Arizona

Arizona's Instrument To Measure Standards

2009
Technical Report

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Foreword

The technical information herein is intended for use by those who evaluate tests, interpret scores, or use test results in making educational decisions. It is assumed that the reader has technical knowledge of test construction and measurement procedures, as stated in *Standards for Educational and Psychological Testing* (American Educational Research Association, American Psychological Association, National Council on Measurement in Education, 1999).

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Part 1: Executive Summary

This document provides information regarding processes and procedures implemented in the 2008 Fall and 2009 Spring Arizona Instrument to Measure Standards (AIMS) assessments for the development of tests, analysis of data, calibration, scoring, and scaling. This document also describes the results of the 2008 Fall and 2009 Spring AIMS assessments. The technical information in this report is intended for those who evaluate tests, interpret scores, or use test results in making educational decisions.

This document also provides information relevant to the *Standards for Educational and Psychological Testing* (American Education Research Association, American Psychological Association, National Council on Measurement in Education, 1999). Each part of this technical report addresses different standards. The standards addressed by each part are listed at the beginning of each part. Part 1 of the technical report addresses standards 2.7, 3.2, 3.3, 6.3, 6.4, 6.15, and 13.6. The 2008 Fall AIMS assessments were administered in Reading, Writing, and Mathematics to students in high school who were in grades 11 and 12 and had not yet obtained a passing score in all three of the content areas. Additionally, students wishing to improve their scores, in any content area, and attain the exceeding category were eligible for this assessment.

The 2009 Spring AIMS assessments were administered in Reading, Writing and Mathematics to students in Grades 3-8 and high school. This was the fifth year that all Grades 3 through 8 and high school were administered Reading, Writing, and Mathematics AIMS. Students in grades 3, 5, and 8 have been taking AIMS assessments since the 1999-2000 school year, and students in high school began taking AIMS (Form A) in Reading, Writing, and Mathematics in 1999. The AIMS assessments are designed to measure Arizona students' performance on the Arizona content standards. All AIMS Reading and Mathematics tests are written to Arizona content standards adopted in March 2003. The AIMS Writing tests are written to content standards adopted in June 2004.

The AIMS high school Reading, Writing, and Mathematics tests are criterion-reference competency tests. Students' test scores on the AIMS high school tests are one component of the high school graduation requirements, and passing scores are required to earn a diploma for students who graduated beginning in Spring 2006. Students in grade 10 have five opportunities to pass the test prior to graduation. The AIMS high school tests in Reading and Mathematics consist of multiple-choice items. The AIMS high school test in Writing consists of a single prompt essay which is scored using a six-trait analytic rubric (see Appendix F).

The AIMS Reading/Language and Mathematics tests for Grades 3-8 are dual purpose assessments (DPA)—both criterion and norm-referenced scores are given based on performance on the tests. The AIMS Writing tests are single prompt essay tests scored using a six-trait analytic rubric. Criterion-referenced scores are reported in Reading, Writing, and Mathematics. Norm-reference scores are reported in Reading, Language, and Mathematics. Each Reading and Mathematics test consists of items written by Arizona teachers and items from CTB/McGraw-Hill's norm-referenced test, *TerraNova, The Second Edition*® (*TerraNova*; CTB/McGraw-Hill, 2001). Some of the *TerraNova* items contribute to both criterion-referenced and norm-referenced scores. These items all match the Arizona content standards. This design eliminated the need for students to take two separate tests and was first implemented for the 2004-2005 testing period. All Reading, Language, and Mathematics tests consist of multiple-choice items only.

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In addition to the scores for Reading, Writing, and Mathematics, a composite score for language arts is also reported. The language arts composite is the mathematical average of the Reading and Writing scale scores. Given the language arts composite is based on separately scaled assessments, reliability information is provided separately for Reading and Writing.

The 2009 Spring AIMS assessments were also administered in Science to students in Grades 4, 8, and high school. This was the second year that Grades 4, 8, and high school were administered Science. The AIMS Science tests are criterion-reference competency tests, which consist of multiple-choice items. The Science test consists of items written entirely by Arizona teachers.

The AIMS assessments are designed to measure Arizona students' performance on the Arizona content standards. All AIMS Science tests are written to Arizona content standards approved by the State Board on May 24, 2004, and updated on March 10, 2005.

Based on the input of Arizona educators and the Arizona's Instrument to Measurement Standards, a design was derived, developed, administered, and scored. The present Technical Report documents all aspects of the testing cycle in the subsequent chapters. The structure of the present Technical Report mirrors the testing cycle. A brief content summary of the report is provided below.

Involvement of Arizona Educators

- Part 2 of this report describes the involvement of Arizona educators in test development.
- Several committees met throughout the year in preparation for the 2009 AIMS.

Test Design and Development

- Part 3 of this report describes the test design and the item development process. It provides the content frameworks and the blueprints upon which all of the AIMS tests are based. This section also includes descriptions and the structure of each AIMS test administered in 2009.
- Part 4 of this report provides a chronological description of the passage, stimulus, and item development process including creation of specifications, committee passage/stimulus reviews, item content and sensitivity reviews, data analysis and item selection procedures, and customer and contractor reviews to guarantee a quality, error-free product.

Administration

- Part 5 briefly describes test administration, accommodations, security, and the written procedures available to all test administrations and school personnel.
- The accommodations were available to some students while testing on AIMS.
- The same accommodations were made for both Fall 2008 and Spring 2009 AIMS.
- Personnel involved in testing administration were asked to sign a security agreement form.
- In order to ensure standardized testing administration for all students, a Test Coordinator's manual was made available to all test coordinators. Also, Test Administration Directions were made available to all test administrators.

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Data for Operational Analysis

- Part 6 describes the data used for calibration and scaling of the 2009 Spring AIMS, and also presents classical test statistics and item analysis statistics.
- In order to ensure valid calibration and scaling, several data clearing steps occurred.
- The values for Cronbach's alpha were provided as a measure of internal consistency.

Calibration, Scaling, and Equating

- Part 7 reviews calibration, equating, scoring methods, and calibration results. Evaluation of the calibration results includes model-to-item fit.
- Two alternate forms for a new test, Science, were equated using the random groups common item design (See Appendix B of the 2008 AIMS Technical Report) in 2008. In 2009 AIMS, Form A was used, after replacing the missing item and rescaling for it.
- Displacement values and other item characteristics were considered for evaluating anchor items.
- Part 7 also shows the relationships between raw scores and scale score through scoring tables.
- Scaling results including the standard error of measurement are also presented.
- For Writing, a pre-equating design had been applied. That is, scoring tables, based on previous field testing, were applied. For the other contents, scoring tables were established using students' responses to the 2009 Spring administration.

Test Results

- Part 8 summarizes information about the results of the 2009 Spring administration of AIMS DPA and AIMS high school. The test results for different ethnic background and special program membership were provided.
- Results for AIMS high school assessments are reported by graduating cohort, such as years from 2009 to 2011.
- Scale score frequency distractions with three cut scores are also presented.

Validity Evidence

- Part 9 reviews the main validity issues discussed in all prior chapters and provides additional validity evidence supporting the AIMS tests.
- For Reading, Mathematics, and Science, Cronbach's alpha was estimated as internal consistency, and for Writing inter-rater position consistency was provided.
- An analysis of differential item functioning is presented.
- Correlations among assessments are presented in the context of construct validity.

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Classification

- Part 10 provides information regarding classification consistency and accuracy when students were classified into proficiency categories.
- The cut scores used for classifying proficiency categories were estimated in standard setting.

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Part 2: Involvement of Arizona Educators at all Levels

Part 2 of the technical report addresses the involvement of Arizona educators in test development. This part of the technical report addresses standard 3.5 of the *Standards for Educational and Psychological Testing* (AERA, APA, NCME, 1999).

Several committees met throughout the year in preparation for the 2009 AIMS Writing, Reading, Math, and Science assessments. These committees included teachers, curriculum specialists, and administrators from across the state and were an integral part of the AIMS test development processes and AIMS results interpretation.

The last year of the contract called for administering just one test form containing only 10 to 15 new field test items per grade and content area. Therefore, typical passage and item development procedures were refined to focus on using as many previously-developed, but unused, passages and items as possible with minimum new development.

The test development committee meetings included:

- Reading Passage and Item Review, conducted in March 2008, in which AZ educators reviewed existing passages and items to ensure topics were appropriate and would not favor a particular gender or ethnic group. These passages and their items had already undergone extensive screening by teacher committees in previous years and had been deemed acceptable and useable. They were considered again for possible use in the Spring of 2009 as field test passages;
- Math Item Review, conducted in March 2008, in which ADE and contractor staff reviewed existing math items to ensure topics were appropriate and would not favor a particular gender or ethnic group. They were also reviewed with an eye toward the soon-to-be-adopted new math standard. These items had already undergone extensive screening by teacher committees in previous years and had been deemed acceptable and useable. They were considered again for possible use in the Spring of 2009 as field test items if they aligned to the new standard;
- Item Editing Workshop, conducted in April 2008, in which educators edited all existing items aligned to the content standards for possible use in Spring 2009 as field test items. The same committee also augmented this pool with newly-written items whenever sufficient numbers of existing items were not available;
- Content and Bias/Sensitivity Review, conducted in June 2008, in which educators reviewed the items written or edited in April 2008 to ensure content was appropriate to the standards being assessed and that the items would not favor a particular gender or ethnic group;
- Data Analysis, conducted in July 2008, in which educators examined the item data generated during the Spring 2008 field test and assigned each item a status code to be included with the item information in the item bank and that would determine its eligibility for possible selection as an operational item starting in Spring 2009; and
- Item Selection, conducted in July 2008, in which educators chose items matching the test blueprints from the item bank and the pool of field tested items administered in the Spring of 2008 to be included on the 2009 assessments.

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Part 3: Test Design

Part 3 of the technical report provides information regarding test design. The following AERA/APA/NCME standards are addressed: 1.2, 1.6, 3.1, 3.2, 3.3, 3.11, 6.4, 6.15, 13.3, and 13.5.

3.1 Content Standards

The AIMS assessments are designed to measure performance on the Arizona content standards adopted in March 2003 for Reading and Mathematics, June 2004 for Writing, and March 2005 for Science. These standards are organized by strand, concept, and performance objective. The AIMS Reading and Mathematics test blueprints are based on the concepts and strands of the Arizona content standards, presented in figures 3.1.1-3.1.2. The AIMS Writing tests are scored on the Six Trait Writing Rubric. Figure 3.1.3 presents the six traits. The AIMS Science test blueprints are based on the concepts and strands of the Arizona content standards, presented in figures 3.1.4 through 3.1.6.

Figure 3.1.1
Arizona Reading Concepts and Strands

Strand 1: Reading Process
- **Concept 1: Print Concepts**
- **Concept 3: Phonics**
- **Concept 4: Vocabulary**
- **Concept 6: Comprehension Strategies**

Strand 2: Comprehending Literary Text
- **Concept 1: Elements of Literature**
- **Concept 2: Historical and Cultural Aspects**

Strand 3: Comprehending Informational Text
- **Concept 1: Expository Text**
- **Concept 2: Functional Text**
- **Concept 3: Persuasive Text**

Figure 3.1.2
Arizona Mathematics Concepts and Strands

Strand 1: Number Sense and Operations
- **Concept 1: Number Sense**
- **Concept 2: Numerical Operations**
- **Concept 3: Estimation**

Strand 2: Data Analysis, Probability and Discrete Math

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Concept 1: Data Analysis (Statistics)

Concept 2: Probability

Concept 3 and 4: Discrete Mathematics

Strand 3: Patterns, Algebra and Functions

Concept 1: Patterns

Concept 2: Functions and Relationships

Concept 3: Algebraic Representations

Concept 4: Analysis of Change

Strand 4: Geometry and Measurement

Concept 1: Geometric Properties

Concept 2: Transformation of Shapes

Concept 3: Coordinate Geometry

Concept 4: Measurement

Strand 5: Structure and Logic

Concept 1: Algorithms and Algorithmic Thinking

Concept 2: Logic and Reasoning

Figure 3.1.3
Arizona Writing Traits

Trait 1: Ideas and Content

Trait 2: Organization

Trait 3: Voice

Trait 4: Word Choice

Trait 5: Sentence Fluency

Trait 6: Conventions

Figure 3.1.4
Arizona Science Concepts and Strands – Grade 4

Strand 1: Inquiry Process

Concept 1: Observations, Questions, and Hypotheses

Concept 2: Scientific Testing (Investigating and Modeling)

Concept 3: Analysis and Conclusions

Concept 4: Communication

Strand 2: History and Nature of Science

Concept 1: History of Science as a Human Endeavor

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Concept 2: Nature of Scientific Knowledge

Strand 3: Science in Personal and Social Perspectives

Concept 1: Changes in Environments

Concept 2: Science and Technology in Society

Strand 4: Life Science

Concept 1: Characteristics of Organisms

Concept 2: Life Cycles

Concept 3: Organisms and Environments

Concept 4: Diversity, Adaptation, and Behavior

Strand 5: Physical Science

Concept 1: Properties of Objects and Materials

Concept 2: Position and Motion of Objects

Concept 3: Energy and Magnetism

Strand 6: Earth and Space Science

Concept 1: Properties of Earth Materials

Concept 2: Earth's Processes and Systems

Concept 3: Changes in the Earth and Sky

Figure 3.1.5
Arizona Science Concepts and Strands – Grade 8

Strand 1: Inquiry Process

Concept 1: Observations, Questions, and Hypotheses

Concept 2: Scientific Testing (Investigating and Modeling)

Concept 3: Analysis and Conclusions

Concept 4: Communication

Strand 2: History and Nature of Science

Concept 1: History of Science as a Human Endeavor

Concept 2: Nature of Scientific Knowledge

Strand 3: Science in Personal and Social Perspectives

Concept 1: Changes in Environments

Concept 2: Science and Technology in Society

Strand 4: Life Science

Concept 1: Structure and Function in Living Systems

Concept 2: Reproduction and Heredity

Concept 3: Populations of Organisms in an Ecosystem

Concept 4: Diversity, Adaptation, and Behavior

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Strand 5: Physical Science

- **Concept 1: Properties and Changes of Properties in Matter**
- **Concept 2: Motion and Forces**
- **Concept 3: Transfer of Energy**

Strand 6: Earth and Space Science

- **Concept 1: Structure of the Earth**
- **Concept 2: Earth's Processes and Systems**
- **Concept 3: Earth in the Solar System**

Figure 3.1.6
Arizona Science Concepts and Strands – High School

Strand 1: Inquiry Process

- **Concept 1: Observations, Questions, and Hypotheses**
- **Concept 2: Scientific Testing (Investigating and Modeling)**
- **Concept 3: Analysis, Conclusions, and Refinements**
- **Concept 4: Communication**

Strand 2: History and Nature of Science

- **Concept 1: History of Science as a Human Endeavor**
- **Concept 2: Nature of Scientific Knowledge**

Strand 3: Science in Personal and Social Perspectives

- **Concept 1: Changes in Environments**
- **Concept 2: Science and Technology in Society**
- **Concept 3: Human Population Characteristics**

Strand 4: Life Science

- **Concept 1: The Cell**
- **Concept 2: Molecular Basis of Heredity**
- **Concept 3: Interdependence of Organisms**
- **Concept 4: Biological Evolution**
- **Concept 5: Matter, Energy, and Organization in Living Systems (Including Human Systems)**

Strand 5: Physical Science

- **Concept 1: Structure and Properties of Matter**
- **Concept 2: Motions and Forces**
- **Concept 3: Conservation of Energy and Increase in Disorder**
- **Concept 4: Chemical Reactions**
- **Concept 5: Interactions of Energy and Matter**

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Strand 6: Earth and Space Science

- **Concept 1: Geochemical Cycles**
- **Concept 2: Energy in the Earth System (Both Internal and External)**
- **Concept 3: Origin and Evolution of the Earth System**
- **Concept 4: Origin and Evolution of the Universe**

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3.2 Test Blueprints

A test blueprint designates the percentage of items that should measure each strand and concept. All AIMS assessments were designed in accordance with the following blueprints. Further discussion of item selection to match the blueprints is included in Part 4 of this report.

Table 3.2.1
AIMS blueprint for Reading

AIMS Reading Blueprint (beginning Spring 2005)

Grade	3	Strand 1						Strand 2		Strand 3		
		Concept 1	Concept 2	Concept 3	Concept 4	Concept 5	Concept 6	Concept 1	Concept 2	Concept 1	Concept 2	Concept 3
	% of test	7%	0%	9%	11%	0%	17%	22%	0%	11%	11%	11%
	% of strand on test	44%						22%		33%		

Grade	4	Strand 1						Strand 2		Strand 3		
		Concept 1	Concept 2	Concept 3	Concept 4	Concept 5	Concept 6	Concept 1	Concept 2	Concept 1	Concept 2	Concept 3
	% of test	0%	0%	0%	7%	0%	15%	31%	0%	24%	11%	11%
	% of strand on test	22%						31%		46%		

Grade	5	Strand 1						Strand 2		Strand 3		
		Concept 1	Concept 2	Concept 3	Concept 4	Concept 5	Concept 6	Concept 1	Concept 2	Concept 1	Concept 2	Concept 3
	% of test	0%	0%	0%	11%	0%	11%	31%	0%	24%	11%	11%
	% of strand on test	22%						31%		46%		

Grade	6	Strand 1						Strand 2		Strand 3		
		Concept 1	Concept 2	Concept 3	Concept 4	Concept 5	Concept 6	Concept 1	Concept 2	Concept 1	Concept 2	Concept 3
	% of test	0%	0%	0%	11%	0%	11%	31%	0%	24%	11%	11%
	% of strand on test	23%						31%		46%		

Grade	7	Strand 1						Strand 2		Strand 3		
		Concept 1	Concept 2	Concept 3	Concept 4	Concept 5	Concept 6	Concept 1	Concept 2	Concept 1	Concept 2	Concept 3
	% of test	0%	0%	0%	11%	0%	11%	24%	7%	22%	13%	11%
	% of strand on test	22%						31%		46%		

Grade	8	Strand 1						Strand 2		Strand 3		
		Concept 1	Concept 2	Concept 3	Concept 4	Concept 5	Concept 6	Concept 1	Concept 2	Concept 1	Concept 2	Concept 3
	% of test	0%	0%	0%	7%	0%	9%	26%	7%	24%	15%	11%
	% of strand on test	17%						33%		50%		

Grade	HS	Strand 1						Strand 2		Strand 3		
		Concept 1	Concept 2	Concept 3	Concept 4	Concept 5	Concept 6	Concept 1	Concept 2	Concept 1	Concept 2	Concept 3
	% of test	0%	0%	0%	7%	0%	7%	26%	7%	22%	15%	15%
	% of strand on test	15%						33%		52%		

Source: www.azed.gov/standards/aims/blueprints/Reading1-10-06.pdf

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Table 3.2.2
AIMS blueprint for Mathematics

AIMS Mathematics Blueprint (beginning Spring 2005)

	Strand 1			Strand 2				Strand 3				Strand 4				Strand 5	
	C1	C2	C3	C1	C2	C3	C4	C1	C2	C3	C4	C1	C2	C3	C4	C1	C2
Grade 3																	
% of Test by Concept	15%	14%	6%	6%	6%	6%		11%		11%		8%		13%		6%	
% of Test by Strand	35%			17%				22%				21%				6%	
Grade 4																	
% of Test by Concept	13%	11%	6%	6%	6%	6%		12%		12%		10%		15%		6%	
% of Test by Strand	30%			17%				23%				24%				6%	
Grade 5																	
% of Test by Concept	10%	13%	6%	6%	6%	6%		12%		12%		10%		13%		6%	
% of Test by Strand	29%			18%				24%				24%				6%	
Grade 6																	
% of Test by Concept	6%	10%	6%	6%	6%	9%		12%		12%		12%		16%		6%	
% of Test by Strand	22%			21%				24%				28%				6%	
Grade 7																	
% of Test by Concept	7%	9%	6%	9%	6%	6%		12%		12%		13%		14%		6%	
% of Test by Strand	22%			21%				24%				28%				6%	
Grade 8																	
% of Test by Concept	6%	6%	6%	11%	6%	6%		6%	6%	15%		14%		6%	6%	6%	
% of Test by Strand	18%			23%				27%				26%				6%	
H. S.																	
% of Test by Concept	5%	5%	5%	9%	5%	5%		5%	7%	14%	5%	9%	5%	7%	6%	5%	5%
% of Test by Strand	14%			19%				31%				27%				9%	

Source: www.azed.gov/standards/aims/blueprints/Mathematics1-10-06.pdf

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Table 3.2.3
AIMS blueprint for Science Grade 4

AIMS Science
Grade 4 Test Blueprint

Strand	Concept	Number of POs	Number of testable POs	Number of Test Items	Percentage of Test
Strand 1: Scientific Inquiry	Concept 1: Observations, Questions, and Hypotheses	4	3	6	33.3%
	Concept 2: Scientific Testing (Investigating and Modeling)	5	3	6	
	Concept 3: Analysis and Conclusions	5	5	6	
	Concept 4: Communication	3	1		
Strand 2: History and Nature of Science	Concept 1: History of Science as a Human Endeavor	2	1	6	11.1%
	Concept 2: Nature of Scientific Knowledge	3	2		
Strand 3: Science in Personal and Social Perspectives	Concept 1: Changes in Environments	2	2	6	11.1%
	Concept 2: Science and Technology in Society	3	2		
Strand 4: Life Science	Concept 1: Characteristics Of Organisms	2	2	6	11.1%
	Concept 2: Life Cycles	0	0		
	Concept 3: Organisms and Environments	4	4		
	Concept 4 : Diversity, Adaptation, and Behavior	2	2		
Strand 5: Physical Science	Concept 1: Properties of Objects and Materials	0	0	6	11.1%
	Concept 2: Position and Motion of Objects	0	0		
	Concept 3: Energy and Magnetism	5	5		
Strand 6: Earth and Space Science	Concept 1: Properties of Earth Materials	0	0	0	22.2%
	Concept 2: Earth's Processes and Systems	6	6	6	
	Concept 3: Changes in the Earth and Sky	6	6	6	
12/6/2005	Total Concepts = 18 Testable Concepts = 14	52	44	54	100%

Source : http://www.azed.gov/standards/aims/blueprints/AIMS_Science_TestBlueprints_Grade%204.pdf

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Table 3.2.4
AIMS blueprint for Science Grade 8

AIMS Science
Grade 8 Test Blueprint

Strand	Concept	Number of POs	Number of testable POs	Number of Test Items	Percentage of Test
Strand 1: Scientific Inquiry	Concept 1: Observations, Questions, and Hypotheses	3	3	6	34.5%
	Concept 2: Scientific Testing (Investigating and Modeling)	5	2	4	
	Concept 3: Analysis and Conclusions	8	7	6	
	Concept 4: Communication	5	2	4	
Strand 2: History and Nature of Science	Concept 1: History of Science as a Human Endeavor	4	3	6	10.3%
	Concept 2: Nature of Scientific Knowledge	4	3		
Strand 3: Science in Personal and Social Perspectives	Concept 1: Changes in Environments	2	2	6	10.3%
	Concept 2: Science and Technology in Society	4	2		
Strand 4: Life Science	Concept 1: Structure and Function in Living Organisms	0	0	8	13.8%
	Concept 2: Reproduction and Heredity	3	3		
	Concept 3: Populations of Organisms in an Ecosystem	0	0		
	Concept 4 : Diversity, Adaptation, and Behavior	6	6		
Strand 5: Physical Science	Concept 1: Properties and Changes of Properties in Matter	7	6	10	31.0%
	Concept 2: Motions and Forces	5	5	8	
	Concept 3: Transfer of Energy	0	0	0	
Strand 6: Earth and Space Science	Concept 1: Structure of the Earth	0	0	0	0%
	Concept 2: Earth's Processes and Systems	0	0		
	Concept 3: Earth in the Solar System	0	0		
12/6/2005	Total Concepts = 18 Testable Concepts = 12	56	44	58	100%

Source: http://www.azed.gov/standards/aims/blueprints/AIMS_Science_TestBlueprints_Grade%208.pdf

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Table 3.2.5
AIMS blueprint for Science High School

AIMS Science
High School Test Blueprint

Strand	Concept	Number of POs	Number of testable POs	Number of Test Items	Percentage of Test
Strand 1: Scientific Inquiry	Concept 1: Observations, Questions, and Hypotheses	4	4	6	33.8%
	Concept 2: Scientific Testing (Investigating and Modeling)	5	3	6	
	Concept 3: Analysis, Conclusions, and Refinements	7	5	6	
	Concept 4: Communication	4	2	4	
Strand 2: History and Nature of Science	Concept 1: History of Science as a Human Endeavor	4	2	6	9.2%
	Concept 2: Nature of Scientific Knowledge	4	3		
Strand 3: Science in Personal and Social Perspectives	Concept 1: Changes in Environments	5	3	7	10.8%
	Concept 2: Science and Technology in Society	5	3		
	Concept 3: Human Population Characteristics	3	1		
Strand 4: Life Science	Concept 1: The Cell	5	3	6	46.2%
	Concept 2: Molecular Basis of Heredity	4	3	6	
	Concept 3: Interdependence of Organisms	3	2	6	
	Concept 4: Biological Evolution	6	6	6	
	Concept 5: Matter, Energy, and Organization in Living Systems (Including Human Systems)	5	5	6	
12/6/2005	Total Concepts = 14 Testable Concepts = 14	**64**	**45**	**65**	100%

Source: http://www.azed.gov/standards/aims/blueprints/AIMS_Science_TestBlueprints_HS.pdf

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3.3 Description of AIMS 2009 Tests

The test blueprints were used with the processes described in detail in Part 4 to develop all AIMS tests administered in 2009. The resulting test configurations are as follows.

3.3.1 High School Reading (Criterion-referenced only)

The AIMS CRT high school Reading test consisted of 54 multiple-choice items developed by Arizona teachers. The raw scores ranged from 0-54, and scale scores were designed to range from 500 to 900. All items on the high school Reading test reported to a criterion-referenced score. No norm-referenced items were included on the high school Reading test. Ten field test items were embedded with the operational items to form a total of 64 test items.

3.3.2 High School Writing (Criterion-referenced only)

The AIMS CRT high school Writing test consisted of one extended response Writing prompt. Responses to the prompt were scored on the six-trait analytic rubric. Each trait received two ratings. Final scores for traits with adjacent ratings were derived by averaging the two ratings. Final scores for traits with discrepant ratings were resolved by a third rater. The raw scores ranged from 0-36, and scale scores were designed to range from 500-900. There were two forms of the high school Writing test, A and T. Form T was used as a make-up form administered one week after the administration of prompt A. No norm-referenced items were included on the high school Writing tests.

3.3.3 High School Mathematics (Criterion-referenced only)

The AIMS CRT high school Mathematics test originally consisted of 85 multiple-choice items developed by Arizona teachers. The raw scores ranged from 0-85, and scale scores were designed to range from 500 to 900. All items on the high school Mathematics test reported to a criterion-referenced score. No norm-referenced items were included in the high school Mathematics test. Fifteen field test items were embedded with the operational items to form a total of 100 test items.

3.3.4 Grades 3-8 Reading and Language (Dual Purpose Assessment)

The AIMS Reading tests for grades 3-8 consisted of both a criterion-referenced and a norm-referenced component. Some items contributed to the CRT component only, some items contributed to the NRT component only, and some items contributed to both CRT and NRT components.

The AIMS CRT Reading tests for grades 4-8 consisted of 39 items developed by Arizona teachers and 15 *TerraNova* items that map to the Arizona content standards, for a total of 54 items. The AIMS CRT Reading test for grade 3 consisted of 42 items developed by Arizona teachers and 12 *TerraNova* items that map to the Arizona content standards, for a total of 54 items. The raw scores on all tests ranged from 0-54. Ten field test items written to the Arizona standards were embedded with the operational items. Detailed test structure information can be found in Table 3.3.1. Scale score ranges are presented in Table 3.3.7. Scaling of AIMS CRT Reading is discussed in Part 7 of this technical report.

The left hand side of Table 3.3.1 presents the number of items that contributed to the AIMS Reading CRT component, the AIMS Reading NRT component, and the AIMS language NRT component for each grade. The number of *TerraNova* Reading items that contributed to both AIMS Reading CRT and AIMS Reading NRT component is also reported. The total number of test items

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on the test is the composite of the number of field test items, CRT items, NRT Reading, and NRT language items.

The right hand side of Table 3.3.1 presents the number of anchor items used in the annual equating for each grade. The number of common dual purpose items and common NRT only items between 2008 and 2009 are also reported. The total number common items between years is the composite of the number of anchor items, common dual purpose items, and common NRT only items.

The AIMS NRT Reading tests for grades 3-8 consisted of 25 *TerraNova* Reading items from *TerraNova* Form D Complete Battery. The AIMS NRT Reading tests closely approximated the test blueprint and statistical criteria of *TerraNova* Form D Complete Battery. The *TerraNova* Reading items were embedded within the AIMS DPA Reading test. Scale scores are reported on the *TerraNova* Reading NRT scale. Norms are reported using the 2000 *TerraNova* norms and a quarter month of 30.

The AIMS NRT language tests for grades 3-8 consisted of 20 *TerraNova* language items from *TerraNova* Form D Complete Battery. The AIMS NRT language tests closely approximated the test blueprint and statistical criteria of *TerraNova* Form D Complete Battery. The *TerraNova* language items were embedded within the AIMS DPA Reading test. Scale scores are reported on the *TerraNova* language NRT scale. Norms are reported using the 2000 *TerraNova* norms and a quarter month of 30. Tables 3.3.4 and 3.3.5 present more detailed information about the blueprint representation of *TerraNova* Form D Complete Battery and the AIMS NRT tests. No NRT items were used as anchor items for AIMS.

3.3.5 Grades 3-8 Writing (Criterion-referenced only)

The AIMS Writing tests for grades 3-8 consisted of one extended response writing prompt per administration, reporting to a criterion-referenced score only. Responses to the prompt were scored on the six-trait analytic rubric. Each trait received one rating with a 10% read behind as a check for consistency. The raw scores ranged from 0-36. Scale score ranges are presented in Table 3.3.6. Scaling of AIMS CRT Writing is discussed in Part 7 of this technical report.

3.3.6 Grades 3-8 Mathematics (Dual Purpose Assessment)

The AIMS Mathematics tests for grades 3-8 consisted of both a criterion-referenced and norm-referenced component to allow for both criterion-referenced and norm-referenced scores. Some items contributed to CRT scores only, some items contributed to NRT scores only, and some items contributed to both CRT and NRT scores. No NRT items were used as anchor items for AIMS.

The AIMS CRT Mathematics tests for grades 3 consisted of 57 items developed by Arizona teachers and 15 *TerraNova* items that map to the Arizona content standards, for a total of 72 items. The AIMS CRT Mathematics tests for grades 4 consisted of 55 items developed by Arizona teachers and 15 *TerraNova* items that map to the Arizona content standards, for a total of 70 items. The AIMS CRT Mathematics tests for grades 5 through 7 consisted of 53 items developed by Arizona teachers and 15 *TerraNova* items that map to the Arizona content standards, for a total of 68 items. The AIMS CRT Mathematics test for grade 8 consisted of 53 items developed by Arizona teachers and 13 *TerraNova* items that map to the Arizona content standards, for a total of 66 items. Ten field test items written to the Arizona standards were embedded with the operational items. Detailed test structure information can be found in Tables 3.3.2. The raw score and scale score ranges are presented in Table 3.3.6. Scaling of AIMS CRT Mathematics is discussed in Part 7 of this technical report.

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The left hand side of Table 3.3.2 presents the break down of the number of items that contributed to the AIMS Mathematics CRT and the AIMS Mathematics NRT component for each grade. The number of *TerraNova* Mathematics items that contributed to both components is also reported. The total number of test items on the test is the composite of the number of field test items, the number of CRT items, and the number of NRT items.

The right hand side of Table 3.3.2 presents the number of anchor items used in the annual equating for each grade. The number of common dual purpose items and NRT only items between 2008 and 2009 is also reported. The total number common items between years is the composite of the number of anchor items, the number of common dual purpose items, and the number of common NRT only items.

The AIMS NRT Mathematics tests for grades 3-8 consisted of 25 *TerraNova* Mathematics items from *TerraNova* Form D Complete Battery. The AIMS NRT Mathematics tests closely approximated the test blueprint and statistical criteria of *TerraNova* Form D Complete Battery. Scale scores are reported on the *TerraNova* Mathematics NRT scale. Norms are reported using the 2000 *TerraNova* norms and a quarter month of 30. Table 3.3.6 presents more detailed information about the blueprint representation of *TerraNova* Form D Complete Battery and the AIMS NRT tests.

Items on the AIMS DPA Reading and Mathematics tests that reported to a criterion-referenced score were either developed by Arizona teachers or were TerraNova items that matched the Arizona content standards. No norm-referenced only Reading items or Mathematics items reported to the AIMS DPA criterion referenced scores. No TerraNova language items reported to the AIMS DPA criterion referenced scores for Writing.

3.3.7 Language Arts Composite

A language arts composite score was also computed for each student. This composite is the mathematical average of the AIMS Reading and Writing scale scores. The language arts score is not reported to students, parents, or teachers. This composite score is provided to ADE in the electronic data only for calculating and reporting annual yearly progress under NCLB legislation.

3.3.8 Grade 4 Science (Criterion-referenced only)

The AIMS 2009 CRT grade 4 Science test consisted of one operational form with 54 multiple-choice items developed by Arizona teachers. The raw scores ranged from 0-54, and scale scores were designed to range from 200 to 800. All items on the grade 4 Science test reported to a criterion-referenced score. No norm-referenced items were included on the grade 4 Science test.

3.3.9 Grade 8 Science (Criterion-referenced only)

The AIMS 2009 CRT grade 8 Science test consisted of one operational form with 58 multiple-choice items developed by Arizona teachers. The raw scores ranged from 0-58, and scale scores were designed to range from 200 to 800. All items on the grade 8 Science test reported to a criterion-referenced score. No norm-referenced items were included on the grade 8 Science test.

3.3.10 High School Science (Criterion-referenced only)

The AIMS 2009 CRT high school Science test consisted of one operational form with 65 multiple-choice items developed by Arizona teachers. One item that was dropped from the form in 2008, was replaced and the scale was recalibrated. Student test scores and all reports included the dropped item. The raw scores ranged from 0-65, and scale scores were designed to range from 200 to 800. All items on the high school Science test reported to a criterion-referenced score. No norm-referenced items were included in the high school Science test.

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Table 3.3.1 Spring 2009 AIMS Test Structure Reading and Language

Reading

Grade	FT	RD CRT only	RD NRT /CRT	RD NRT only	RD CRT TOTAL (CRT + NRT/ CRT)	RD NRT TOTAL	LA NRT only	LA NRT TOTAL	TOTAL ITEMS ON TEST	I. Anchor (Common CRT: Spring 2008 - 2009)	II. Common NRT/CRT items: Spring 2008 - 2009	III. Common NRT items: Spring 2008 - 2009	IV. Common Non-Anchor CRT-Spring 2008-2009	Total common items: Spring 2008 - 2009 (I+II+III+ IV)
3	10	42	12	13	54	25	20	20	97	20	12	33	16	81
4	10	39	15	10	54	25	20	20	94	18	15	30	9	72
5	10	39	15	10	54	25	20	20	94	18	15	30	18	75
6	10	39	15	10	54	25	20	20	94	21	14	30	12	77
7	10	39	15	10	54	25	20	20	94	28	15	30	10	83
8	10	39	15	10	54	25	20	20	94	24	15	30	8	77
HS*	10	54	N/A	N/A	54	N/A	N/A	N/A	64	20	N/A	N/A	26	46

*High School has 10 field test forms, for a total of 100 field test items.
**There are some CRT items that are common to 2008 & 2009 but are not used as anchors.

Table 3.3.2 Spring 2009 AIMS Test Structure Math

Grade	FT	MA CRT only	MA NRT /CRT	MA NRT only	MA CRT TOTAL (CRT + NRT/CRT)	MA NRT TOTAL	TOTAL ITEMS ON TEST	I. Anchor (Common CRT: Spring 2008 -2009)	II. Common NRT/CRT items: Spring 2008 - 2009	III. Common NRT items: Spring 2008 - 2009	IV. Common Non-Anchor CRT-Spring 2008-2009	Total common items: Spring 2008-2009 (I+II+ III+IV)
3	10	57	15	10	72	25	92	33	15	10	16	74
4	10	55	15	10	70	25	90	35	15	10	14	74
5	10	53	15	10	68	25	88	29	15	10	15	69
6	10	53	15	10	68	25	88	26	15	10	10	61
7	10	53	15	10	68	25	88	30	15	10	11	66
8	10	53	13	12	66	25	88	36	13	12	5	66
HS*	15	85	N/A	N/A	85	N/A	100	28	N/A	N/A	45	73

*High School has 10 field test forms, for a total of 150 field test items.

*Two former HS anchor items will be used as OP but not AN.

Table 3.3.3 Spring 2009 AIMS Test Structure Science

Grade	FT	MA CRT only	MA NRT /CRT	MA NRT only	MA CRT TOTAL (CRT + NRT/CRT)	MA NRT TOTAL	TOTAL ITEMS ON TEST	I. Anchor (Common CRT: Spring 2008 -2009)	II. Common NRT/CRT items: Spring 2008 - 2009	III. Common NRT items: Spring 2008 - 2009	IV. Common Non-Anchor CRT-Spring 2008-2009	Total common items: Spring 2008-2009 (I+II+ III+IV)
4	N/A	54	N/A	N/A	54	N/A	54	22	N/A	N/A	32	54
8	N/A	58	N/A	N/A	58	N/A	58	27	N/A	N/A	31	58
HS	N/A	65	N/A	N/A	65	N/A	65	20	N/A	N/A	45	65

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Table 3.3.4 *TerraNova* and AIMS NRT Blueprint Representation Reading

Grade		*TerraNova* Strand 02 Basic Understanding	03 Analyze Text	04 Evaluate and Extend Meaning	05 Identify Reading Strategies	Total
3						
	N items TN CB	14	10	8	10	42
	% items TN CB	33%	24%	19%	24%	100%
	N items AIMS NRT	8	8	4	5	25
	% items AIMS NRT	32%	32%	16%	20%	100%
4						
	N items TN CB	18	19	7	6	50
	% items TN CB	36%	38%	14%	12%	100%
	N items AIMS NRT	9	9	4	3	25
	% items AIMS NRT	36%	36%	16%	12%	100%
5						
	N items TN CB	14	15	8	9	46
	% items TN CB	30%	33%	17%	20%	100%
	N items AIMS NRT	8	8	4	5	25
	% items AIMS NRT	32%	32%	16%	20%	100%
6						
	N items TN CB	16	12	5	9	42
	% items TN CB	38%	29%	12%	21%	100%
	N items AIMS NRT	9	8	3	5	25
	% items AIMS NRT	36%	32%	12%	20%	100%
7						
	N items TN CB	13	18	12	7	50
	% items TN CB	26%	36%	24%	14%	100%
	N items AIMS NRT	6	9	6	4	25
	% items AIMS NRT	24%	36%	24%	16%	100%
8						
	N items TN CB	16	17	9	6	48
	% items TN CB	33%	35%	19%	13%	100%
	N items AIMS NRT	8	9	5	3	25
	% items AIMS NRT	32%	36%	20%	12%	100%

Note. TN CB= *TerraNova* Complete Battery D, AIMS NRT = Arizona Instrument to Measure Standards Norm Referenced Test.

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Table 3.3.5 *TerraNova* and AIMS NRT Blueprint Representation Language

Grade	*TerraNova* Strand 07 Sentence Structure	08 Writing Strategies	09 Editing Skills	Total
3				
N items TN CB	7	8	13	28
% items TN CB	25%	29%	46%	100%
N items AIMS NRT	5	5	10	20
% items AIMS NRT	25%	25%	50%	100%
4				
N items TN CB	7	8	15	30
% items TN CB	23%	27%	50%	100%
N items AIMS NRT	3	6	11	20
% items AIMS NRT	15%	30%	55%	100%
5				
N items TN CB	11	13	10	34
% items TN CB	32%	38%	29%	100%
N items AIMS NRT	6	8	6	20
% items AIMS NRT	30%	40%	30%	100%
6				
N items TN CB	10	16	12	38
% items TN CB	26%	42%	32%	100%
N items AIMS NRT	5	8	7	20
% items AIMS NRT	25%	40%	35%	100%
7				
N items TN CB	13	10	7	30
% items TN CB	43%	33%	23%	100%
N items AIMS NRT	8	7	5	20
% items AIMS NRT	40%	35%	25%	100%
8				
N items TN CB	8	13	11	32
% items TN CB	25%	41%	34%	100%
N items AIMS NRT	5	7	8	20
% items AIMS NRT	25%	35%	40%	100%

Note. TN CB= *TerraNova* Complete Battery D, AIMS NRT = Arizona Instrument to Measure Standards Norm Referenced Test.

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Table 3.3.6 *TerraNova* and AIMS NRT Blueprint Representation Mathematics

Grade	TerraNova Strand								
	10 Number and Number Relations	11 Computation and Numerical Estimation	12 Operation Concepts	13 Measurement	14 Geometry and Spatial Sense	15 Data Analysis, Statistics, and Probability	16 Patterns, Functions, Algebra	17 Problem Solving and Reasoning	Total
3									
N items TN CB	8	12	4	6	6	6	4	4	50
% items TN CB	16%	24%	8%	12%	12%	12%	8%	8%	100%
N items AIMS NRT	4	5	2	2	3	3	3	3	25
% items AIMS NRT	16%	20%	8%	8%	12%	12%	12%	12%	100%
4									
N items TN CB	7	15	7	7	6	7	3	5	57
% items TN CB	12%	26%	12%	12%	11%	12%	5%	9%	100%
N items AIMS NRT	3	6	4	3	3	3	1	2	25
% items AIMS NRT	12%	24%	16%	12%	12%	12%	4%	8%	100%
5									
N items TN CB	11	12	5	6	6	9	4	4	57
% items TN CB	19%	21%	9%	11%	11%	16%	7%	7%	100%
N items AIMS NRT	4	5	2	3	4	3	2	2	25
% items AIMS NRT	16%	20%	8%	12%	16%	12%	8%	8%	100%
6									
N items TN CB	11	13	3	6	5	7	7	4	56
% items TN CB	20%	23%	5%	11%	9%	13%	13%	7%	100%
N items AIMS NRT	5	4	2	3	3	2	4	2	25
% items AIMS NRT	20%	16%	8%	12%	12%	8%	16%	8%	100%
7									
N items TN CB	10	12	2	6	7	10	6	4	57
% items TN CB	18%	21%	4%	11%	12%	18%	11%	7%	100%
N items AIMS NRT	5	3	2	3	3	4	3	2	25
% items AIMS NRT	20%	12%	8%	12%	12%	16%	12%	8%	100%
8									
N items TN CB	11	10	1	5	7	10	8	4	56
% items TN CB	20%	18%	2%	9%	13%	18%	14%	7%	100%
N items AIMS NRT	5	3	1	2	3	4	4	3	25
% items AIMS NRT	20%	12%	4%	8%	12%	16%	16%	12%	100%

Note. TN CB= TerraNova Complete Battery D, AIMS NRT = Arizona Instrument to Measure Standards Norm Referenced Test.

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Table 3.3.7
Raw Score and Scale Score ranges of AIMS 2009 CRT Assessments

Content	Grade	Raw Score range	Scale Score range
Reading	3	0-54	200-640
	4	0-54	220-660
	5	0-54	240-675
	6	0-54	250-690
	7	0-54	260-720
	8	0-54	270-800
	HS[α]	0-54	500-900
Writing	3	0-36	200-650
	4	0-36	230-700
	5	0-36	255-740
	6	0-36	275-760
	7	0-36	290-770
	8	0-36	300-800
	HS[α]	0-36	500-900
Mathematics	3	0-72	200-650
	4	0-70	230-675
	5	0-68	255-700
	6	0-68	270-725
	7	0-68	290-740
	8	0-66	300-800
	HS[α]	0-85	500-900
Science	4	0-54	200-800
	8	0-58	200-800
	HS	0-65	200-800

[a]HS tests are not on the same scale as G3-8 tests. Scale scores are therefore not comparable between the HS and G3-8 tests. See Part 7 for information regarding the scaling of the AIMS assessment.

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Part 4: Test Development

Part 4 of the technical report provides a summary of the test development activities that occurred during the 2008-2009 contract year. Information is provided relating to the following topics as they pertain to AIMS:

- a discussion of the AIMS test development and editing process;
- a description of the use of previously created AIMS item specifications;
- a description of the AIMS passage development and review procedures;
- a description of the AIMS item editing procedures;
- a description of content and bias/sensitivity review procedures for AIMS items;
- a description of the data analysis committee procedures; and
- a description of the AIMS item selection committee meetings.

A comprehensive, multi-segment development process guides the development of assessment materials. The following section outlines this process in general terms. The remainder of Part 4 provides details of how these processes were implemented in Arizona. This section of the technical report addresses the following AERA/APA/NCME standards: 1.6, 3.1, 3.5, 3.6, 3.7, 3.9, 3.11, 3.16, 6.4, 6.15, 7.3, 7.4, 7.7, 13.3, and 13.5.

4.1 AIMS Test Development and Editing Process

4.1.1 Test Development Process

Test development for the 2009 test administration began with the customer kick-off meeting via telephone call in February of 2008. During this phase, the project deliverables were defined, such as test books, answer documents, test administration manuals, test coordinator manuals, test interpretation guides, and materials to support special accommodations, including Braille and large print books. The actual test form design was unchanged from the previous year. The ancillary materials were modified and all modifications were discussed and shared among all team members to ensure understanding.

4.1.2 Documents and Materials Development

Following definition of project deliverables, CTB'sentire test development team reviewed the blueprints, item specifications, and ADE (Arizona Department of Education) style guide to insure that the 2009 assessment would meet all of the required, previously-developed criteria. Field test items were developed for reading and math to insure a sufficient supply of items would be available to be placed on operational forms for the 2009 assessments. Special care was taken to ensure that field test items for mathematics would match both the 2003 an 2008 Arizona mathematics standards.

4.1.3 Item Development and Editing

The development of AIMS assessments for 2009 involved many professionals from CTB and ADE collaborating in an effort to ensure that all newly developed items closely matched the Arizona Content Standards and the item specifications, while addressing the need to expand the Arizona Item Bank. The Arizona teachers who were selected to serve on item editing committees all possessed content and assessment expertise and the ability to be creative while adhering to the test blueprint,

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detailed item specifications, and content limits. There was a considerable amount of professional development provided to integrate new item participants with more experienced item participants. Test items were edited by Arizona teachers using a template that contained all requirements and supporting information such as strand, concept, performance objective, and content reference documentation. After the item editing workshops were concluded, test items were edited again by in-house content editors, style editors, art specialists, hand scoring staff, and research scientists for content appropriateness and standards match. After passing these committees, the items were prepared for incorporation into the field test portion of the operational 2009 AIMS assessments. Since the new mathematics standards will be tested operationally in 2010, a separate stand alone field test was conducted with 18 items per form in grades 3-8 and 25 items per form for high school. The field test was conducted within the same test window after administering AIMS.

4.1.4 Quality Reviews

ADE and CTB personnel implemented a series of quality review checks at various stages of production to assure all AIMS materials were error free.

ADE first reviewed each component at a relatively early stage of page production. Items were compared to the way they were presented to the content/bias review committee to be sure no unauthorized changes had been introduced. Answer keys were checked. All changes were approved in writing by ADE.

A smooth AIMS test administration requires that all test materials, including test books, answer documents, and directions to students and test coordinators align with each other. Therefore, CTB conducted a materials integration review (MIR) as the second quality check. A side benefit of this review was the detection of possible revisions required on any unclear items.

Prior to creation of camera copy, CTB performed a third quality assurance (QA) review. The purpose of the QA review was to ensure that all publishable products met ADE's high quality standards and expectations.

After CTB conducted their QA review, all test forms were again submitted to ADE for review. All final forms and documents were reviewed and approved by ADE content specialists.

4.2 Pool of Items Used for Test Construction

4.2.1 Item Specifications

Prior to item editing, ADE and CTB reviewed and revised the item specifications. The item specifications are living documents and need to be constantly reviewed. The purpose of the review and revision was to provide further clarity for how AIMS would measure students' understanding of the standards. This was based on feedback from previous item development workshops. ADE and CTB staff reviewed the definition of what was being tested by each Performance Objective (PO) and, where needed, clarified the PO statements, the content limits, and the stimulus and response attribute descriptions. Taken together, these revisions further helped to inform instruction by explaining in detail what each PO meant at each grade level and by describing how each PO was to be tested.

The resulting documents were used during item reviews. Refinements and inputs were implemented. During item editing, it became clear that the item specifications would continue to require clarification and refinement in order to assure varied PO coverage within the test blueprint each year. More and varied illustrative samples for each PO need to be created that truly reflect the item specification components and clearly test the PO. These item specifications should continue to be refined as needed.

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4.2.2 Reading Passage Review

The passages considered for field testing in Spring 2009 were passages that had been commissioned for earlier years but not selected to be field tested in those years. They reflected the kinds of reading required by the AZ Reading Standards. Table 4.2.2.1 shows the kinds of passages offered to support the 2009 assessment. Therefore, the Spring 2009 passage development cycle began with a supply of 31 passages. Many of these passages already had items associated with them that had been reviewed, but not used, in previous years.

When considering passages and items for use in the Spring 2009 assessments, the committee critiqued them to be sure:

- all were well-written;
- all were rich in content and subject matter;
- all were age and grade appropriate;
- all avoided stereotyping and controversial, confusing, or emotionally-charged topics;
- together they reflected a range of multi-cultural content;
- some reflected the diversity of Arizona and the Southwest region; and
- all were written in such a way that no group would have an advantage or disadvantage.

In all, 31 passages and their accompanying items were prepared for a Reading Passage Review meeting held on March 20, 2008.

Table 4.2.2.1
Passages Prepared for Reading Passage Review in AZ March 2008

Grade	Fiction or Poetry	Expository/ Persuasive	Expository/ Functional	Total Taken to Passage Review
3	2	-	2	4
4	2	1	2	5
5	2	-	2	4
6	1	1	1	3
7	1	2	1	4
8	-	2	2	4
HS	2	1	4	7
Total	10	7	14	31

Those 31 passages were prepared for review in Passage Review Books. Each review book contained the passages and items for a specific grade. Each passage was on a template that included the word count and genre. The template also included space for reviewers to indicate their acceptance or rejection of the passage based on two back-to-back reviews: one for content and one for sensitivity issues. Items were also presented on templates. Each template included the Performance Objective which it was written to assess. During a general session, all reviewers were provided with the review criteria for each type of review.

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Content criteria included:

- Prior Knowledge/Audience/Appropriateness – Subject matter should be grade appropriate and not require specialized knowledge or background on the part of the reader.
- Interest – The material should engage the student. Students should find the topic interesting.
- Coherence/Cohesiveness – The passage should provide clear links between sentences and paragraphs. Antecedent reference should be clear and unambiguous.
- Writing Style/Passage Structure – The writing style should be consistent throughout the passage. Ideas should be presented in logical order.
- Unity/Purpose – Ideas should flow in a unified direction. The passage should have a clear purpose.
- Conceptual Density – Passage should place reasonable conceptual demands on the reader. New, unusual, or difficult terms should be explained using vocabulary familiar to the reader.
- Explication – Nonfiction passages should provide a balance between information that is stated directly and information that requires the reader to make inferences.
- Representation/Accuracy – Passages must represent their genre and contain factual information. Facts should be documented from reliable sources.
- Organizational Aids – Organizational aids, such as headings, diagrams, or introductions should be included where applicable.
- Story Structure – Passages should contain sufficient structure to support a variety of questions.

Sensitivity criteria included:

- Passages should be free of specific references to or descriptions of events of extreme sadness or adversity, acts of physical or psychological violence, alcohol or drug abuse, vulgar language, or sex.
- Religious, political, social, or psychological issues should be presented so that more than one point of view is expressed, factual accuracy is maintained, controversial contemporary issues are avoided, and stereotypical descriptions of beliefs or customs are avoided.
- Offensive, disturbing, and inappropriate language or content is not used.
- There should be no evidence of stereotyping based on gender, race, ethnicity, religion, socioeconomic status, age, regional or geographic area, disability, or occupation.
- Passages should be free of differential familiarity for any group based on language, socioeconomic status, regional or geographic area, or prior knowledge or experiences unrelated to the subject matter being tested.

Reviewers who represented all grade levels and Arizona's rich ethnic and cultural diversity read each passage and its items, discussed its content, and either accepted passages sets as they were or suggested revisions which were incorporated during the review sessions. A laptop connected to a

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projector allowed participants to revise passages on the spot. Table 4.2.2.2 shows the number of passages brought to passage review and the number accepted. Of the 31 passages taken to Reading Passage Review, 29 (approximately 94%) were accepted for use during item editing workshops. Only two passages were rejected, one because of possible bias, the other because of close similarity to a sample passage posted on the ADE website.

Table 4.2.2.2
Results of Reading Passage Review in AZ March 2008

Grade	Total Passages Reviewed	Total Passages Accepted
3	4	3
4	5	4
5	4	4
6	3	3
7	4	4
8	4	4
HS	7	7
Total	31	29

The 29 newly accepted passages were considered for item editing. Because there were more passages reviewed than actually needed, the committees ranked the passages and selected three passages for each grade to be taken to the editing workshop. These 18 passages were available for item editing in April.

4.2.3 Math Item Review

Of the 1,826 math items field tested in Spring 2009, 230 were embedded in the Spring 2009 assessment and were items that had been written for earlier years. Some had been written at previous item writing workshops and set aside without any further reviews, some had received internal edits by the contractor's content staff, almost half had been approved at previous content/bias reviews but were not selected to be field tested in those years, and others were judged to be salvageable with significant edits during previous content/bias reviews. Table 4.2.3.1 shows the stages of development of the 230 math items considered for field testing in Spring 2009.
The remaining 1,526 math items field tested in Spring 2009 were not embedded. Rather, they were prepared as separate test books that were administered as a stand-alone field test during the same testing window as the regular assessment. A small portion of the 1,526 items that were field tested this way already existed in the item bank, but needed to be re-field tested at a new grade level. The vast majority were developed during an item writing workshop conducted in October 2008. Refer to the 2009 AIMS Math Field Test Technical Report for a complete description of the development process.

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Table 4.2.3.1
Items Prepared for Math Item Review in AZ March 2008

Grade	New Items	Previously-edited Items	Previously-accepted Items	Salvageable Items	Total
3	17	6	10	10	43
4	12	7	14	7	40
5	11	6	15	0	32
6	9	4	11	0	24
7	10	0	12	2	24
8	8	0	13	7	28
HS	0	0	39	0	39
Total	67	23	114	26	230

These 230 items were prepared for review in Item Review Books. Each review book contained the items for a specific grade. Each item was on a template that included the strand, concept, and Performance Objective to which the item aligned as well as its stage of development. ADE staff evaluated each item for alignment to the soon-to-be-adopted new math standard. On March 25, 2008, ADE and contractor content staff met via conference call to identify the items that would align to the new standard and, therefore, be brought to the item editing workshop.

4.2.4 Item Editing

Items for the AIMS CRT tests are edited by Arizona teachers and facilitated[by the testing contractor. Item editing workshops were conducted in Arizona on April 29 and 30, 2008. Participants were selected on the basis of the criteria already established for item writers by ADE. They represented all grade levels and geographic regions of the state. Their task was to prepare sufficient items to bring to Content/Sensitivity review and still have the number of items needed, after attrition, to support the Spring 2009 field test. This meant editing enough items to field test one form per grade. Editing teams were organized by grade level spans (3 through 5; 6 through 8; HS) with their work spread over a two-day session. Table 4.2.4.1 shows the target number of passages and reading items needed per grade, the number of existing, previously-unused passages *with* items that could be revised and used in 2009, the number of existing, previously-unused passages *without* items that would require some new item creation, and the time allotted for the task. Table 4.2.4.2 shows the target number of math items needed and the number of existing items that could be revised and used in 2009. Appendix B contains the item editor selection criteria. Appendix C contains the PowerPoint slides used during the AIMS Item Editing Workshop.

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Table 4.2.4.1
Reading Item Editing Plan

	Target		Available		Days
	Passages	Items	Passages with Items	Passages without Items	
Grade 3	2 to 3	30 to 45	2	1	2
Grade 4	2 to 3	30 to 45	1	2	2
Grade 5	2 to 3	30 to 45	2	1	2
Grade 6	2 to 3	30 to 45	1	2	2
Grade 7	2 to 3	30 to 45	2	1	2
Grade 8	2 to 3	30 to 45	3	0	2
HS	2 to 3	30 to 45	3	0	1
TOTAL	14 to 21	210 to 315			
	~ 15 item per passage				

Table 4.2.4.2
Math Item Editing Plan

	Target	Available	Days
Grade 3	15	25	2
Grade 4	15	24	2
Grade 5	15	17	2
Grade 6	15	18	2
Grade 7	15	16	2
Grade 8	15	16	2
HS	15	24	1
TOTAL	105	140	

The group received instruction to guide their editing process. They were trained to first determine if the item tested the intended Performance Objective (PO) and if the item adhered to the established item specification. Items that passed this initial gate moved on to receive detailed editing. The group was trained to consider each editable item four ways: for content, for context, for clarity, and for construction and to apply acceptability criteria for each of these views. Finally, the group was trained to consider the results of their editing efforts as passage sets and as PO-related sets.

Each group was given copies of the item specifications (see section 4.2.1), style guides, vocabulary word lists, and checklists to guide their editing. Editors worked in teams to edit their items. In-room facilitators offered assistance and advice. They discussed the suggested revisions and arrived at items that met everyone's satisfaction.

The goal for the Reading team was to come away from the item editing workshop with at least two passage sets of well-written items per grade. As a result, some new item development was required at grades 4 and 6. To streamline this process, the contractor brought some pre-written item stems for which the group developed clearly correct answers and well-written distractors.

The contractor took all of the resulting items through another careful content review and edited the items for style in preparation for Content/Sensitivity Review (see section 4.2.5).

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4.2.5 Content/Sensitivity Review

Content and Sensitivity Reviews for newly written or edited Reading and Math items were conducted by Arizona educators and facilitated by contractor staff in June 2008. Reading items that had been judged acceptable during previous Content/Sensitivity Reviews were *not* reviewed again.

The purposes of the Content Review were to verify the accuracy, difficulty range, depth of knowledge, and grade-appropriateness of potential test items and to verify their alignment to the intended Performance Objective (PO). The purposes of the Sensitivity Review were to verify the items were free of stereotypes or other sources of bias and to confirm that they reflected community standards. Content and Sensitivity Reviews were conducted separately for each item. But, each item earned just one combined rating: Accept As Is, Accept with Revisions, or Reject. Participants were selected on the basis of their ability to represent their grade level and to assure ethnic, racial, and gender representation. At the conclusion of the reviews, participants selected the passages and items that would be field tested in Spring 2009.

During general sessions, participants received training in what to check during their Content Review, which included ensuring that the content of each item:

- was targeted to assess only one PO (unless specifications indicate otherwise);
- dealt with material that was important in testing the targeted PO;
- used grade-appropriate content;
- used appropriate thinking skills (application, analysis, conclusions, extending);
- was presented at a reading level suitable for the grade level being tested;
- was accurate and documented against reliable, up-to-date sources;
- had a stem that facilitated answering the question or completing the statement without looking at the answer choices;
- had a stem that did not present clues to the correct answer choice;
- had answer choices that were plausible and attractive to the student who had not mastered the objective or skill;
- was conceptually, grammatically, and syntactically consistent—between the stem and answer choices, and among the answer choices;
- had mutually exclusive distractors; and
- had one and only one correct answer choice.

During general sessions, participants received training in what to check during their Sensitivity Review, which included ensuring that each item:

- was free of offensive, disturbing, or inappropriate language or content;
- was free of stereotyping based on gender, race, ethnicity, religion, socioeconomic status, age, regional or geographic area, disability, and occupation;
- demonstrated sensitivity to historical representation of groups; and
- was free of differential familiarity for any group based on language, socioeconomic status, regional or geographic area, and prior knowledge or experiences unrelated to the subject matter being tested.

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Participants were also asked to ensure that the content of each item was free of explicit references to or descriptions of events involving extreme sadness or adversity, acts of physical or psychological violence, alcohol or drug abuse, vulgar language, or sex.

Throughout the Sensitivity Review, participants were asked to ensure that more than one point of view was expressed when any religious, political, social, or philosophical issues were addressed; beliefs or biases did not interfere with factual accuracy; contemporary issues that had already been proven to be controversial were absent; and stereotypic descriptions of beliefs or customs were absent.

During the reviews, participants were frequently encouraged to discuss each item and to make revisions that would bring the item into compliance with the above conditions. As they worked, participants were asked to consider the items two separate ways – once for content and once for sensitivity. Considering the results of both reviews, participants were asked to place the items into the following categories: Accept as Is, Accept with Revisions, or Reject.

Overall, the acceptance rates were quite high. Across all grade levels, 96.5% of the items reviewed were accepted either as is or with revisions. Table 4.2.5.1 shows the number and portion of items classified into each category during Content and Sensitivity Reviews by grade level and content area.

Any item that was rejected either for content or for sensitivity issues was removed from consideration for field testing. In order to ultimately contribute to an item bank of items that measure and support the curriculum and state content standards, selection of the field test items was guided by the test blueprints. The goal was to select 10 items for Grades 3 through 8 per content area (Reading and Mathematics), 10 items for high school Reading, and 15 items for high school Mathematics. Field test item selection was performed by Content/Sensitivity Review participants. Selections were subject to approval by ADE staff. Table 4.2.5.2 shows that 145 field test items were selected for inclusion in field test books.

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Table 4.2.5.1
Content and Sensitivity Review Results

Content Area	Grade	Items Reviewed	Accepted As Is		Accepted with Revisions		Rejected	
Reading	3	30	29	96.7%	1	3.3%	0	0
	4	31	30	96.8%	1	3.2%	0	0
	5	15	14	93.3%	0	0	1	6.7%
	6	13	9	69.2%	4	30.8%	0	0
	7	12	6	50%	4	33.3%	2	16.7%
	8	12	11	91.7%	1	8.3%	0	0
	HS	34	29	85.3%	2	5.9%	3	8.9%
Reading Total		147	128	87.1%	13	8.9%	6	4.1%
Math	3	15	13	86.7%	2	13.3%	0	0
	4	16	13	81.2%	3	18.8%	0	0
	5	14	13	92.9%	1	7.1%	0	0
	6	16	13	81.2%	1	6.3%	2	12.5%
	7	13	12	92.3%	1	7.7%	0	0
	8	14	12	85.7%	2	14.3%	0	0
	HS	23	16	69.6%	6	26.1%	1	4.3%
Math Total		111	92	82.9%	16	14.4%	3	2.7%
Grand Total		258	220	85.3%	29	11.2%	9	3.5%

Table 4.2.5.2 Number of Field Test Items Selected

Content Area	Number of Grades	Number of Forms	Number of Items Selected
Reading	6 (gr3 through 8)	1	60
Reading	1 (HS)	1	10
Math - embedded in Spr09 assessment	6 (gr3 through 8)	1	60
Math- embedded in Spr09 assessment	1 (HS)	1	15
Math – stand-alone FT	6 (gr3 through 8)	12	1,296
Math – stand-alone FT	1 (HS)	12	300
TOTAL			1,741

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4.2.6 Data Analysis

AIMS CRT Data Analysis was conducted July 22 and 23, 2008. Primary responsibility for conducting this workshop rested with ADE. However, a team of seven experienced test developers from CTB facilitated the data analysis activities. For Reading and Math, Arizona participants included four teachers for each content area and grade level band (grades 3 through 5, grades 6 through 8, and HS) for a total of 24 participants. The primary purpose of the Data Analysis meeting was to have Arizona educators examine the item data generated during the Spring 2008 field test, assign each item a status code to be included with the item information in the item bank, and determine each items' eligibility for possible selection as an operational item starting in Spring 2009.

Participants were given instruction by ADE staff in how to interpret basic statistical concepts related to item data including p-values, Rasch values, Infit/Outfit, point biserial correlations, response distributions and ethnic and gender differential item functioning (DIF) flags, omit rates, and population counts.

Items that measured the content they were intended to measure and whose statistics were within acceptable limits were assigned Item Acceptable (IA) status. These items were eligible for selection as operational items. Across the three grade levels, 82.7% of the items received IA status.

Items whose statistics indicated a fixable problem and defined where the item could be improved were assigned Re-Field Test (RFT) status. These items would be revised during future item writing workshops and would be re-field tested in future assessments. RFT appeared in Mathematics only, and on average, 6.5% items received RFT status across Mathematics grade levels.

Items whose statistics indicated they would not function fairly and reliably were rejected and assigned Do Not Use (DNU) status. These items were removed from consideration as operational items. Across the content and grade levels, about 10.8% of the items were assigned DNU status.

Table 4.2.6.1 shows the number and portion of items classified into each category during Data Analysis by grade level.

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Table 4.2.6.1
Items Given Special Codes

Content Area	Grade	Items Reviewed	Items Assigned IA Status		Items Assigned RFT* Status		Items Assigned DNU* Status	
Reading	3	40	38	95%	0	0	2	5%
	4	40	37	92.5%	0	0	3	7.5%
	5	38	35	92.1%	0	0	3	7.9
	6	40	32	80%	0	0	8	20%
	7	40	32	80%	0	0	8	20%
	8	40	30	75%	0	0	10	25%
	HS	100	85	85%	0	0	15	15%
Reading Total		338	289	85.5%	0	0	49	14.5
Math	3	40	36	90%	2	5%	2	5%
	4	40	35	87.5%	3	7.5%	2	5%
	5	40	38	95%	1	2.5%	1	2.5%
	6	40	36	90%	1	2.5%	3	7.5%
	7	40	31	77.5%	5	12.5%	4	10%
	8	40	32	80%	4	10%	4	10%
	HS	150	105	70%	31	20.7%	14	9.3%
Math Total		390	313	80.2%	47	12%	30	7.7%
Grand Total		728	602	82.7%	47	6.5%	79	10.8%

***** Re-field Test (RFT) - Do Not Use (DNU)

4.2.7 AIMS CRT Item Selection

AIMS CRT Item Selection was conducted July 24 and 25, 2008, immediately following the Data Analysis workshop. A team of seven experienced test developers from CTB facilitated the item selection meeting. For Reading and Math, Arizona participants included four teachers for each content area and grade level band (grades 3 through 5, grades 6 through 8, and HS) for a total of 24 participants. The primary purpose of the Item Selection meeting was to have Arizona educators select items to place on test forms for the Spring 2009 operational test that would produce valid and reliable scores using the items from the 2008 field test administration that had been designated as IA as well as using items from previous test administrations. Two sets of criteria guided the selection of AIMS items: content representation and statistical requirements.

All of the items in the item bank that were available and eligible for selection as operational items in Spring 2009 were displayed on grade level and content area Item Pool tables. With minor exceptions, the pool consisted of items field tested in 2002 through 2007. The items field tested in Spring 2008 were available in the Data Analysis materials used the previous two days. The Item Pool tables for the math committees were arranged by Performance Objective. The Item Pool tables for the reading committees were arranged by passage. All tables could also be sorted according to any of the columns, making them extremely useful tools for searching for items with specific characteristics. These items formed the pool for item selection. Item images could be viewed

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electronically via the item bank. Each meeting room was equipped with a laptop loaded with the item bank and a projection screen so that the entire group could view items at the same time.

Each entry on the table contained identification numbers, content alignment information (Strand, Concept, Performance Objective), the most recent test administration, and the most current statistical information about that item (p-value, Rasch values, point biserial, differential item functioning summary flags, Rasch model fit statistics, and the percent of students who omitted the item). Participants were given training to interpret these statistics and statistical guidelines for test selection. These guidelines included a target difficulty level for each test. Specifically, a target mean and standard deviation of selected item p-values, as well as a suggested distribution for the item p-values was provided for each grade/subject combination. Careful adherence to the specified distribution of p-values guaranteed students a reasonable opportunity to do well on a test that would be neither too easy nor too hard.

In addition to selecting items within specific p-values ranges, staff members were also asked to select items with item discriminations that indicate that getting the item correct is reasonably correlated with performance on the entire test (i.e., preferably item correlations greater than 0.3) and do not exhibit the potential for item bias (i.e., the items should not be flagged using various differential item functioning statistics).

Content considerations were addressed by the test blueprints. Careful adherence to the blueprints guaranteed the tests would validly measure the construct of Math and Reading as represented in the Arizona state content standards, maintain consistency, link to instruction, and allow for selection of items from different performance objectives within each concept. Substantial variance from the test blueprint could alter the test alignment and thus the validity of the scores being reported. Items were selected to represent the significant content categories specified in the test blueprint in the same proportion as the content categories represented in the test blueprint.

Prior to the participant committee meeting, CTB selected an anchor set of items upon which the operational forms would be constructed. The anchor set consisted of items that had been operational at least the previous year (during the Spring 2008 test administration). Regardless of content area or grade, each anchor set was carefully selected to meet statistical criteria and to proportionally represent the blueprint. Anchor sets were approved by ADE prior to the item selection workshop.

To facilitate the selection process and to guarantee that the proper number and proportion of items would be selected, participants were provided with Item Pool Tables and Item Replacement Tables. Table 4.2.7.1 shows a sample of an Item Pool Table and the available data considered by the item selection committee in its selection of replacement items. An analysis of Differential Item Functioning is performed for every administration. The latest values are included in the Item Pool Tables for each grade/content area and provided to participants in the item selection committee. The sample shown in Table 4.2.7.2 is a portion of the Item Replacement Table used by the participants to study their replacement requirements for Grade 3 Mathematics. This table shows the portion relevant to Strand 1 Concept 2 only. The entire table included all strands and concepts. This table shows the portion of columns relevant to Spring 2008 and Spring 2009. The entire table included the Spring 2005, Spring 2006, and Spring 2007 operational items.

The information in the first column shows the blueprint requirements for Strand 1, Concept 1 – 15% of the 72 Operational items (i.e., 11 items) should be covered by items from Strand 1, Concept 1 in the Grade 3 Mathematics test. The next two columns show that two of those 11 items are covered by *TerraNova* NRT/CRT items, leaving nine slots to be filled with AZ items. Similar columns were provided for each element of the blueprint, guaranteeing exact adherence to the blueprint.

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The set of columns labeled Spring 08 Operational Items include all of the AZ items covering Strand 1 Concept 1 that were in the Spring 2008 test. The set of columns labeled Spring 09 Operational Items show the items that were retained from the Spring 2008 administration. These retained items were designated as anchor items. During item selection for Spring 2009, the participants' task was to retain as many anchor items as possible, and select items to fill in any gaps in blueprint coverage. As the participants considered each option based on content and difficulty, they could refer to the Item Pool Table to determine if the statistical considerations were being met and to the item bank to see the items.

As selections were made, they were recorded on Item Replacement Tables. These tables were loaded onto computers and projected for group discussion. These tables provided a running record of the selections and further helped to guarantee blueprint coverage.

These tables were completed for all selections and were subject to approval by both ADE and CTB/McGraw-Hill's Research department.

Table 4.2.7.3 shows the number of AIMS Reading and Mathematics items that were selected for each grade. All selections were approved by CTB research staff and ADE staff.

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Table 4.2.7.1
Sample Grade 3 Mathematics Item Pool Table

AZID	PEID	Content	Grade	Strand	Concept	PO	Recent Year	Rasch	p_value	Pt_Bis	Infit	Outfit	DIF M_F	DIF W_B	DIF W_H	DIF W-AmI	DIF W_A	% Omit
3015074	00586502	MA	03	1	1	15	2008_OP	-0.1033	0.75	0.51	0.88	0.77	C<	A	B>	B>	A	0
3148275	00586520	MA	03	1	1	3	2008_OP	-0.8453	0.83	0.27	1.15	1.53	A	A	B>	B>	A	0
3148288	00586536	MA	03	1	1	18	2008_OP	-0.1979	0.77	0.44	0.94	0.89	B<	A	B>	B>	A	1
3148311	00586546	MA	03	1	1	4	2008_OP	-0.3678	0.78	0.36	1.04	1.07	B>	B>	B>	B>	B>	0
3148308	00586556	MA	03	1	1	20	2008_OP	0.5433	0.66	0.47	0.94	0.91	B<	B>	B>	A	B>	0
3148310	00586562	MA	03	1	1	4	2008_OP	-0.1005	0.75	0.39	1.01	0.97	A	A	B>	B>	B>	1
3157143	00586572	MA	03	1	1	9	2008_OP	0.3815	0.67	0.44	0.98	0.98	B<	A	A	A	A	0
3148306	00586584	MA	03	1	1	19	2008_OP	0.6561	0.62	0.54	0.88	0.8	B<	B<	B<	B<	B<	1
3148314	00586598	MA	03	1	1	7	2008_OP	0.9240	0.57	0.49	0.94	0.92	B>	A	B<	A	A	4
3139131	00586496	MA	03	1	2	12	2008_OP	-1.0807	0.87	0.42	0.9	0.73	B>	B>	B>	A	B>	1
3156997	00586506	MA	03	1	2	10	2008_OP	-0.3529	0.76	0.44	1.05	1.03	A	B>	B>	B>	B>	0
3139242	00586530	MA	03	1	2	11	2008_OP	-0.3585	0.77	0.37	1.09	1.13	A	B>	B>	A	B>	0
3139140	00586558	MA	03	1	2	6	2008_OP	1.0541	0.55	0.49	0.93	0.9	B<	A	A	A	B>	0
3139236	00586574	MA	03	1	2	9	2008_OP	-0.7810	0.84	0.36	1	1.01	B>	B>	B>	B>	A	2
3139119	00586594	MA	03	1	2	7	2008_OP	-0.2474	0.76	0.54	0.88	0.75	A	B>	B>	A	B>	2
3513026	00852897	MA	03	1	2	16	2008_OP	0.0151	0.73	0.28	1.14	1.3	B>	B>	B>	A	B>	0
3150192	00586522	MA	03	1	3	3	2008_OP	1.8927	0.39	0.30	1.14	1.24	A	B<	A	A	B<	0
3139137	00586580	MA	03	1	3	5	2008_OP	-0.3252	0.78	0.44	0.96	0.94	B<	B<	B<	A	B<	1

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Table 4.2.7.2
Sample Grade 3 Mathematics Item Replacement Table

# of Items Required per Blueprint	# of TN Items in Test	# of AZ Items needed	Strand	Concept	Spr08 OP items				Spring 09 - New Operational Items					
									Selections					
					Actual # of AZ Items in Spring 08	PO	AZID	PEID	Actual # of AZ Items Needed in Spring 09	PO	AZID	PEID	P-VALUE	Rasch
11	2	**9**	1	1	**9**	1.1.3	3148275	00586520	**9**	1.1.3	3148275	00586520	0.83	-0.8453
			1	1		1.1.4	3148310	00586562						
			1	1		1.1.4	3148311	00586546		1.1.4	3148311	00586546	0.78	-0.3678
			1	1		1.1.7	3148314	00586598						
			1	1		1.1.9	3157143	00586572						
			1	1		1.1.15	3015074	00586502						
			1	1		1.1.18	3148288	00586536		1.1.18	3148288	00586536	0.77	-0.1979
			1	1		1.1.19	3148306	00586584						
			1	1		1.1.20	3148308	00586556		1.1.20	3148308	00586556	0.66	0.5433

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Table 4.2.7.3
Number of Reading and Math Items Selected by Committee

Content Area	Grade	CRT Items Only	Anchor Items		Total Selected	
Reading	3	42	20	47.6%	22	53.4%
	4	39	18	46.2%	21	53.8%
	5	39	18	46.2%	21	53.8%
	6	39	21	53.8%	18	46.2%
	7	39	28	71.8%	11	28.2%
	8	39	24	61.5%	15	38.5%
	HS	54	20	37%%	34	63%
Reading Total		291	149	51.2%	142	48.8%
Math	3	57	33	57.9%	24	42.1%
	4	55	35	63.6%	20	36.4%
	5	53	31	58.5%	22	41.5%
	6	53	26	49%	27	51%
	7	53	30	56.6%	23	43.4%
	8	53	36	67.9%	17	32.1%
	HS	85	31	34.5%	54	63.5%
Math Total		409	222	54.3%	187	45.7%
Grand Total		700	371	53%	329	47%

4.2.8 AIMS NRT Item Selection

The *TerraNova* component of all earlier AIMS assessments was replicated in the 2009 AIMS administration. Specifically, the *TerraNova* items that yielded the NRT scores for the 2009 AIMS assessment and the subset of *TerraNova* items that contributed to the CRT portion of the 2009 AIMS were identical to those on the 2008, 2007, 2006, and 2005 AIMS administration.

The *TerraNova* items embedded in the AIMS DPA assessment were selected to match the test blueprint and statistical criteria of *TerraNova* Form D Complete Battery. The differences in blueprint representation between the *TerraNova* component embedded in the AIMS DPA assessment and the *TerraNova* Form D Complete Battery are summarized below.

For *TerraNova* Reading, the difference in blueprint representation at the strand level exceeded 5% in only one strand in the grade 3 test. The difference in blueprint representation in all other strands in grades 3-8 did not exceed 3%. The difference between test characteristic curves in terms of expected percent of maximum raw score did not exceed 2%.

For *TerraNova* Language, difference in blueprint representation did not exceed 5% at the strand level with the exception of one strand in grade 4 and two strands in grade 8 where the differences were 6%, 6%, and 8%, respectively. The difference between test characteristic curves in terms of expected percent of maximum raw score did not exceed 2%.

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For *TerraNova* Mathematics, the difference in blueprint representation at the strand level did not exceed 5% with the exception of one strand in grade 6 (7%), one strand in grade 7 (9%), and one strand in grade 8 (6%). The difference between test characteristic curves in terms of expected percent of maximum raw score did not exceed 2%.

The 2005 AIMS Technical Report contains more information about how the *TerraNova* items were selected in 2005. Copies of the 2005 AIMS Technical Report are available from Arizona Department of Education at the following web address: www.azed.gov/standards/aims/Administering/AIMSTechReport2005.pdf.

4.3 Customer Approvals

Approvals from ADE staff were obtained during several phases of development: during selection of the CRT items, after second pages were created, at the completion of the QA reviews, and when pre-press test books were available. Each is described below.

4.3.1 Item Selection Approval

Since the item selection was conducted in AZ, item selection approvals were obtained on site at the end of each day. ADE staff members were given the Item Replacement Tables and the item cards. Content was the main focus of this review. Approval was verbal. The item selection tables were then sent electronically to the contract's Research Scientist for review. Psychometric evaluation of the test selection was the main focus of this review. Recommended changes were discussed with and approved by ADE.

4.3.2 Second Pages Approvals

At the second pages phase of development, items had been arranged into test book format. That is, they were no longer treated as individual items, but appeared in page layouts as they would appear in the final, printed test books. By this point, all content issues were resolved. That is, the focus of this approval was on format and presentation issues, rather than on content issues. Formal approval was given. Desired changes were communicated via email and the Edit Request Form which included a description of the change, a justification, and space for the customer to grant or deny approval. Formal sign-off of second pages by ADE was achieved via a Request for ADE Approval (RAA) document.

4.3.3 FTP Site

A secure FTP site had been established for transfer of electronic documents (annotated test books, test book reviews, confirming copies, etc.) that need to be reviewed by ADE staff. After careful review by ADE staff, corrections and edits were transmitted to CTB for inclusion/revision of the test documents.

4.3.4 Materials Integration Review (MIR)

The MIR review provided an opportunity for CTB staff members who had not previously seen the test materials to review them. This review helped assure that test books, answer documents, and test administration directions all work in concert. A MIR summary listed any anomalies found.

4.3.5 Quality Assurance (QA) Review (CTB)

The QA review provided another opportunity for CTB staff members who had not previously seen the test materials to review them. This review focused on detecting errors, inconsistencies, and cosmetic errors. Items with problems identified during the QA review were annotated. CTB

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staff resolved all comments and made necessary corrections prior to releasing the materials.

4.3.6 ADE Quality Review

After CTB reviewed and edited test documents, ADE staff conducted a final review of "second pages" and "confirming copies" to determine if all edits had been accomplished properly.

4.3.7 Final Sign-off

A final, formal approval (blue line stage) was given as test books became available for printing. A copy of the test book was sent for ADE to review. A formal approval document (RAA) was also included to be signed and returned.

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Part 5: Test Administration

Part 5 of the technical report describes administration procedures, including accommodations, security, and written procedures available to test administrators and school personnel for all AIMS and TerraNova testing for the 2008-2009 school year. The following AERA/APA/NCME standards are addressed: 1.13, 3.3, 3.19, 3.20, 3.21, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 6.11, 6.15, 9.1, 10.1, and 10.2.

5.1 Accommodations

The same accommodations were made available for all of the Fall 2008 and Spring 2009 AIMS tests, including AIMS HS, AIMS DPA, and AIMS Math Field Test. In addition, in Grades 2 and 9, students were assessed in Reading, Language Arts, and Mathematics using *TerraNova*, a norm-referenced test published by CTB/McGraw-Hill. *TerraNova* was normed in 2000. The norming group included students with disabilities who received accommodations and students identified as English Learners. Therefore, all of the AIMS HS, AIMS DPA, *TerraNova* and AIMS Math Field Testassessments allow the same accommodations and include students who have received accommodations.

Students with disabilities who have an Individualized Education Program (IEP), or who have a 504 plan, may be considered for both universal and standard accommodations (described in section 5.1.1). Also, students identified as English Language Learner (ELL) and students who have been identified as Fluent English Proficient (FEP) for no more than two years may be considered for both universal and standard accommodations.

For the purposes of assessment, a Special Education student is eligible to receive services under the Individuals with Disabilities Education Act –(IDEA) and has an Individualized Education Program (IEP); and a 504 student is eligible under Section 504 of the Rehabilitation Act of 1973 and has a 504 Accommodation Plan.

The Arizona English Language Learner Assessment (AZELLA), a language proficiency assessment, is given to determine a student's proficiency in English and respective instructional placement. An English Language Learner (ELL) is a student whose native language is other than English, whose scores below the proficient level on the AZELLA, and is placed into a language program. Fluent English Proficient (FEP) is a term that is used to refer to a former ELL student who has scored at the proficient level of the AZELLA.

Detailed information about testing accommodations was included in the document, *Testing Accommodations: Guidelines for 2008-2009* on the ADE website. This document was posted at the following location: http://www.ade.az.gov/standards/AIMS/Administering/Default.asp

5.1.1 Overview of Accommodations

Accommodations are specific practices and procedures that provide students with equitable access during instruction and assessment. Accommodations are made in order to provide a student equal access to learning and equal opportunity to demonstrate what is known. They are intended to reduce or even eliminate the effects of a student's disability. Accommodations can be changes in the presentation, response, setting, and timing/scheduling of educational activities. There should be a direct connection between a student's disability or need and the accommodation(s) provided to the student during educational activities, including assessment.

Students should receive the same accommodations for classroom instruction, classroom assessments, district assessment, and state assessments. No accommodations should be provided

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during assessments that are not also provided during instruction. However, not all accommodations appropriate for instruction are appropriate for use during a standardized state assessment. **The accommodations available to students while testing on *TerraNova*, AIMS DPA, AIMS HS, or AIMS Math Field Test are limited to those listed in later sections of this document.**

Accommodations may not provide verbal or other clues or suggestions that hint at or give away the correct response to the student. Therefore, it is not permissible to simplify, paraphrase, explain, or eliminate any test item, prompt, or multiple-choice option. Additionally, accommodations provided for one student may not impede or impact other students in the testing room. It is the responsibility of the Testing Administrator to see that each student, who qualifies for testing accommodations, receives these accommodations while also ensuring that other students, who do not receive accommodations, are not affected.

5.1.2 Descriptions of Universal and Standard Accommodations

Arizona offers two levels of accommodations to students participating in state assessments: universal accommodations and standard accommodations.

Universal Accommodations are provisions made for students that are in need of a minor change in testing practices or procedures in order to demonstrate their learning. Universal accommodations do not change what the student is responsible for learning or demonstrating. Students who are in need of universal accommodations do not necessarily have a disability that qualifies them for an IEP or a 504.

Standard Accommodations are provisions made in how a student accesses and demonstrates learning that does not substantially change the instructional level, the content, or the performance criteria. Students with disabilities who have an Individualized Education Program (IEP), or who have a 504 plan, may be considered for standard accommodations. Also, English Language Learners may be considered for standard accommodations.

During the assessment, all accommodations for assessment identified in a student's IEP must be made available. However, students may choose not to use the accommodation(s).

5.1.3 Determining if a Student Needs a Testing Accommodation

When students need accommodations in how they learn or demonstrate learning, they are likely to need accommodations in how they are assessed. Conversely, if students do not need accommodations in how they learn or demonstrate learning, they will not need accommodations in how they are assessed. Therefore, no accommodation can be put in place for assessment that is not also used for instruction.

To determine if a student will need testing accommodations to participate in state assessments, the following questions were asked:

- Does the student use accommodations during daily instruction?
- If the student uses accommodations during daily instructions, does the student need accommodations in order to participate in the state assessment?
- If so, which testing accommodations are necessary and appropriate for the student?

It is important to annually re-consider the types of accommodations used for students, particularly as they gain more skills. Table 5.1.1 lists the specific testing accommodations available to students while participating in a state assessment.

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Figure 5.1.1
Fall 2008 and Spring 2009 AIMS Standard Accommodations

Universal Accomodations	All	ELL	504	Special Education
a separate location or study carrol	x	x	x	x
preferential seating	x	x	x	x
special lighting	x	x	x	x
student wears noise buffers (after directions)	x	x	x	x
special furniture or pencil	x	x	x	x
familiar test administrator	x	x	x	x
repeat directions	x	x	x	x
clarify directions	x	x	x	x
color overlay	x	x	x	x

Standard Accomodations	Injured	ELL	504	Special Education
more breaks and/or several shorten sessions		x	x	x
small group administrion or one-on-one testing		x	x	x
simplify language in directions in English		x	x	x
read aloud in English the writing prompt, mathematics test items, or science test items as neede upon student request		x	x	x
provide a word-for-word published, paper translation dictionary		x		
exact oral tanslation of directions as needed upon student request		x		
test at a different time of day			x	x
read or sign directions			x	x
exact sign language interpretation of the writing prompt, mathematics test items, or science test items			x	x
magnification device			x	x
amplification equipment			x	x
place marker used			x	x
large print or Braille edition of test			x	x
for a student who is blind, use of an abacus for mathematics test items			x	x
for a student who is blind, use of an electronic dictionary and thesaurus with grammar check, spell check, encyclopedia, translation, and internet access turned off			x	x
for a student who is blind, Braille writers*			x	x
write answers directly into test booklet*	x		x	x
record or dictate multiple choice reponses to a scribe*	x		x	x
use assisitive technology with spell check, grammer check, and predict ahead functions turned off*	x		x	x

* For these accomodations, the student's responses must be transferred to the student's answer document as directed in the corresponding *Test Administration Directions* manual

5.1.4 Reporting Results of Assessments Taken with Accommodations

Students who receive **standard** testing accommodations while participating in *TerraNova*, AIMS DPA, AIMS HS, or AIMS Math Field Test must have their accommodations appropriately identified on their answer document as directed in the corresponding Test Administration Directions. It is not necessary to identify students who received **universal** accommodations while participating in *TerraNova*, AIMS DPA, AIMS HS, or AIMS Math Field Test.

The use of **universal** or **standard** accommodations results in scores that are considered valid for comparison and accountability purposes. The results for students who participated in assessments with **universal** or **standard** accommodations will be included in aggregate results at the school, district, and state level on the paper reports provided by the testing contractor. Students who received **universal** or **standard** accommodations on AIMS DPA and AIMS HS will count as having tested for federal accountability (AYP) purposes. Students taking the AIMS Math Field Test will not receive any scores or score reports.

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5.2 Test Security

All AIMS tests were administered under secure testing conditions. Figure 5.2.1 includes the security agreement signed by personnel involved with testing administration.

5.3 Test Administration

In order to ensure standardized testing administration for all students, a Test Coordinator's manual was made available to all test coordinators for the Fall 2008 and Spring 2009 administrations. The manual included the following topics:

- Schedule of Important Dates
- District Test Coordinator's Responsibilities
- Scheduling Test Administration
- Students to be Tested
- Student Identification Information
- Test Materials
- Receiving Test Materials
- Inventorying Test Materials
- Procedures During Test Administration
- Procedures Following Test Administration
- Returning Materials to CTB/McGraw-Hill
- Test Security

Test Administration Directions were made available to all test administrators for the Fall 2008 and Spring 2009 assessments. They included the following:

- Test Administrator Responsibilities
- Arrangements Prior to Test Administration
- Test Materials and Testing Schedule
- Test Administration Guidelines
- Student Identification Information
- Detailed Scripts for Administration of Each Part of Each Test
- Procedures Following Test Administration

For specific information related to test administration, refer to the Test Coordinator's Manual and/or the Test Administration Directions.

Pre-test workshops were presented to all test coordinators across the state. Both ADE and CTB participated in these workshops. All districts test coordinators are required to attend a pre-test workshop and make-up workshops are provided if someone misses a required workshop. Attendance is checked to verify attendance by at least the district test coordinator.

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Figure 5.2.1
2009 Spring AIMS Test security agreement

Arizona's Instrument to Measure Standards
AIMS/*TerraNova* Security Agreement
Spring 2009

I acknowledge that AIMS/*TerraNova* is a secure test and I agree to the following conditions of use to ensure the security of the test:

1. I will take necessary precautions to safeguard test materials
   a. Limiting access to persons with a responsible, professional interest in the test's security.
   b. The names of all persons having access to the materials will be kept on file by the designated test coordinator.
   c. All persons having access to the AIMS/*TerraNova* test materials (other than students to whom the test is administered) will sign the test security agreement, which will be kept on file for 6 years.
      i. Building administrators will maintain signed agreements of building staff.
      ii. Superintendent/charter representative will maintain signed agreements of building administrators.
      iii. Superintendent/charter representative will sign for district and submit security agreement to ADE.
      iv. ADE will maintain signed agreements of superintendents/charter representatives.

2. I will keep all test materials under lock and key, except on actual testing dates, limiting access to those responsible for their security.
   a. Secure test materials, including test books and directions, will be delivered to examiners no sooner than the date of testing, unless logistics dictate an earlier delivery date.
   b. Test materials will be kept secure until they are actually distributed to students.
   c. In no case will students be permitted to remove test material from the room where testing takes place except under supervision of staff (students completing test).

3. I will not examine the AIMS/*TerraNova* to determine the content beyond the requirements to administer the test.
   a. No content of the test will be disclosed or allowed to be disclosed.
   b. No test item will be discussed at any time.

4. I will follow the guidelines approved by the State Board of Education in January 2003, updated in December 2007, in the document *Test Preparation and Administration Practices*.

5. I understand the district superintendent or charter operator will develop, distribute, and enforce disciplinary procedures for the violation of test security by district or agency staff.

Individuals that will be administering or proctoring the AIMS/*TerraNova* for the Spring 2009 must also:

6. Participate in training activities prior to administering the AIMS/*TerraNova* in Spring 2009.

7. Review Test Administration Directions for Spring 2009 prior to test date.

8. Follow all instructions in the Test Coordinator's Manual and the Test Administration Directions which includes reading the directions to students exactly as scripted in the Test Administration Directions.

9. Upon completion of testing, return all AIMS/*TerraNova* test materials, including all used and unused test books, answer documents, and test administration manual to the designated test coordinator for the school/district.

By signing my name to this document, I am assuring my district/charter and the Arizona Department of Education that I will abide by the above conditions and that anyone I supervise, who will have access to the Spring 2009 AIMS/TerraNova test will also sign a Test Security Agreement.

Signed By: _____

Printed Name: _____

Title: _____

School: _____

Please return signed copy as per instructions from your district/school test coordinator.
All copies will be maintained by building/district administrators for 6 years.

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Part 6: Classical Item Analysis

Part 6 presents classical test statistics and item analysis statistics for each content area and grade level (CRT and NRT) computed along with the data used for calibration and scaling. Addressed in this part of the technical report are the following AERA/APA/NCME standards: 1.5, 1.13, 2.4, 2.8, 3.18, 6.5, and 7.1. (See Appendix A for this information for the 2008 Fall AIMS administration.)

6.1 Data

Arizona had two test windows for operational testing in spring 2009. The high school Reading and Writing tests were administered between February 24 and March 4. High school Math tests were administered between April 1 and April 7. HS Science was administered on April 2 (no makeup). The AIMS grades 3-8 Reading, Writing, Math, and Science tests were administered between March 30 and April 17.

6.2 Descriptive Statistics by Test

Table 6.2.1 presents descriptive statistics by test (content area and grade level) which are computed with the calibration samples in Reading, Mathematics, Science, and census data in writing. In the table it shows the number of students (N), the maximum obtained raw score (Max RS), the raw score mean (RS M), the raw score standard deviation (RS SD), the average p-value (P-value M), the average item to total correlation (*r* M), and Cronbach's alpha as a measure of internal consistency. The item to total correlation is computed as a point biserial correlation for dichotomous items and as a Pearson product-moment correlation for polytomous items. The point biserial correlation reported is the point biserial of the item and sum of other operational items. The Pearson product-moment correlation reported is the Pearson product-moment correlation of the item and sum of other operational items.

Note that internal consistency is not reported for the Writing tests. This is because, although Cronbach's alpha could be used as a measure of internal consistency for the 2009 Spring AIMS CRT Writing tests, this measure would likely overestimate the coefficient because the trait scores are based on the same response. Furthermore, split-half reliability for a single prompt test may not be a valid estimate of reliability for a single prompt test. Therefore, measures of internal consistency for the AIMS Writing tests are not reported.

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Table 6.2.1
2009 Spring AIMS Classical Test Analysis Statistics

	Content	Grade	Form	N	Max RS Obtained	RS M	RS SD	P-value M	rpb M	Internal Consistency
CRT										
	Math									
		3		83190	72	51.72	12.83	0.72	0.39	0.93
		4		82526	70	52.00	12.79	0.74	0.41	0.94
		5		81189	68	47.48	13.59	0.70	0.43	0.94
		6		80963	68	48.08	13.58	0.71	0.43	0.94
		7		81190	68	48.11	13.13	0.71	0.42	0.94
		8		79663	66	44.75	12.81	0.68	0.41	0.93
		HS		74547	85	57.45	16.97	0.68	0.43	0.95
	Reading									
		3		83191	54	37.05	10.80	0.69	0.43	0.93
		4		82539	54	39.34	10.85	0.73	0.45	0.93
		5		81189	54	38.26	10.46	0.71	0.42	0.92
		6		80953	54	37.66	10.27	0.70	0.41	0.92
		7		81199	54	37.16	10.32	0.69	0.40	0.92
		8		79673	54	36.94	10.34	0.68	0.39	0.91
		HS		74672	54	36.96	10.33	0.68	0.40	0.92
	Writing									
		3		82848	36	191.17	51.41	0.53	0.85	0.95
		4		82344	36	193.28	42.93	0.54	0.84	0.95
		5		81031	36	201.10	49.08	0.56	0.86	0.96
		6		80821	36	206.26	43.82	0.57	0.84	0.95
		7		81252	36	205.43	47.11	0.57	0.86	0.95
		8		79750	36	211.08	45.11	0.59	0.85	0.95
		HS	A	96509	36	212.71	45.21	0.59	0.91	0.97
		HS	T	3574	35	194.79	54.76	0.54	0.91	0.97
	Science									
		4		81732	54	35.11	9.30	0.65	0.35	0.89
		8		78502	58	36.85	10.64	0.64	0.37	0.91
		HS		50472	65	35.37	11.63	0.54	0.35	0.91

Note: CRT = Criterion-referenced test, NRT = Norm-referenced test, HS-A = High School Prompt A, HS-T = High School Prompt T. High school writing test have a maximum raw score of 72 because 6 traits were scored by two raters each, treated in analysis as 1

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Table 6.2.1 (continued)
2009 Spring AIMS Classical Test Analysis Statistics

	Content	Grade	Form	N	Max RS Obtained	RS M	RS SD	P-value M	rpb M	Internal Consistency
NRT										
	Math									
		4		82526	25	18.46	4.59	0.74	0.37	0.83
		5		81189	25	17.59	5.10	0.70	0.40	0.85
		6		80963	25	17.35	5.42	0.69	0.42	0.87
		7		81190	25	15.25	5.35	0.61	0.39	0.85
		8		79663	25	15.90	5.06	0.64	0.37	0.83
	Reading									
		3		83191	25	16.29	5.00	0.65	0.37	0.83
		4		82539	25	18.25	5.07	0.73	0.41	0.86
		5		81189	25	17.14	4.78	0.69	0.37	0.82
		6		80953	25	17.71	4.74	0.71	0.37	0.82
		7		81199	25	16.35	5.50	0.65	0.41	0.86
		8		79673	25	17.88	4.74	0.72	0.37	0.83
	Language									
		3		83191	20	12.87	3.92	0.64	0.36	0.79
		4		82539	20	13.54	3.94	0.68	0.35	0.79
		5		81189	20	12.91	4.58	0.65	0.41	0.84
		6		80953	20	13.04	4.41	0.65	0.40	0.82
		7		81199	20	13.77	4.16	0.69	0.38	0.81
		8		79673	20	13.11	3.95	0.66	0.36	0.79

Note: CRT = Criterion-referenced test, NRT = Norm-referenced test, HS-A = High School Prompt A, HS-T = High School Prompt T. High school writing test have a maximum raw score of 72 because 6 traits were scored by two raters each, treated in analysis as 1

6.3 Classical Item Analysis

Classical item analysis was conducted for all grades and content areas. Tables 6.3.1—6.3.25 presents item statistics for the CRT tests. Note that operational CRT items are reported in sequence without embedded field test and non-dual purpose NRT/CRT items. Tables 6.3.26—6.3.43 presents item statistics for the NRT tests. The tables show the number of students (N), the item difficulty (P-Value), point biserial correlation (r_{pb}) and biserial correlation (r_{bi}) for dichotomous items, item to total Pearson product-moment correlation (r) for polytomous items, percentage of students who omitted the item (% Omit), and the percentage of students responding to and point biserial for the key and each distractor. The point biserial correlation (r_{bi}) reported is the point biserial correlation of the item and sum of other operational items. The biserial correlation (r_{pb}) reported is the biserial correlation of the item and sum of other operational items. The item to total Pearson product-moment correlation reported is the Pearson product moment correlation of the item and sum of other operational items.

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Table 6.3.1
2009 Spring AIMS Classical Item Analysis
Mathematics CRT Grade 3

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
1	83190	0.69	0.44	0.58	0.25	69.08	11.06	-0.20	6.58	-0.27	13.02	-0.21
2	83190	0.91	0.32	0.58	1.10	91.37	3.95	-0.18	1.84	-0.20	1.72	-0.16
3	83190	0.77	0.41	0.57	0.17	76.98	5.56	-0.25	7.96	-0.22	9.32	-0.19
4	83190	0.99	0.17	0.59	0.16	98.82	0.24	-0.09	0.31	-0.09	0.46	-0.10
5	83190	0.72	0.36	0.48	0.38	71.94	8.53	-0.24	11.44	-0.20	7.67	-0.12
6	83190	0.59	0.38	0.49	0.29	59.23	22.33	-0.24	10.76	-0.09	6.65	-0.19
7	83190	0.77	0.44	0.61	0.50	76.88	14.73	-0.36	6.58	-0.16	1.30	-0.14
8	83190	0.79	0.37	0.52	0.47	78.66	1.36	-0.19	14.49	-0.17	5.01	-0.31
9	83190	0.85	0.26	0.40	0.35	85.33	3.30	-0.23	5.36	-0.12	5.64	-0.09
10	83190	0.45	0.29	0.36	0.76	45.48	21.64	-0.06	15.69	-0.20	16.39	-0.11
11	83190	0.83	0.31	0.45	0.59	82.96	1.86	-0.13	10.93	-0.18	3.62	-0.19
12	83190	0.96	0.24	0.58	0.41	96.41	1.31	-0.15	1.02	-0.14	0.79	-0.13
13	83190	0.74	0.48	0.64	0.90	74.19	10.63	-0.31	10.33	-0.26	3.93	-0.15
14	83190	0.60	0.46	0.59	0.33	59.70	2.27	-0.08	6.93	-0.10	30.66	-0.40
15	83190	0.60	0.61	0.77	0.46	59.70	27.17	-0.53	8.30	-0.21	4.31	0.01
16	83190	0.79	0.55	0.77	0.36	78.69	7.32	-0.25	7.85	-0.34	5.76	-0.29
17	83190	0.72	0.28	0.37	0.36	71.75	13.47	-0.15	7.16	-0.10	4.31	-0.17
18	83190	0.62	0.44	0.56	0.27	62.29	16.06	-0.20	8.72	-0.21	12.66	-0.23
19	83190	0.47	0.33	0.41	0.25	46.85	43.18	-0.15	4.82	-0.19	4.84	-0.23
20	83190	0.77	0.53	0.74	0.15	77.43	1.63	-0.20	17.98	-0.40	2.80	-0.23
21	83190	0.48	0.24	0.31	0.52	48.31	16.17	-0.14	9.83	-0.23	25.15	0.01
22	83190	0.94	0.36	0.71	0.91	93.98	1.39	-0.19	1.42	-0.22	2.30	-0.22
23	83190	0.84	0.27	0.41	0.18	83.68	1.01	-0.19	13.27	-0.15	1.85	-0.21
24	83190	0.67	0.23	0.30	0.29	66.52	9.01	-0.19	12.72	-0.08	11.42	-0.07
25	83190	0.55	0.35	0.45	0.60	54.95	14.21	-0.11	15.81	-0.20	14.42	-0.17
26	83190	0.83	0.29	0.44	0.59	82.77	9.94	-0.18	4.30	-0.16	2.39	-0.14
27	83190	0.40	0.31	0.40	0.54	40.46	24.15	0.09	33.32	-0.36	1.50	-0.13
28	83190	0.83	0.37	0.55	0.47	83.07	6.56	-0.18	1.96	-0.20	7.87	-0.24
29	83190	0.64	0.46	0.59	0.71	64.15	12.70	-0.21	9.24	-0.18	13.20	-0.28
30	83190	0.87	0.43	0.68	0.28	87.32	5.38	-0.24	2.81	-0.23	4.19	-0.23
31	83190	0.94	0.35	0.69	1.17	94.02	2.21	-0.21	1.17	-0.19	1.43	-0.21
32	83190	0.53	0.38	0.47	0.95	52.55	35.78	-0.16	6.66	-0.35	4.05	-0.08
33	83190	0.78	0.38	0.53	0.32	77.85	5.93	-0.12	3.12	-0.22	12.77	-0.25
34	83190	0.56	0.53	0.66	0.52	56.34	12.45	-0.23	27.56	-0.34	3.13	-0.16
35	83190	0.78	0.44	0.62	0.66	77.94	6.48	-0.20	4.12	-0.23	10.79	-0.27
36	83190	0.76	0.44	0.61	0.90	76.28	7.77	-0.25	11.55	-0.21	3.51	-0.26
37	83190	0.67	0.53	0.69	0.53	66.69	14.56	-0.41	9.75	-0.28	8.46	-0.06
38	83190	0.53	0.41	0.51	0.26	52.89	18.42	-0.22	13.65	-0.12	14.77	-0.22
39	83190	0.46	0.44	0.55	0.36	45.55	28.62	-0.23	12.13	-0.09	13.32	-0.24
40	83190	0.86	0.49	0.76	0.37	85.60	5.53	-0.30	4.53	-0.25	3.97	-0.24

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

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Table 6.3.1 (continued)
2009 Spring AIMS Classical Item Analysis
Mathematics CRT Grade 3

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
41	83190	0.81	0.37	0.53	0.30	80.66	5.68	-0.22	9.44	-0.18	3.90	-0.19
42	83190	0.86	0.30	0.47	0.47	85.98	7.04	-0.17	3.83	-0.15	2.66	-0.18
43	83190	0.89	0.41	0.68	0.29	88.83	3.15	-0.25	5.90	-0.24	1.83	-0.18
44	83190	0.78	0.47	0.66	0.22	77.70	10.79	-0.31	3.99	-0.19	7.30	-0.23
45	83190	0.53	0.37	0.47	0.28	53.33	19.15	-0.11	10.17	-0.18	17.06	-0.22
46	83190	0.66	0.46	0.60	0.69	65.67	10.73	-0.26	12.88	-0.15	10.02	-0.28
47	83190	0.50	0.35	0.44	0.43	49.88	11.64	-0.33	32.93	-0.12	5.11	-0.05
48	83190	0.51	0.46	0.58	0.35	50.57	14.97	-0.24	12.02	-0.21	22.08	-0.18
49	83190	0.81	0.39	0.57	1.38	80.90	6.17	-0.26	2.51	-0.19	9.03	-0.20
50	83190	0.70	0.34	0.44	0.26	70.13	14.25	-0.17	9.14	-0.18	6.00	-0.16
51	83190	0.87	0.18	0.29	0.30	87.01	2.22	-0.12	7.59	-0.08	2.81	-0.10
52	83190	0.64	0.40	0.51	1.29	64.09	18.27	-0.12	10.46	-0.26	5.89	-0.25
53	83190	0.58	0.28	0.35	0.31	57.86	19.45	-0.09	10.13	-0.17	12.23	-0.15
54	83190	0.69	0.53	0.70	0.51	69.41	11.02	-0.26	8.09	-0.30	10.97	-0.24
55	83190	0.86	0.38	0.59	0.50	86.10	3.95	-0.22	6.09	-0.20	3.34	-0.18
56	83190	0.84	0.37	0.56	0.86	84.18	2.20	-0.21	9.32	-0.25	3.44	-0.15
57	83190	0.60	0.43	0.54	0.60	60.08	11.76	-0.20	20.87	-0.21	6.67	-0.22
58	83190	0.79	0.43	0.61	0.66	78.75	12.47	-0.26	6.03	-0.23	2.07	-0.20
59	83190	0.59	0.44	0.55	1.54	59.19	8.41	-0.28	18.95	-0.20	11.91	-0.15
60	83190	0.84	0.46	0.69	0.60	83.91	2.45	-0.23	5.35	-0.22	7.68	-0.29
61	83190	0.89	0.42	0.71	0.72	89.47	2.20	-0.22	3.90	-0.22	3.70	-0.25
62	83190	0.78	0.45	0.62	0.25	77.68	7.66	-0.26	7.92	-0.26	6.46	-0.18
63	83190	0.64	0.30	0.39	0.27	64.00	6.01	-0.19	19.65	-0.21	10.06	-0.04
64	83190	0.90	0.37	0.63	0.32	90.24	3.05	-0.23	1.38	-0.19	5.01	-0.19
65	83190	0.70	0.44	0.58	0.46	70.43	10.46	-0.26	14.87	-0.21	3.76	-0.20
66	83190	0.75	0.53	0.73	4.01	75.17	11.53	-0.39	1.87	-0.21	7.41	-0.26
67	83190	0.70	0.39	0.52	0.27	70.21	7.21	-0.15	14.26	-0.26	7.96	-0.17
68	83190	0.59	0.24	0.31	0.27	59.50	18.14	0.08	4.25	-0.13	17.82	-0.31
69	83190	0.78	0.44	0.62	0.32	78.49	13.00	-0.30	5.97	-0.25	2.20	-0.10
70	83190	0.83	0.45	0.67	0.56	83.50	3.47	-0.28	5.90	-0.25	6.57	-0.20
71	83190	0.60	0.43	0.54	0.83	60.11	23.78	-0.30	9.91	-0.15	5.37	-0.12
72	83190	0.65	0.48	0.62	1.72	64.66	6.45	-0.25	15.26	-0.31	11.90	-0.16

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.2
2009 Spring AIMS Classical Item Analysis
Mathematics CRT Grade 4

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
1	82526	0.81	0.38	0.55	0.08	80.77	7.78	-0.22	7.56	-0.22	3.80	-0.18
2	82526	0.75	0.52	0.71	0.07	74.55	20.48	-0.39	3.08	-0.25	1.80	-0.18
3	82526	0.79	0.51	0.72	0.13	78.94	6.41	-0.22	6.75	-0.27	7.77	-0.31
4	82526	0.71	0.32	0.42	0.09	71.13	14.38	-0.26	8.34	-0.07	6.04	-0.14
5	82526	0.66	0.33	0.43	0.08	66.27	22.95	-0.18	5.46	-0.15	5.23	-0.19
6	82526	0.89	0.26	0.43	0.08	89.48	5.21	-0.12	3.18	-0.15	2.04	-0.17
7	82526	0.92	0.44	0.81	0.08	92.32	4.26	-0.29	1.59	-0.22	1.70	-0.22
8	82526	0.85	0.47	0.72	0.10	85.25	5.55	-0.24	4.55	-0.25	4.53	-0.27
9	82526	0.70	0.44	0.58	0.13	69.90	6.09	-0.19	7.88	-0.18	15.98	-0.29
10	82526	0.79	0.32	0.45	0.10	79.19	1.64	-0.16	17.58	-0.24	1.48	-0.14
11	82526	0.86	0.45	0.70	0.07	85.90	6.35	-0.26	4.53	-0.24	3.14	-0.23
12	82526	0.62	0.44	0.57	0.10	61.99	21.80	-0.28	7.06	-0.20	9.03	-0.17
13	82526	0.86	0.39	0.61	0.10	86.20	1.54	-0.21	3.48	-0.25	8.65	-0.22
14	82526	0.61	0.42	0.53	0.15	61.29	9.58	-0.19	16.24	-0.24	12.72	-0.17
15	82526	0.84	0.47	0.71	0.10	83.96	6.42	-0.27	4.60	-0.28	4.89	-0.21
16	82526	0.73	0.40	0.53	0.13	72.83	6.97	-0.21	16.54	-0.20	3.50	-0.24
17	82526	0.84	0.57	0.85	0.08	84.04	5.48	-0.33	4.70	-0.28	5.69	-0.30
18	82526	0.82	0.33	0.48	0.08	82.28	6.82	-0.16	5.74	-0.21	5.06	-0.16
19	82526	0.83	0.22	0.33	0.08	83.49	1.06	-0.17	14.25	-0.14	1.10	-0.13
20	82526	0.86	0.42	0.66	0.10	85.79	6.61	-0.20	3.41	-0.27	4.07	-0.25
21	82526	0.63	0.42	0.53	0.12	62.58	8.05	-0.18	15.05	-0.22	14.17	-0.22
22	82526	0.56	0.33	0.42	0.13	56.26	4.36	-0.22	9.23	-0.21	30.01	-0.12
23	82526	0.43	0.38	0.48	0.15	43.42	22.25	-0.23	9.12	-0.18	25.05	-0.09
24	82526	0.73	0.45	0.61	0.21	73.15	6.24	-0.25	8.10	-0.24	12.29	-0.22
25	82526	0.67	0.54	0.70	0.37	67.27	6.31	-0.30	16.21	-0.34	9.82	-0.18
26	82526	0.85	0.34	0.52	0.09	84.92	4.46	-0.19	7.09	-0.19	3.43	-0.18
27	82526	0.61	0.45	0.57	0.10	60.62	18.80	-0.35	5.89	-0.23	14.57	-0.08
28	82526	0.77	0.53	0.73	0.11	76.88	10.06	-0.28	8.77	-0.29	4.16	-0.26
29	82526	0.59	0.52	0.66	0.13	58.75	14.21	-0.09	14.75	-0.37	12.14	-0.28
30	82526	0.88	0.46	0.74	0.19	87.83	3.51	-0.24	5.08	-0.29	3.35	-0.22
31	82526	0.68	0.42	0.54	0.09	68.31	10.40	-0.31	18.60	-0.17	2.59	-0.21
32	82526	0.77	0.46	0.63	0.14	76.52	2.68	-0.26	8.00	-0.23	12.63	-0.26
33	82526	0.78	0.52	0.73	0.12	78.01	14.41	-0.39	3.57	-0.24	3.84	-0.15
34	82526	0.78	0.44	0.62	0.14	78.19	4.22	-0.22	12.46	-0.25	4.96	-0.23
35	82526	0.88	0.29	0.48	0.11	88.27	3.39	-0.16	5.27	-0.17	2.93	-0.15
36	82526	0.94	0.32	0.65	0.16	94.49	1.50	-0.19	2.68	-0.17	1.13	-0.17
37	82526	0.86	0.44	0.69	0.09	86.26	4.44	-0.27	4.13	-0.25	5.06	-0.20
38	82526	0.70	0.39	0.51	0.11	70.18	3.19	-0.22	4.55	-0.24	21.95	-0.21
39	82526	0.90	0.41	0.70	0.12	89.76	2.44	-0.21	3.18	-0.23	4.46	-0.24
40	82526	0.59	0.31	0.39	0.10	59.31	6.69	-0.23	5.09	-0.20	28.78	-0.11

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

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Table 6.33.2 (continued)
2009 Spring AIMS Classical Item Analysis
Mathematics CRT Grade 4

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
41	82526	0.47	0.46	0.58	0.14	47.42	31.26	-0.31	13.20	-0.13	7.93	-0.14
42	82526	0.83	0.33	0.49	0.14	82.68	4.62	-0.26	10.01	-0.13	2.54	-0.18
43	82526	0.44	0.25	0.31	0.11	44.43	20.11	-0.19	18.12	-0.08	17.19	-0.04
44	82526	0.67	0.46	0.60	0.17	66.61	5.53	-0.21	14.70	-0.14	12.95	-0.35
45	82526	0.65	0.51	0.66	0.13	65.30	21.78	-0.41	6.93	-0.15	5.82	-0.15
46	82526	0.73	0.44	0.59	0.12	73.49	16.89	-0.23	5.90	-0.25	3.58	-0.24
47	82526	0.88	0.48	0.78	0.19	87.63	2.39	-0.22	2.42	-0.21	7.35	-0.35
48	82526	0.62	0.55	0.70	0.38	62.43	11.25	-0.28	11.46	-0.22	14.47	-0.29
49	82526	0.84	0.25	0.38	0.15	84.14	4.79	-0.12	5.98	-0.14	4.92	-0.14
50	82526	0.75	0.28	0.38	0.15	75.37	0.84	-0.16	1.46	-0.16	22.16	-0.20
51	82526	0.74	0.40	0.54	0.17	74.17	5.88	-0.25	8.98	-0.32	10.77	-0.07
52	82526	0.78	0.62	0.86	0.18	78.12	12.47	-0.43	4.75	-0.27	4.43	-0.26
53	82526	0.71	0.44	0.59	0.26	70.53	13.28	-0.26	8.76	-0.19	7.11	-0.22
54	82526	0.68	0.35	0.46	0.16	68.46	13.92	-0.26	6.95	-0.15	10.49	-0.11
55	82526	0.89	0.40	0.66	0.16	88.77	1.90	-0.23	6.66	-0.24	2.50	-0.20
56	82526	0.76	0.51	0.71	0.20	75.98	11.99	-0.33	6.05	-0.26	5.76	-0.20
57	82526	0.77	0.55	0.76	0.17	76.88	10.14	-0.35	6.14	-0.30	6.64	-0.20
58	82526	0.87	0.29	0.46	0.16	86.61	2.86	-0.21	5.81	-0.15	4.53	-0.12
59	82526	0.67	0.55	0.71	0.19	67.25	12.36	-0.26	6.98	-0.21	13.18	-0.34
60	82526	0.93	0.31	0.58	0.18	92.56	2.59	-0.20	2.56	-0.16	2.04	-0.15
61	82526	0.57	0.47	0.60	0.18	57.15	10.96	-0.24	22.70	-0.19	8.98	-0.27
62	82526	0.81	0.37	0.54	0.18	81.44	12.32	-0.21	3.77	-0.22	2.27	-0.20
63	82526	0.60	0.41	0.52	0.18	59.60	13.12	-0.14	18.21	-0.22	8.86	-0.24
64	82526	0.77	0.32	0.44	0.19	76.52	2.86	-0.19	17.28	-0.17	3.12	-0.19
65	82526	0.59	0.40	0.50	0.19	58.72	23.19	-0.16	8.48	-0.22	9.40	-0.22
66	82526	0.72	0.43	0.57	0.22	72.27	7.96	-0.28	8.51	-0.24	11.01	-0.15
67	82526	0.84	0.41	0.61	0.22	83.75	3.52	-0.24	7.39	-0.19	5.08	-0.24
68	82526	0.70	0.40	0.53	0.29	69.83	12.00	-0.20	10.29	-0.20	7.54	-0.21
69	82526	0.92	0.35	0.64	0.33	92.08	2.39	-0.19	3.11	-0.19	2.07	-0.20
70	82526	0.43	0.32	0.40	0.63	43.29	31.80	-0.12	12.44	-0.09	11.83	-0.20

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.3
2009 Spring AIMS Classical Item Analysis
Mathematics CRT Grade 5

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
1	81189	0.70	0.32	0.42	0.05	70.28	14.99	-0.26	2.16	-0.18	12.50	-0.08
2	81189	0.93	0.33	0.63	0.04	92.99	2.65	-0.18	2.71	-0.22	1.60	-0.15
3	81189	0.64	0.48	0.62	0.07	64.42	15.31	-0.38	14.82	-0.18	5.37	-0.13
4	81189	0.87	0.38	0.61	0.05	86.78	4.05	-0.23	4.66	-0.21	4.46	-0.19
5	81189	0.78	0.43	0.60	0.04	78.41	4.11	-0.23	7.02	-0.25	10.41	-0.22
6	81189	0.88	0.45	0.73	0.05	87.72	3.99	-0.26	4.08	-0.27	4.14	-0.21
7	81189	0.59	0.36	0.45	0.05	58.70	4.83	-0.17	32.86	-0.23	3.55	-0.17
8	81189	0.71	0.48	0.63	0.10	70.88	9.28	-0.28	7.67	-0.24	12.06	-0.22
9	81189	0.71	0.35	0.46	0.05	70.92	2.82	-0.23	13.51	-0.22	12.69	-0.13
10	81189	0.78	0.38	0.53	0.08	77.60	9.94	-0.19	7.53	-0.16	4.85	-0.28
11	81189	0.81	0.39	0.56	0.04	81.13	8.79	-0.18	5.64	-0.23	4.39	-0.24
12	81189	0.67	0.48	0.63	0.07	66.58	9.49	-0.24	13.58	-0.23	10.27	-0.26
13	81189	0.87	0.37	0.59	0.07	86.94	4.52	-0.19	5.31	-0.23	3.15	-0.18
14	81189	0.68	0.55	0.72	0.09	68.37	10.02	-0.31	14.10	-0.36	7.41	-0.15
15	81189	0.59	0.37	0.47	0.06	59.20	26.57	-0.12	9.67	-0.28	4.49	-0.22
16	81189	0.66	0.44	0.57	0.07	65.54	10.30	-0.23	16.20	-0.21	7.88	-0.24
17	81189	0.49	0.40	0.50	0.13	49.40	14.07	-0.27	23.05	-0.12	13.34	-0.16
18	81189	0.70	0.36	0.48	0.10	70.12	13.62	-0.21	8.84	-0.20	7.31	-0.13
19	81189	0.81	0.55	0.80	0.07	81.23	9.74	-0.39	4.21	-0.26	4.73	-0.22
20	81189	0.76	0.40	0.55	0.11	76.22	11.40	-0.20	7.59	-0.23	4.67	-0.21
21	81189	0.88	0.38	0.62	0.08	88.17	3.53	-0.23	4.90	-0.21	3.31	-0.19
22	81189	0.74	0.55	0.74	0.07	73.72	7.71	-0.30	3.60	-0.20	14.88	-0.34
23	81189	0.62	0.48	0.62	0.09	61.84	11.34	-0.14	20.06	-0.37	6.66	-0.15
24	81189	0.84	0.42	0.62	0.09	83.79	5.66	-0.22	4.90	-0.24	5.54	-0.21
25	81189	0.83	0.42	0.63	0.09	83.13	2.96	-0.22	11.70	-0.27	2.10	-0.24
26	81189	0.80	0.54	0.77	0.12	79.97	7.80	-0.29	7.59	-0.28	4.50	-0.30
27	81189	0.92	0.24	0.44	0.07	92.50	2.39	-0.13	3.42	-0.13	1.61	-0.14
28	81189	0.68	0.43	0.56	0.12	68.31	8.34	-0.26	7.43	-0.23	15.78	-0.18
29	81189	0.73	0.38	0.51	0.10	73.35	7.78	-0.25	12.82	-0.12	5.93	-0.25
30	81189	0.44	0.39	0.49	0.10	44.10	15.70	-0.12	27.03	-0.20	13.02	-0.17
31	81189	0.81	0.32	0.45	0.12	80.53	4.39	-0.20	6.44	-0.15	8.50	-0.16
32	81189	0.51	0.42	0.53	0.11	50.82	19.54	-0.26	18.60	-0.16	10.92	-0.14
33	81189	0.63	0.39	0.49	0.11	63.06	10.50	-0.13	11.99	-0.20	14.32	-0.23
34	81189	0.82	0.51	0.74	0.11	82.39	6.81	-0.27	5.65	-0.22	5.03	-0.32
35	81189	0.66	0.35	0.45	0.11	65.79	8.95	-0.23	20.15	-0.12	4.97	-0.23
36	81189	0.72	0.46	0.61	0.16	71.50	5.56	-0.21	11.53	-0.24	11.23	-0.26
37	81189	0.69	0.44	0.58	0.10	69.35	12.73	-0.21	6.10	-0.25	11.70	-0.23
38	81189	0.64	0.52	0.67	0.14	63.79	15.06	-0.38	13.70	-0.20	7.29	-0.17
39	81189	0.80	0.46	0.65	0.13	79.75	2.61	-0.22	13.17	-0.28	4.32	-0.25
40	81189	0.62	0.49	0.62	0.19	61.55	24.27	-0.26	7.07	-0.25	6.91	-0.24

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

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Table 6.3.3 (continued)
2009 Spring AIMS Classical Item Analysis
Mathematics CRT Grade 5

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
41	81189	0.58	0.49	0.62	0.16	57.85	8.74	-0.12	22.19	-0.31	11.05	-0.24
42	81189	0.79	0.47	0.66	0.15	78.69	9.23	-0.28	6.96	-0.22	4.94	-0.23
43	81189	0.73	0.50	0.66	0.17	73.02	6.55	-0.21	13.62	-0.29	6.59	-0.26
44	81189	0.52	0.44	0.55	0.26	51.71	10.31	-0.27	23.30	-0.15	14.38	-0.20
45	81189	0.59	0.41	0.51	0.16	58.69	14.92	-0.30	13.77	-0.18	12.45	-0.09
46	81189	0.59	0.38	0.48	0.19	58.51	15.80	-0.24	13.75	-0.17	11.72	-0.12
47	81189	0.57	0.41	0.52	0.16	57.44	17.59	-0.09	16.97	-0.32	7.80	-0.18
48	81189	0.53	0.43	0.54	0.19	53.28	7.78	-0.30	18.71	-0.31	19.99	-0.03
49	81189	0.89	0.36	0.59	0.17	88.75	4.43	-0.23	2.81	-0.18	3.81	-0.18
50	81189	0.49	0.46	0.57	0.16	48.69	20.57	-0.25	15.74	-0.21	14.83	-0.14
51	81189	0.66	0.62	0.80	0.16	65.54	2.98	-0.24	15.48	-0.39	15.83	-0.30
52	81189	0.73	0.52	0.70	0.22	72.84	11.98	-0.22	8.73	-0.34	6.18	-0.25
53	81189	0.58	0.60	0.75	0.16	58.07	11.03	-0.16	25.33	-0.44	5.39	-0.21
54	81189	0.63	0.41	0.52	0.19	62.82	25.27	-0.24	5.68	-0.22	6.00	-0.16
55	81189	0.71	0.46	0.61	0.20	70.69	10.11	-0.22	13.77	-0.24	5.20	-0.26
56	81189	0.72	0.53	0.70	0.15	72.02	10.79	-0.22	9.16	-0.29	7.87	-0.30
57	81189	0.81	0.48	0.69	0.16	81.05	8.00	-0.23	8.32	-0.32	2.45	-0.23
58	81189	0.92	0.38	0.69	0.17	91.60	3.03	-0.23	3.52	-0.21	1.66	-0.19
59	81189	0.65	0.31	0.40	0.17	64.74	6.33	-0.25	12.27	-0.26	16.47	0.00
60	81189	0.86	0.42	0.65	0.17	86.28	3.40	-0.22	4.21	-0.25	5.92	-0.22
61	81189	0.79	0.43	0.61	0.23	78.90	4.49	-0.24	11.73	-0.23	4.62	-0.23
62	81189	0.60	0.37	0.46	0.15	59.63	15.71	-0.25	13.24	-0.12	11.24	-0.15
63	81189	0.63	0.41	0.53	0.19	62.58	17.45	-0.17	11.22	-0.28	8.54	-0.16
64	81189	0.42	0.39	0.49	0.21	41.54	10.86	-0.20	31.18	-0.08	16.17	-0.24
65	81189	0.71	0.36	0.47	0.21	70.92	14.42	-0.16	7.80	-0.21	6.59	-0.18
66	81189	0.62	0.38	0.48	0.23	62.11	18.03	-0.16	11.29	-0.24	8.30	-0.16
67	81189	0.59	0.40	0.51	0.26	59.43	6.87	-0.20	12.90	-0.17	20.49	-0.21
68	81189	0.60	0.40	0.51	0.33	59.94	13.02	-0.18	12.18	-0.17	14.51	-0.22

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.4
2009 Spring AIMS Classical Item Analysis
Mathematics CRT Grade 6

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
1	80963	0.83	0.29	0.43	0.06	82.84	4.15	-0.20	12.02	-0.17	0.93	-0.14
2	80963	0.49	0.31	0.39	0.07	48.87	14.43	-0.28	5.81	-0.20	30.80	-0.01
3	80963	0.64	0.51	0.66	0.11	64.14	11.49	-0.29	3.61	-0.14	20.64	-0.31
4	80963	0.74	0.48	0.65	0.10	74.05	12.00	-0.29	8.32	-0.20	5.53	-0.26
5	80963	0.55	0.39	0.48	0.07	55.01	29.38	-0.22	5.84	-0.18	9.69	-0.16
6	80963	0.92	0.32	0.59	0.07	92.26	3.76	-0.19	2.52	-0.16	1.38	-0.18
7	80963	0.76	0.53	0.72	0.09	75.74	8.27	-0.28	10.31	-0.28	5.58	-0.27
8	80963	0.66	0.47	0.61	0.09	66.37	14.55	-0.30	3.19	-0.12	15.78	-0.26
9	80963	0.88	0.41	0.67	0.05	88.36	3.45	-0.21	2.64	-0.18	5.48	-0.28
10	80963	0.77	0.49	0.67	0.09	77.40	8.52	-0.30	7.14	-0.27	6.84	-0.19
11	80963	0.55	0.35	0.45	0.11	55.30	19.95	-0.09	11.61	-0.22	13.02	-0.21
12	80963	0.74	0.35	0.47	0.07	74.04	8.98	-0.18	7.08	-0.12	9.81	-0.23
13	80963	0.75	0.45	0.62	0.08	75.29	5.90	-0.21	9.73	-0.31	8.99	-0.18
14	80963	0.57	0.31	0.39	0.10	57.05	20.61	-0.18	11.87	-0.14	10.35	-0.12
15	80963	0.59	0.42	0.54	0.07	59.50	18.49	-0.17	9.95	-0.22	11.97	-0.22
16	80963	0.49	0.40	0.51	0.11	48.66	11.24	-0.30	23.03	-0.15	16.96	-0.12
17	80963	0.60	0.28	0.36	0.11	60.04	11.45	-0.08	13.33	-0.12	15.06	-0.20
18	80963	0.65	0.48	0.62	0.08	64.86	4.81	-0.31	20.69	-0.25	9.54	-0.22
19	80963	0.61	0.48	0.61	0.08	61.28	15.67	-0.21	17.05	-0.30	5.90	-0.17
20	80963	0.60	0.43	0.54	0.14	59.54	14.88	-0.22	11.54	-0.18	13.90	-0.21
21	80963	0.81	0.49	0.71	0.12	80.94	6.02	-0.30	8.07	-0.29	4.82	-0.19
22	80963	0.94	0.35	0.70	0.09	94.03	0.88	-0.12	1.16	-0.17	3.84	-0.27
23	80963	0.89	0.31	0.52	0.10	89.23	1.45	-0.15	3.30	-0.18	5.91	-0.18
24	80963	0.68	0.46	0.60	0.18	67.85	7.56	-0.23	13.38	-0.25	11.01	-0.22
25	80963	0.72	0.31	0.41	0.09	72.29	1.04	-0.16	24.22	-0.22	2.36	-0.17
26	80963	0.82	0.39	0.57	0.10	81.59	4.87	-0.20	7.83	-0.21	5.59	-0.22
27	80963	0.92	0.39	0.71	0.10	92.07	1.74	-0.16	3.11	-0.18	2.97	-0.31
28	80963	0.79	0.41	0.58	0.11	79.48	3.39	-0.21	7.22	-0.24	9.79	-0.21
29	80963	0.65	0.40	0.52	0.14	65.20	9.02	-0.24	15.46	-0.17	10.16	-0.20
30	80963	0.81	0.52	0.76	0.09	80.87	8.38	-0.33	5.37	-0.28	5.28	-0.22
31	80963	0.79	0.38	0.53	0.11	78.82	6.00	-0.25	11.05	-0.14	4.01	-0.24
32	80963	0.52	0.42	0.53	0.12	52.38	29.62	-0.23	12.40	-0.18	5.46	-0.20
33	80963	0.79	0.49	0.68	0.13	78.65	2.29	-0.20	5.49	-0.19	13.44	-0.36
34	80963	0.69	0.46	0.61	0.09	68.83	8.26	-0.24	15.92	-0.21	6.89	-0.28
35	80963	0.73	0.44	0.59	0.12	73.25	9.53	-0.23	5.36	-0.21	11.73	-0.24
36	80963	0.49	0.33	0.41	0.11	49.02	21.23	-0.19	20.81	-0.10	8.82	-0.16
37	80963	0.69	0.49	0.64	0.12	68.83	13.68	-0.19	9.16	-0.30	8.19	-0.27
38	80963	0.87	0.39	0.63	0.11	87.40	2.83	-0.21	3.13	-0.19	6.51	-0.24
39	80963	0.65	0.47	0.60	0.11	65.07	8.01	-0.32	21.64	-0.25	5.15	-0.14
40	80963	0.76	0.55	0.76	0.15	75.57	8.14	-0.30	8.86	-0.28	7.27	-0.28

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

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Table 6.3.4 (continued)
2009 Spring AIMS Classical Item Analysis
Mathematics CRT Grade 6

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
41	80963	0.73	0.51	0.69	0.16	73.31	11.55	-0.37	13.55	-0.23	1.42	-0.21
42	80963	0.64	0.39	0.50	0.19	63.90	17.32	-0.16	9.87	-0.20	8.69	-0.21
43	80963	0.70	0.45	0.60	0.19	69.62	11.55	-0.20	5.68	-0.27	12.94	-0.23
44	80963	0.72	0.58	0.77	0.20	71.73	10.39	-0.30	5.22	-0.24	12.44	-0.34
45	80963	0.71	0.52	0.69	0.15	70.94	21.45	-0.39	4.93	-0.23	2.52	-0.14
46	80963	0.79	0.55	0.78	0.17	78.82	5.38	-0.21	6.08	-0.29	9.53	-0.36
47	80963	0.63	0.44	0.56	0.19	63.43	9.79	-0.32	21.41	-0.19	5.16	-0.16
48	80963	0.56	0.42	0.53	0.20	56.08	22.82	-0.27	10.98	-0.12	9.90	-0.18
49	80963	0.89	0.43	0.70	0.19	88.56	3.68	-0.21	4.91	-0.25	2.65	-0.25
50	80963	0.72	0.41	0.55	0.17	72.34	12.29	-0.26	4.72	-0.21	10.46	-0.17
51	80963	0.65	0.37	0.48	0.16	64.98	2.51	-0.20	27.65	-0.24	4.68	-0.16
52	80963	0.58	0.46	0.58	0.19	57.91	13.50	-0.24	12.25	-0.20	16.12	-0.21
53	80963	0.84	0.54	0.81	0.18	83.65	8.05	-0.36	3.71	-0.26	4.39	-0.24
54	80963	0.75	0.36	0.48	0.16	74.61	16.20	-0.20	5.68	-0.20	3.34	-0.17
55	80963	0.78	0.50	0.70	0.17	77.68	8.20	-0.26	8.16	-0.29	5.77	-0.23
56	80963	0.68	0.45	0.59	0.20	68.36	5.46	-0.20	10.72	-0.23	15.24	-0.25
57	80963	0.68	0.41	0.53	0.18	67.79	4.61	-0.25	19.70	-0.16	7.71	-0.27
58	80963	0.58	0.45	0.57	0.19	57.71	9.06	-0.26	11.51	-0.21	21.51	-0.19
59	80963	0.70	0.45	0.59	0.16	70.23	14.21	-0.23	10.87	-0.25	4.51	-0.21
60	80963	0.69	0.47	0.62	0.18	68.84	17.96	-0.18	6.99	-0.32	6.00	-0.28
61	80963	0.81	0.34	0.49	0.19	80.65	3.83	-0.19	5.65	-0.22	9.64	-0.14
62	80963	0.72	0.55	0.74	0.20	72.46	11.33	-0.27	8.50	-0.28	7.49	-0.31
63	80963	0.63	0.52	0.66	0.22	63.05	15.08	-0.23	14.16	-0.26	7.47	-0.26
64	80963	0.51	0.47	0.59	0.18	51.30	29.61	-0.26	13.54	-0.23	5.35	-0.15
65	80963	0.79	0.34	0.49	0.18	79.13	3.46	-0.18	6.10	-0.13	11.10	-0.23
66	80963	0.82	0.46	0.67	0.20	82.43	3.57	-0.23	4.86	-0.22	8.92	-0.28
67	80963	0.52	0.38	0.47	0.21	52.09	14.66	-0.18	16.44	-0.19	16.59	-0.13
68	80963	0.84	0.44	0.67	0.24	84.27	3.40	-0.20	6.48	-0.28	5.60	-0.23

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.5
2009 Spring AIMS Classical Item Analysis
Mathematics CRT Grade 7

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
1	81190	0.55	0.37	0.47	0.13	55.46	16.08	-0.26	15.00	-0.22	13.31	-0.03
2	81190	0.55	0.35	0.44	0.18	55.44	12.70	-0.13	14.02	-0.17	17.66	-0.18
3	81190	0.70	0.36	0.48	0.09	70.41	15.82	-0.07	5.58	-0.23	8.10	-0.31
4	81190	0.82	0.44	0.65	0.09	82.41	6.22	-0.22	4.47	-0.24	6.80	-0.25
5	81190	0.80	0.32	0.46	0.10	80.08	3.18	-0.22	4.87	-0.23	11.75	-0.12
6	81190	0.81	0.39	0.57	0.09	80.60	5.43	-0.23	11.88	-0.23	1.99	-0.21
7	81190	0.75	0.44	0.60	0.08	74.96	15.47	-0.29	4.83	-0.24	4.65	-0.17
8	81190	0.87	0.38	0.60	0.10	87.41	2.63	-0.18	7.19	-0.26	2.66	-0.16
9	81190	0.71	0.41	0.54	0.09	70.86	4.95	-0.17	12.78	-0.20	11.31	-0.25
10	81190	0.62	0.43	0.55	0.08	62.31	7.08	-0.18	23.66	-0.29	6.85	-0.14
11	81190	0.60	0.35	0.45	0.08	60.42	9.43	-0.15	7.55	-0.26	22.51	-0.14
12	81190	0.86	0.42	0.64	0.08	85.66	7.25	-0.22	4.85	-0.26	2.16	-0.21
13	81190	0.63	0.34	0.44	0.08	62.92	13.46	-0.15	14.66	-0.17	8.88	-0.18
14	81190	0.71	0.43	0.57	0.10	70.74	5.27	-0.26	7.38	-0.25	16.49	-0.20
15	81190	0.50	0.31	0.39	0.08	50.03	10.66	-0.20	25.41	-0.08	13.79	-0.16
16	81190	0.82	0.44	0.64	0.09	81.72	5.17	-0.26	6.74	-0.18	6.28	-0.26
17	81190	0.40	0.31	0.39	0.14	40.29	11.59	-0.19	31.92	-0.02	16.05	-0.21
18	81190	0.56	0.41	0.51	0.11	55.86	9.96	-0.07	24.36	-0.20	9.70	-0.32
19	81190	0.86	0.46	0.72	0.11	86.32	4.59	-0.31	4.55	-0.25	4.42	-0.19
20	81190	0.72	0.44	0.59	0.14	72.33	10.09	-0.28	6.46	-0.31	10.98	-0.11
21	81190	0.88	0.32	0.53	0.09	87.94	4.25	-0.20	4.57	-0.20	3.14	-0.13
22	81190	0.62	0.35	0.44	0.11	62.06	8.69	-0.19	13.07	-0.24	16.06	-0.09
23	81190	0.52	0.51	0.64	0.13	51.77	12.66	-0.23	14.92	-0.24	20.51	-0.22
24	81190	0.80	0.40	0.58	0.11	79.92	14.22	-0.19	1.73	-0.23	4.01	-0.33
25	81190	0.67	0.49	0.64	0.12	67.05	8.62	-0.18	12.34	-0.21	11.86	-0.33
26	81190	0.80	0.43	0.62	0.12	80.43	8.69	-0.18	5.10	-0.26	5.65	-0.26
27	81190	0.78	0.44	0.62	0.15	78.01	7.27	-0.24	11.73	-0.24	2.82	-0.24
28	81190	0.61	0.50	0.64	0.20	61.20	24.24	-0.32	9.95	-0.23	4.40	-0.17
29	81190	0.95	0.34	0.73	0.12	95.42	2.13	-0.21	1.50	-0.18	0.82	-0.16
30	81190	0.78	0.53	0.74	0.14	77.94	5.01	-0.23	7.60	-0.32	9.30	-0.28
31	81190	0.69	0.48	0.62	0.12	69.27	5.39	-0.25	9.83	-0.31	15.39	-0.19
32	81190	0.69	0.55	0.72	0.15	68.73	10.36	-0.39	5.71	-0.27	15.05	-0.19
33	81190	0.81	0.44	0.63	0.13	80.83	9.94	-0.23	5.54	-0.20	3.55	-0.28
34	81190	0.70	0.45	0.59	0.14	69.78	7.27	-0.12	13.14	-0.24	9.65	-0.31
35	81190	0.72	0.50	0.67	0.16	71.63	11.10	-0.24	12.17	-0.28	4.93	-0.25
36	81190	0.84	0.49	0.73	0.12	84.19	7.39	-0.30	5.09	-0.26	3.19	-0.23
37	81190	0.74	0.48	0.65	0.13	73.93	12.01	-0.29	6.59	-0.28	7.33	-0.17
38	81190	0.41	0.39	0.49	0.16	41.43	20.24	-0.18	21.46	-0.18	16.70	-0.11
39	81190	0.72	0.53	0.71	0.14	72.13	10.72	-0.28	10.12	-0.26	6.87	-0.28
40	81190	0.68	0.41	0.53	0.16	67.65	16.29	-0.20	10.11	-0.20	5.78	-0.23

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

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Table 6.3.5 (continued)
2009 Spring AIMS Classical Item Analysis
Mathematics CRT Grade 7

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
41	81190	0.42	0.29	0.36	0.14	41.87	19.08	-0.17	28.11	-0.06	10.79	-0.15
42	81190	0.63	0.53	0.67	0.14	63.19	18.52	-0.34	13.05	-0.23	5.10	-0.19
43	81190	0.76	0.44	0.60	0.13	75.60	8.24	-0.25	8.98	-0.29	7.03	-0.14
44	81190	0.36	0.28	0.36	0.15	36.49	7.09	-0.09	45.38	-0.14	10.86	-0.13
45	81190	0.54	0.32	0.41	0.18	54.16	12.96	-0.21	27.19	-0.12	5.49	-0.15
46	81190	0.81	0.39	0.56	0.20	81.41	5.28	-0.25	5.78	-0.20	7.33	-0.17
47	81190	0.76	0.39	0.54	0.21	75.98	11.30	-0.24	4.91	-0.26	7.58	-0.12
48	81190	0.72	0.42	0.55	0.24	72.25	6.93	-0.19	15.15	-0.28	5.42	-0.13
49	81190	0.90	0.42	0.71	0.20	89.54	3.11	-0.23	3.28	-0.23	3.86	-0.23
50	81190	0.77	0.51	0.71	0.21	77.45	9.55	-0.21	8.20	-0.33	4.58	-0.27
51	81190	0.52	0.51	0.64	0.24	52.22	17.14	-0.23	14.55	-0.27	15.84	-0.19
52	81190	0.81	0.34	0.49	0.21	81.41	3.61	-0.25	3.70	-0.29	11.05	-0.08
53	81190	0.67	0.48	0.62	0.21	66.57	18.04	-0.24	7.86	-0.28	7.29	-0.21
54	81190	0.76	0.47	0.64	0.21	75.88	4.84	-0.23	14.58	-0.25	4.48	-0.28
55	81190	0.56	0.42	0.52	0.22	56.44	18.20	-0.24	15.24	-0.15	9.88	-0.19
56	81190	0.88	0.35	0.57	0.19	87.95	2.97	-0.22	4.95	-0.18	3.93	-0.17
57	81190	0.84	0.53	0.81	0.19	84.49	5.75	-0.30	3.93	-0.27	5.62	-0.29
58	81190	0.80	0.49	0.70	0.22	79.72	5.96	-0.26	8.06	-0.24	6.02	-0.28
59	81190	0.80	0.30	0.43	0.22	79.88	6.93	-0.18	10.69	-0.14	2.27	-0.20
60	81190	0.54	0.30	0.38	0.20	53.82	13.36	-0.16	17.00	-0.15	15.60	-0.10
61	81190	0.91	0.39	0.67	0.20	90.63	1.98	-0.24	2.32	-0.21	4.86	-0.20
62	81190	0.82	0.45	0.66	0.20	81.77	10.56	-0.26	4.60	-0.27	2.86	-0.20
63	81190	0.64	0.32	0.41	0.24	64.37	9.94	-0.19	8.98	-0.22	16.46	-0.08
64	81190	0.62	0.55	0.70	0.21	62.21	15.68	-0.27	11.51	-0.34	10.37	-0.18
65	81190	0.88	0.39	0.62	0.21	87.86	2.90	-0.23	5.54	-0.17	3.47	-0.24
66	81190	0.80	0.53	0.75	0.22	79.75	8.36	-0.28	7.20	-0.30	4.44	-0.25
67	81190	0.74	0.55	0.74	0.22	73.83	9.27	-0.29	12.04	-0.30	4.61	-0.25
68	81190	0.57	0.46	0.57	0.27	56.51	9.67	-0.17	15.38	-0.20	18.17	-0.26

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.6
2009 Spring AIMS Classical Item Analysis
Mathematics CRT Grade 8

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
1	79663	0.58	0.44	0.56	0.09	57.67	4.65	-0.24	5.56	-0.15	32.02	-0.28
2	79663	0.64	0.43	0.55	0.12	64.14	4.96	-0.17	23.06	-0.22	7.71	-0.28
3	79663	0.90	0.37	0.64	0.08	90.45	4.11	-0.21	3.79	-0.22	1.57	-0.17
4	79663	0.70	0.47	0.61	0.14	70.08	11.03	-0.37	7.82	-0.23	10.93	-0.11
5	79663	0.58	0.40	0.50	0.12	57.90	12.86	-0.18	21.74	-0.24	7.38	-0.12
6	79663	0.42	0.38	0.47	0.17	41.55	22.72	-0.32	31.80	-0.09	3.74	-0.05
7	79663	0.48	0.35	0.44	0.15	48.48	10.90	-0.24	26.20	-0.02	14.26	-0.27
8	79663	0.62	0.42	0.54	0.12	61.60	7.39	-0.19	6.90	-0.26	23.97	-0.21
9	79663	0.65	0.44	0.56	0.15	64.60	19.45	-0.21	9.80	-0.25	5.99	-0.22
10	79663	0.74	0.39	0.52	0.12	73.63	4.08	-0.20	12.54	-0.18	9.62	-0.23
11	79663	0.68	0.44	0.58	0.09	67.96	7.63	-0.24	15.00	-0.18	9.31	-0.26
12	79663	0.80	0.41	0.59	0.12	80.22	4.70	-0.13	7.12	-0.30	7.82	-0.22
13	79663	0.49	0.44	0.55	0.12	48.67	11.15	-0.14	28.89	-0.20	11.15	-0.25
14	79663	0.83	0.36	0.54	0.12	82.58	7.77	-0.21	5.35	-0.22	4.18	-0.15
15	79663	0.61	0.35	0.45	0.10	60.56	20.19	-0.29	16.06	-0.05	3.07	-0.20
16	79663	0.81	0.40	0.57	0.14	81.02	2.65	-0.20	7.14	-0.22	9.05	-0.22
17	79663	0.78	0.50	0.70	0.10	78.05	7.45	-0.31	7.08	-0.27	7.31	-0.21
18	79663	0.71	0.54	0.72	0.12	71.43	8.86	-0.28	7.59	-0.33	11.98	-0.23
19	79663	0.48	0.31	0.38	0.12	47.89	13.49	-0.17	15.90	-0.23	22.58	-0.02
20	79663	0.67	0.46	0.60	0.12	66.83	9.23	-0.36	13.98	-0.20	9.82	-0.14
21	79663	0.74	0.45	0.61	0.10	73.82	11.51	-0.30	9.81	-0.25	4.75	-0.13
22	79663	0.78	0.43	0.60	0.12	78.26	4.65	-0.23	7.11	-0.26	9.85	-0.20
23	79663	0.84	0.38	0.57	0.11	84.12	1.40	-0.15	11.65	-0.27	2.72	-0.20
24	79663	0.78	0.49	0.68	0.13	77.93	5.71	-0.24	11.09	-0.32	5.13	-0.20
25	79663	0.65	0.39	0.51	0.12	65.03	5.59	-0.23	12.89	-0.16	16.35	-0.21
26	79663	0.70	0.52	0.69	0.15	70.19	13.04	-0.27	9.87	-0.28	6.75	-0.24
27	79663	0.64	0.33	0.43	0.15	63.85	11.34	-0.12	9.74	-0.18	14.91	-0.18
28	79663	0.86	0.44	0.68	0.13	86.29	4.26	-0.29	3.29	-0.24	6.01	-0.19
29	79663	0.87	0.27	0.43	0.13	86.52	2.71	-0.18	4.11	-0.16	6.52	-0.12
30	79663	0.38	0.43	0.55	0.21	38.25	40.66	-0.09	8.31	-0.28	12.56	-0.26
31	79663	0.58	0.42	0.53	0.14	58.19	15.61	-0.21	11.45	-0.22	14.60	-0.16
32	79663	0.80	0.41	0.58	0.14	80.11	11.25	-0.21	4.38	-0.22	4.12	-0.24
33	79663	0.50	0.36	0.45	0.15	49.62	22.14	-0.09	18.78	-0.24	9.27	-0.16
34	79663	0.78	0.48	0.67	0.12	78.42	5.47	-0.25	7.86	-0.28	8.11	-0.22
35	79663	0.38	0.34	0.43	0.14	37.89	49.93	-0.09	5.48	-0.28	6.54	-0.22
36	79663	0.56	0.41	0.51	0.14	55.81	24.04	-0.25	13.84	-0.15	6.16	-0.16
37	79663	0.77	0.35	0.49	0.13	77.05	6.52	-0.23	11.26	-0.09	5.03	-0.28
38	79663	0.60	0.45	0.57	0.14	60.00	14.90	-0.22	15.56	-0.17	9.38	-0.25
39	79663	0.74	0.31	0.42	0.13	73.87	2.56	-0.16	16.93	-0.15	6.50	-0.22
40	79663	0.43	0.35	0.44	0.15	43.35	13.45	-0.14	21.06	-0.15	21.97	-0.15

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

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Table 6.3.6 (continued)
2009 Spring AIMS Classical Item Analysis
Mathematics CRT Grade 8

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
41	79663	0.80	0.23	0.33	0.27	79.69	13.62	-0.10	2.96	-0.15	3.45	-0.15
42	79663	0.53	0.45	0.57	0.29	52.62	19.97	-0.41	11.63	-0.21	15.47	0.03
43	79663	0.90	0.41	0.71	0.26	90.19	1.63	-0.19	2.28	-0.26	5.63	-0.24
44	79663	0.58	0.47	0.59	0.28	58.10	4.07	-0.23	33.76	-0.32	3.79	-0.14
45	79663	0.72	0.56	0.75	0.25	72.09	8.10	-0.29	10.27	-0.38	9.28	-0.18
46	79663	0.71	0.36	0.48	0.25	71.47	10.61	-0.23	2.58	-0.20	15.09	-0.16
47	79663	0.78	0.51	0.72	0.26	78.27	6.69	-0.21	11.90	-0.37	2.87	-0.20
48	79663	0.63	0.36	0.46	0.27	62.93	9.13	-0.09	14.99	-0.24	12.67	-0.18
49	79663	0.63	0.42	0.53	0.30	62.59	12.66	-0.19	16.47	-0.22	7.96	-0.19
50	79663	0.64	0.49	0.63	0.26	64.19	7.00	-0.24	16.60	-0.35	11.95	-0.12
51	79663	0.85	0.53	0.81	0.25	85.50	4.28	-0.26	8.05	-0.37	1.91	-0.21
52	79663	0.82	0.44	0.65	0.26	82.05	5.74	-0.29	4.23	-0.24	7.70	-0.18
53	79663	0.36	0.34	0.44	0.29	36.10	37.24	-0.26	17.24	-0.11	9.13	0.04
54	79663	0.73	0.40	0.54	0.25	73.14	10.46	-0.20	10.29	-0.21	5.84	-0.20
55	79663	0.78	0.52	0.73	0.28	78.29	10.53	-0.42	4.99	-0.18	5.90	-0.18
56	79663	0.89	0.35	0.57	0.26	88.62	2.76	-0.21	1.89	-0.19	6.45	-0.18
57	79663	0.75	0.40	0.54	0.26	74.95	4.65	-0.32	16.33	-0.16	3.79	-0.20
58	79663	0.69	0.45	0.59	0.27	68.69	6.01	-0.13	11.04	-0.21	13.98	-0.30
59	79663	0.61	0.42	0.53	0.25	60.58	7.02	-0.21	21.15	-0.13	10.99	-0.29
60	79663	0.77	0.27	0.37	0.27	77.07	2.96	-0.19	15.99	-0.11	3.70	-0.18
61	79663	0.64	0.35	0.45	0.27	63.77	10.10	-0.13	17.13	-0.19	8.71	-0.20
62	79663	0.81	0.48	0.69	0.26	81.16	7.80	-0.29	7.54	-0.26	3.23	-0.19
63	79663	0.70	0.41	0.54	0.25	69.64	7.08	-0.12	9.41	-0.18	13.60	-0.30
64	79663	0.31	0.26	0.33	0.28	31.38	11.60	-0.06	31.84	-0.03	24.89	-0.18
65	79663	0.74	0.47	0.64	0.26	74.15	3.88	-0.24	12.07	-0.25	9.63	-0.24
66	79663	0.84	0.45	0.68	0.28	83.79	6.90	-0.27	4.81	-0.25	4.22	-0.19

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.7
2009 Spring AIMS Classical Item Analysis
Mathematics CRT High School

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
1	74547	0.51	0.34	0.42	0.24	50.58	15.45	-0.24	25.60	-0.09	8.13	-0.14
2	74547	0.89	0.38	0.63	0.03	88.84	1.16	-0.11	6.45	-0.29	3.52	-0.20
3	74547	0.68	0.44	0.57	0.05	67.67	9.01	-0.20	8.71	-0.25	14.55	-0.23
4	74547	0.62	0.38	0.48	0.33	61.73	6.41	-0.08	12.65	-0.15	18.88	-0.29
5	74547	0.92	0.28	0.50	0.02	91.82	6.35	-0.20	1.19	-0.15	0.62	-0.11
6	74547	0.65	0.51	0.66	0.09	65.07	3.57	-0.23	23.54	-0.35	7.73	-0.19
7	74547	0.82	0.30	0.45	0.06	82.28	1.20	-0.14	14.08	-0.27	2.38	-0.05
8	74547	0.92	0.32	0.57	0.03	91.99	3.00	-0.20	3.62	-0.16	1.36	-0.17
9	74547	0.53	0.39	0.49	0.17	52.69	29.92	-0.27	9.49	-0.14	7.73	-0.11
10	74547	0.78	0.46	0.64	0.10	78.39	10.10	-0.25	4.51	-0.24	6.90	-0.25
11	74547	0.78	0.46	0.65	0.05	77.89	8.79	-0.24	5.29	-0.20	7.98	-0.29
12	74547	0.69	0.52	0.69	0.28	69.06	7.04	-0.23	12.50	-0.29	11.12	-0.28
13	74547	0.89	0.41	0.68	0.03	89.42	0.85	-0.18	6.31	-0.38	3.39	-0.08
14	74547	0.71	0.36	0.48	0.06	70.57	3.89	-0.18	3.63	-0.13	21.86	-0.25
15	74547	0.43	0.42	0.52	0.24	43.44	16.71	-0.15	25.41	-0.32	14.20	-0.04
16	74547	0.50	0.51	0.64	0.10	50.24	18.38	-0.20	19.97	-0.34	11.31	-0.12
17	74547	0.80	0.34	0.49	0.03	79.67	5.43	-0.14	11.00	-0.21	3.87	-0.20
18	74547	0.53	0.41	0.51	0.13	52.56	5.98	-0.11	16.47	-0.25	24.86	-0.19
19	74547	0.45	0.24	0.30	0.17	44.93	22.94	-0.25	13.97	-0.16	17.98	0.12
20	74547	0.64	0.55	0.71	0.04	64.29	3.54	-0.15	21.73	-0.42	10.39	-0.21
21	74547	0.93	0.32	0.61	0.05	93.22	0.88	-0.14	4.72	-0.22	1.12	-0.19
22	74547	0.85	0.45	0.69	0.05	84.66	8.19	-0.25	3.31	-0.23	3.79	-0.27
23	74547	0.72	0.45	0.60	0.08	72.28	12.27	-0.19	10.93	-0.30	4.43	-0.23
24	74547	0.51	0.38	0.47	0.21	50.64	18.23	-0.22	21.13	-0.18	9.78	-0.08
25	74547	0.94	0.28	0.56	0.04	94.21	1.60	-0.16	2.81	-0.16	1.34	-0.15
26	74547	0.84	0.44	0.66	0.09	84.37	3.87	-0.20	3.99	-0.26	7.68	-0.25
27	74547	0.57	0.39	0.49	0.09	57.46	9.87	-0.20	21.57	-0.24	11.01	-0.10
28	74547	0.63	0.56	0.71	0.10	62.77	24.01	-0.44	9.89	-0.20	3.23	-0.13
29	74547	0.89	0.42	0.70	0.06	89.18	3.05	-0.24	3.27	-0.27	4.44	-0.20
30	74547	0.74	0.55	0.74	0.09	74.33	6.31	-0.27	8.46	-0.30	10.81	-0.28
31	74547	0.67	0.57	0.75	0.09	67.36	3.57	-0.20	17.25	-0.36	11.72	-0.29
32	74547	0.60	0.42	0.53	0.08	59.60	8.60	-0.14	23.03	-0.27	8.69	-0.19
33	74547	0.87	0.38	0.61	0.06	87.28	2.73	-0.21	2.66	-0.18	7.26	-0.24
34	74547	0.56	0.52	0.65	0.11	56.45	10.38	-0.19	14.87	-0.29	18.18	-0.24
35	74547	0.81	0.47	0.68	0.08	80.73	8.68	-0.25	6.27	-0.28	4.25	-0.23
36	74547	0.58	0.65	0.82	0.07	57.92	14.56	-0.29	12.02	-0.36	15.43	-0.28
37	74547	0.62	0.56	0.72	0.09	62.10	16.11	-0.25	14.12	-0.34	7.58	-0.23
38	74547	0.86	0.51	0.79	0.09	85.73	3.63	-0.26	4.77	-0.29	5.77	-0.29
39	74547	0.83	0.42	0.62	0.07	82.85	5.01	-0.19	6.97	-0.28	5.09	-0.19
40	74547	0.59	0.41	0.52	0.07	58.87	13.78	-0.27	20.13	-0.17	7.15	-0.16

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

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Table 6.3.7 (continued)
2009 Spring AIMS Classical Item Analysis
Mathematics CRT High School

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
41	74547	0.56	0.28	0.35	0.09	55.70	6.51	-0.24	33.95	-0.10	3.75	-0.17
42	74547	0.57	0.40	0.51	0.09	56.72	14.55	-0.21	17.97	-0.16	10.67	-0.20
43	74547	0.76	0.48	0.66	0.15	76.34	17.93	-0.34	4.79	-0.27	0.78	-0.14
44	74547	0.49	0.39	0.48	0.39	49.36	24.03	-0.18	17.37	-0.21	8.84	-0.12
45	74547	0.78	0.40	0.55	0.20	77.62	7.75	-0.20	8.43	-0.24	6.00	-0.17
46	74547	0.72	0.29	0.38	0.23	72.19	9.33	-0.06	10.69	-0.21	7.55	-0.16
47	74547	0.59	0.48	0.61	0.24	58.87	7.83	-0.22	22.18	-0.24	10.87	-0.24
48	74547	0.74	0.54	0.73	0.19	73.99	13.64	-0.38	9.59	-0.27	2.58	-0.15
49	74547	0.59	0.36	0.46	0.20	58.60	19.24	-0.20	7.72	-0.27	14.24	-0.07
50	74547	0.84	0.40	0.61	0.18	84.37	2.64	-0.19	8.24	-0.25	4.56	-0.20
51	74547	0.47	0.38	0.48	0.30	46.58	9.08	-0.18	19.45	-0.19	24.59	-0.14
52	74547	0.73	0.37	0.49	0.16	73.25	15.60	-0.11	4.64	-0.27	6.34	-0.25
53	74547	0.76	0.48	0.66	0.21	76.30	4.82	-0.26	10.31	-0.33	8.35	-0.16
54	74547	0.49	0.43	0.54	0.21	48.81	10.33	-0.04	33.53	-0.36	7.11	-0.12
55	74547	0.50	0.58	0.73	0.29	49.90	15.83	-0.33	16.48	-0.24	17.49	-0.20
56	74547	0.55	0.41	0.51	0.20	55.42	10.28	-0.17	16.86	-0.26	17.23	-0.14
57	74547	0.75	0.26	0.35	0.21	75.41	6.20	-0.22	5.89	-0.19	12.27	-0.03
58	74547	0.83	0.46	0.68	0.17	83.38	7.54	-0.27	4.59	-0.26	4.31	-0.20
59	74547	0.72	0.57	0.76	0.25	72.41	6.81	-0.30	10.64	-0.35	9.87	-0.22
60	74547	0.56	0.36	0.46	0.25	55.90	9.08	-0.22	20.76	-0.09	14.00	-0.22
61	74547	0.74	0.56	0.76	0.16	74.39	13.33	-0.38	10.01	-0.27	2.12	-0.21
62	74547	0.23	0.22	0.31	0.20	23.41	3.92	-0.29	51.37	-0.17	21.09	0.12
63	74547	0.71	0.61	0.81	0.17	71.09	13.42	-0.46	10.73	-0.26	4.57	-0.19
64	74547	0.60	0.42	0.53	0.27	59.71	14.63	-0.24	18.19	-0.17	7.20	-0.20
65	74547	0.61	0.43	0.55	0.37	61.11	16.48	-0.19	14.39	-0.25	7.63	-0.18
66	74547	0.63	0.33	0.42	0.19	62.53	17.28	-0.17	15.50	-0.11	4.49	-0.24
67	74547	0.53	0.36	0.45	0.22	53.37	15.00	-0.17	12.65	-0.26	18.76	-0.06
68	74547	0.37	0.37	0.47	0.29	37.37	10.72	-0.06	20.19	-0.27	31.42	-0.11
69	74547	0.72	0.47	0.63	0.19	72.40	11.81	-0.26	11.43	-0.23	4.16	-0.24
70	74547	0.81	0.48	0.69	0.21	80.58	8.50	-0.25	6.04	-0.29	4.67	-0.22
71	74547	0.65	0.47	0.60	0.25	65.38	5.78	-0.23	17.05	-0.29	11.54	-0.17
72	74547	0.58	0.48	0.61	0.19	57.94	11.65	-0.23	13.15	-0.30	17.05	-0.15
73	74547	0.87	0.46	0.74	0.18	87.24	6.80	-0.28	3.49	-0.27	2.29	-0.20
74	74547	0.64	0.44	0.57	0.21	64.36	17.90	-0.20	13.60	-0.27	3.92	-0.22
75	74547	0.52	0.49	0.61	0.30	52.39	14.06	-0.23	20.25	-0.22	12.99	-0.22
76	74547	0.48	0.34	0.42	0.24	48.45	22.69	-0.10	21.01	-0.16	7.60	-0.21
77	74547	0.67	0.46	0.59	0.20	66.70	13.92	-0.18	11.84	-0.25	7.33	-0.27
78	74547	0.71	0.54	0.72	0.22	71.09	15.25	-0.29	6.99	-0.29	6.43	-0.25
79	74547	0.74	0.47	0.63	0.21	73.54	5.70	-0.24	11.50	-0.24	9.05	-0.24
80	74547	0.59	0.38	0.48	0.24	58.94	12.79	-0.23	19.11	-0.12	8.90	-0.20
81	74547	0.84	0.40	0.61	0.19	84.18	5.45	-0.25	4.19	-0.24	5.99	-0.15
82	74547	0.79	0.47	0.67	0.19	79.12	9.48	-0.31	7.96	-0.24	3.24	-0.18
83	74547	0.61	0.60	0.76	0.22	61.00	13.25	-0.25	6.69	-0.27	18.82	-0.35
84	74547	0.81	0.40	0.58	0.20	80.65	8.70	-0.19	5.50	-0.24	4.94	-0.21
85	74547	0.62	0.39	0.50	0.20	62.19	9.74	-0.18	15.06	-0.19	12.80	-0.18

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.8
2009 Spring AIMS Classical Item Analysis
Reading CRT Grade 3

Item	N	P-Value	rpb	rbi	% Omit	Key %	Distractor 1 %	Distractor 1 rpb	Distractor 2 %	Distractor 2 rpb	Distractor 3 %	Distractor 3 rpb
1	83191	0.94	0.38	0.75	0.16	93.69	4.98	-0.31	1.16	-0.22	0.00	.
2	83191	0.85	0.34	0.52	0.24	84.55	4.66	-0.24	10.55	-0.23	0.00	.
3	83191	0.95	0.35	0.71	0.16	94.59	2.51	-0.25	2.74	-0.22	0.00	.
4	83191	0.81	0.40	0.58	0.20	81.28	8.32	-0.29	10.20	-0.24	0.00	.
5	83191	0.67	0.38	0.49	0.16	66.65	11.08	-0.19	17.01	-0.15	5.09	-0.28
6	83191	0.66	0.46	0.60	0.29	66.33	22.98	-0.22	5.08	-0.26	5.30	-0.29
7	83191	0.43	0.34	0.43	0.31	42.59	38.29	-0.07	9.90	-0.23	8.89	-0.23
8	83191	0.86	0.53	0.83	0.65	86.00	5.53	-0.30	3.49	-0.29	4.33	-0.30
9	83191	0.83	0.52	0.77	0.28	82.97	4.35	-0.30	4.20	-0.30	8.20	-0.26
10	83191	0.54	0.37	0.46	0.53	53.71	7.49	-0.19	8.85	-0.39	29.43	-0.04
11	83191	0.71	0.53	0.71	0.18	71.45	5.86	-0.27	11.52	-0.22	10.99	-0.33
12	83191	0.91	0.44	0.77	0.20	90.94	3.47	-0.27	2.75	-0.24	2.63	-0.23
13	83191	0.76	0.57	0.78	0.28	75.67	8.21	-0.27	7.93	-0.27	7.91	-0.35
14	83191	0.77	0.43	0.60	0.31	77.45	8.85	-0.28	8.37	-0.17	5.00	-0.25
15	83191	0.68	0.46	0.60	0.49	67.69	10.58	-0.21	8.45	-0.31	12.79	-0.19
16	83191	0.30	0.28	0.37	1.89	30.39	10.60	-0.27	33.12	0.07	23.98	-0.15
17	83191	0.70	0.41	0.54	0.17	69.78	13.37	-0.28	4.65	-0.23	12.03	-0.13
18	83191	0.67	0.10	0.14	0.16	66.77	3.17	-0.20	18.65	0.13	11.23	-0.19
19	83191	0.71	0.49	0.65	0.25	70.80	7.29	-0.27	12.52	-0.22	9.12	-0.28
20	83191	0.56	0.38	0.48	0.44	56.19	7.19	-0.23	11.64	-0.20	24.53	-0.15
21	83191	0.79	0.49	0.70	0.17	79.11	6.65	-0.37	10.74	-0.21	3.32	-0.24
22	83191	0.82	0.46	0.68	0.23	82.48	4.22	-0.29	5.15	-0.24	7.92	-0.22
23	83191	0.68	0.49	0.64	0.53	68.20	11.11	-0.23	11.93	-0.25	8.23	-0.26
24	83191	0.39	0.17	0.21	0.26	38.74	11.28	-0.20	19.94	-0.01	29.78	-0.02
25	83191	0.67	0.49	0.63	0.35	66.72	19.88	-0.32	5.98	-0.29	7.07	-0.12
26	83191	0.75	0.43	0.58	0.66	75.22	5.40	-0.25	6.70	-0.28	12.01	-0.17
27	83191	0.57	0.43	0.54	1.11	57.29	11.42	-0.19	10.10	-0.33	20.07	-0.11
28	83191	0.82	0.52	0.77	0.37	82.14	7.63	-0.26	4.88	-0.31	4.98	-0.29
29	83191	0.62	0.34	0.44	0.65	61.56	26.35	-0.16	6.92	-0.10	4.51	-0.31
30	83191	0.58	0.39	0.49	0.26	58.10	7.83	-0.27	13.39	-0.20	20.41	-0.11
31	83191	0.77	0.48	0.67	0.26	77.14	7.01	-0.26	10.19	-0.28	5.39	-0.21
32	83191	0.77	0.48	0.67	0.37	76.98	11.31	-0.21	4.62	-0.28	6.72	-0.30
33	83191	0.61	0.42	0.53	0.65	61.15	13.96	-0.17	11.64	-0.19	12.60	-0.24
34	83191	0.77	0.51	0.70	0.32	76.79	8.63	-0.30	5.30	-0.28	8.96	-0.22
35	83191	0.70	0.52	0.69	0.29	69.88	4.99	-0.29	6.69	-0.25	18.13	-0.29
36	83191	0.72	0.52	0.69	0.29	72.07	9.02	-0.28	10.55	-0.27	8.06	-0.25
37	83191	0.93	0.44	0.85	0.16	93.21	2.30	-0.27	2.42	-0.25	1.91	-0.23
38	83191	0.79	0.50	0.72	0.23	79.47	8.17	-0.30	9.21	-0.26	2.92	-0.25
39	83191	0.66	0.32	0.41	0.46	66.32	14.34	-0.18	7.51	-0.28	11.36	-0.03
40	83191	0.81	0.51	0.73	0.81	81.27	6.07	-0.28	6.01	-0.29	5.84	-0.26

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

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Table 6.3.8 (continued)
2009 Spring AIMS Classical Item Analysis
Reading CRT Grade 3

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
41	83191	0.88	0.41	0.68	0.28	88.20	2.79	-0.27	6.52	-0.23	2.21	-0.19
42	83191	0.74	0.35	0.48	0.38	74.03	6.28	-0.16	4.90	-0.18	14.41	-0.21
43	83191	0.47	0.38	0.47	0.66	46.54	18.82	-0.31	17.44	-0.08	16.53	-0.08
44	83191	0.47	0.46	0.58	0.85	46.87	6.80	-0.27	32.56	-0.16	12.90	-0.25
45	83191	0.57	0.37	0.47	1.15	57.08	21.65	-0.11	13.07	-0.26	7.04	-0.19
46	83191	0.68	0.52	0.68	0.93	67.98	7.94	-0.29	12.53	-0.28	10.61	-0.20
47	83191	0.72	0.34	0.46	0.38	72.23	11.49	-0.32	2.07	-0.24	13.81	-0.04
48	83191	0.43	0.29	0.36	0.24	42.70	8.01	-0.21	7.49	-0.20	41.56	-0.06
49	83191	0.62	0.38	0.49	0.44	62.42	6.96	-0.22	11.73	-0.27	18.43	-0.10
50	83191	0.50	0.50	0.63	0.36	49.80	15.42	-0.38	18.41	-0.13	16.00	-0.17
51	83191	0.60	0.44	0.56	0.86	60.49	14.16	-0.17	13.31	-0.26	11.17	-0.20
52	83191	0.58	0.48	0.60	0.46	58.44	7.01	-0.33	28.88	-0.21	5.19	-0.22
53	83191	0.67	0.56	0.73	0.54	67.10	10.51	-0.27	11.94	-0.33	9.88	-0.22
54	83191	0.58	0.49	0.62	0.74	57.77	19.68	-0.24	10.75	-0.19	11.05	-0.26

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.9
2009 Spring AIMS Classical Item Analysis
Reading CRT Grade 4

Item	N	P-Value	rpb	rbi	% Omit	Key %	Distracto %	rpb	Distracto %	rpb	Distracto %	rpb
1	82539	0.86	0.43	0.68	0.05	86.43	9.41	-0.32	1.58	-0.18	2.51	-0.20
2	82539	0.73	0.32	0.42	0.07	72.95	18.00	-0.11	5.22	-0.26	3.75	-0.20
3	82539	0.66	0.48	0.62	0.08	66.03	17.67	-0.24	3.55	-0.24	12.66	-0.27
4	82539	0.55	0.29	0.37	0.09	55.08	10.07	-0.19	29.73	-0.09	5.03	-0.22
5	82539	0.81	0.51	0.75	0.05	81.45	5.36	-0.32	7.80	-0.25	5.33	-0.27
6	82539	0.71	0.31	0.40	0.08	70.76	13.99	-0.10	5.07	-0.23	10.10	-0.18
7	82539	0.79	0.53	0.75	0.09	78.51	5.02	-0.28	9.11	-0.29	7.26	-0.28
8	82539	0.77	0.38	0.53	0.09	77.20	4.95	-0.31	3.45	-0.28	14.30	-0.12
9	82539	0.69	0.44	0.57	0.08	68.73	12.99	-0.29	3.66	-0.25	14.54	-0.16
10	82539	0.53	0.35	0.44	0.08	52.97	10.38	-0.18	17.90	-0.12	18.66	-0.18
11	82539	0.67	0.26	0.34	0.09	66.68	5.59	-0.19	21.03	-0.09	6.59	-0.17
12	82539	0.78	0.48	0.68	0.10	78.35	10.81	-0.26	4.12	-0.27	6.59	-0.25
13	82539	0.78	0.42	0.59	0.11	77.60	12.72	-0.18	5.08	-0.27	4.48	-0.26
14	82539	0.91	0.47	0.82	0.15	90.73	2.67	-0.26	3.28	-0.23	3.15	-0.29
15	82539	0.52	0.35	0.44	0.10	52.28	9.42	-0.20	16.41	-0.26	21.79	-0.05
16	82539	0.77	0.46	0.63	0.09	77.15	7.57	-0.24	11.88	-0.27	3.31	-0.22
17	82539	0.87	0.44	0.71	0.09	87.09	3.15	-0.23	3.98	-0.26	5.67	-0.24
18	82539	0.80	0.45	0.65	0.10	80.34	5.50	-0.23	9.81	-0.25	4.22	-0.26
19	82539	0.60	0.40	0.51	0.12	59.92	19.82	-0.18	8.16	-0.26	11.95	-0.15
20	82539	0.67	0.44	0.57	0.11	67.00	11.77	-0.18	6.76	-0.17	14.34	-0.30
21	82539	0.76	0.35	0.48	0.19	76.15	6.27	-0.27	14.09	-0.10	3.30	-0.25
22	82539	0.91	0.51	0.89	0.09	90.95	2.23	-0.27	3.52	-0.32	3.20	-0.26
23	82539	0.87	0.42	0.66	0.09	87.19	5.86	-0.26	4.53	-0.22	2.33	-0.19
24	82539	0.69	0.40	0.52	0.13	68.52	21.53	-0.19	3.51	-0.28	6.27	-0.22
25	82539	0.87	0.50	0.81	0.11	87.38	5.69	-0.25	3.21	-0.29	3.59	-0.30
26	82539	0.80	0.43	0.61	0.11	80.13	6.34	-0.23	6.37	-0.22	7.01	-0.23
27	82539	0.75	0.58	0.80	0.13	75.14	8.90	-0.24	8.38	-0.31	7.44	-0.36
28	82539	0.78	0.40	0.56	0.15	78.04	11.07	-0.22	7.17	-0.20	3.54	-0.24
29	82539	0.74	0.55	0.75	0.16	74.01	9.81	-0.26	6.21	-0.33	9.78	-0.28
30	82539	0.62	0.56	0.71	0.16	61.85	7.63	-0.38	20.38	-0.26	9.98	-0.21
31	82539	0.72	0.38	0.51	0.14	72.20	8.37	-0.29	4.94	-0.29	14.36	-0.07
32	82539	0.71	0.46	0.60	0.15	70.58	8.97	-0.21	5.09	-0.31	15.20	-0.22
33	82539	0.79	0.47	0.66	0.16	79.13	6.08	-0.22	5.30	-0.27	9.28	-0.26
34	82539	0.62	0.38	0.49	0.22	62.45	20.32	-0.20	11.64	-0.18	5.33	-0.20
35	82539	0.67	0.45	0.59	0.16	67.35	6.83	-0.24	5.54	-0.22	20.11	-0.24
36	82539	0.80	0.53	0.75	0.30	80.32	3.78	-0.31	9.67	-0.32	5.92	-0.21
37	82539	0.64	0.41	0.53	0.16	64.26	11.36	-0.21	6.33	-0.26	17.90	-0.17
38	82539	0.77	0.52	0.73	0.16	76.93	5.75	-0.28	6.99	-0.28	10.14	-0.26
39	82539	0.61	0.51	0.65	0.19	61.02	7.84	-0.27	8.75	-0.30	22.19	-0.22
40	82539	0.71	0.52	0.68	0.19	70.66	12.65	-0.28	6.30	-0.25	10.19	-0.26

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

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Table 6.3.9 (continued)
2009 Spring AIMS Classical Item Analysis
Reading CRT Grade 4

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
41	82539	0.76	0.52	0.72	0.15	76.20	4.91	-0.28	14.37	-0.31	4.35	-0.24
42	82539	0.58	0.51	0.64	0.17	58.07	10.91	-0.28	9.99	-0.27	20.85	-0.19
43	82539	0.38	0.18	0.23	0.24	38.13	16.61	-0.13	19.01	-0.06	26.00	-0.03
44	82539	0.74	0.43	0.58	0.17	73.53	9.95	-0.23	9.79	-0.23	6.56	-0.21
45	82539	0.88	0.49	0.80	0.19	88.48	4.34	-0.27	3.42	-0.27	3.56	-0.26
46	82539	0.84	0.38	0.57	0.24	83.90	4.29	-0.29	8.08	-0.10	3.49	-0.26
47	82539	0.88	0.55	0.90	0.16	88.27	4.05	-0.29	4.68	-0.33	2.83	-0.29
48	82539	0.87	0.56	0.89	0.18	86.95	4.40	-0.32	4.84	-0.30	3.62	-0.30
49	82539	0.78	0.51	0.72	0.20	77.97	6.68	-0.33	12.48	-0.26	2.65	-0.24
50	82539	0.90	0.51	0.87	0.19	89.96	3.21	-0.28	3.69	-0.27	2.93	-0.30
51	82539	0.69	0.46	0.61	0.21	68.53	17.73	-0.21	7.44	-0.27	6.07	-0.26
52	82539	0.47	0.40	0.50	0.26	46.58	18.05	-0.21	28.99	-0.09	6.11	-0.31
53	82539	0.67	0.52	0.67	0.22	67.15	6.56	-0.31	11.92	-0.19	14.15	-0.29
54	82539	0.59	0.47	0.60	0.33	58.72	20.09	-0.20	7.28	-0.30	13.58	-0.20

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.10
2009 Spring AIMS Classical Item Analysis
Reading CRT Grade 5

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
1	82539	0.86	0.43	0.68	0.05	86.43	9.41	-0.32	1.58	-0.18	2.51	-0.20
2	82539	0.73	0.32	0.42	0.07	72.95	18.00	-0.11	5.22	-0.26	3.75	-0.20
3	82539	0.66	0.48	0.62	0.08	66.03	17.67	-0.24	3.55	-0.24	12.66	-0.27
4	82539	0.55	0.29	0.37	0.09	55.08	10.07	-0.19	29.73	-0.09	5.03	-0.22
5	82539	0.81	0.51	0.75	0.05	81.45	5.36	-0.32	7.80	-0.25	5.33	-0.27
6	82539	0.71	0.31	0.40	0.08	70.76	13.99	-0.10	5.07	-0.23	10.10	-0.18
7	82539	0.79	0.53	0.75	0.09	78.51	5.02	-0.28	9.11	-0.29	7.26	-0.28
8	82539	0.77	0.38	0.53	0.09	77.20	4.95	-0.31	3.45	-0.28	14.30	-0.12
9	82539	0.69	0.44	0.57	0.08	68.73	12.99	-0.29	3.66	-0.25	14.54	-0.16
10	82539	0.53	0.35	0.44	0.08	52.97	10.38	-0.18	17.90	-0.12	18.66	-0.18
11	82539	0.67	0.26	0.34	0.09	66.68	5.59	-0.19	21.03	-0.09	6.59	-0.17
12	82539	0.78	0.48	0.68	0.10	78.35	10.81	-0.26	4.12	-0.27	6.59	-0.25
13	82539	0.78	0.42	0.59	0.11	77.60	12.72	-0.18	5.08	-0.27	4.48	-0.26
14	82539	0.91	0.47	0.82	0.15	90.73	2.67	-0.26	3.28	-0.23	3.15	-0.29
15	82539	0.52	0.35	0.44	0.10	52.28	9.42	-0.20	16.41	-0.26	21.79	-0.05
16	82539	0.77	0.46	0.63	0.09	77.15	7.57	-0.24	11.88	-0.27	3.31	-0.22
17	82539	0.87	0.44	0.71	0.09	87.09	3.15	-0.23	3.98	-0.26	5.67	-0.24
18	82539	0.80	0.45	0.65	0.10	80.34	5.50	-0.23	9.81	-0.25	4.22	-0.26
19	82539	0.60	0.40	0.51	0.12	59.92	19.82	-0.18	8.16	-0.26	11.95	-0.15
20	82539	0.67	0.44	0.57	0.11	67.00	11.77	-0.18	6.76	-0.17	14.34	-0.30
21	82539	0.76	0.35	0.48	0.19	76.15	6.27	-0.27	14.09	-0.10	3.30	-0.25
22	82539	0.91	0.51	0.89	0.09	90.95	2.23	-0.27	3.52	-0.32	3.20	-0.26
23	82539	0.87	0.42	0.66	0.09	87.19	5.86	-0.26	4.53	-0.22	2.33	-0.19
24	82539	0.69	0.40	0.52	0.13	68.52	21.53	-0.19	3.51	-0.28	6.27	-0.22
25	82539	0.87	0.50	0.81	0.11	87.38	5.69	-0.25	3.21	-0.29	3.59	-0.30
26	82539	0.80	0.43	0.61	0.11	80.13	6.34	-0.23	6.37	-0.22	7.01	-0.23
27	82539	0.75	0.58	0.80	0.13	75.14	8.90	-0.24	8.38	-0.31	7.44	-0.36
28	82539	0.78	0.40	0.56	0.15	78.04	11.07	-0.22	7.17	-0.20	3.54	-0.24
29	82539	0.74	0.55	0.75	0.16	74.01	9.81	-0.26	6.21	-0.33	9.78	-0.28
30	82539	0.62	0.56	0.71	0.16	61.85	7.63	-0.38	20.38	-0.26	9.98	-0.21
31	82539	0.72	0.38	0.51	0.14	72.20	8.37	-0.29	4.94	-0.29	14.36	-0.07
32	82539	0.71	0.46	0.60	0.15	70.58	8.97	-0.21	5.09	-0.31	15.20	-0.22
33	82539	0.79	0.47	0.66	0.16	79.13	6.08	-0.22	5.30	-0.27	9.28	-0.26
34	82539	0.62	0.38	0.49	0.22	62.45	20.32	-0.20	11.64	-0.18	5.33	-0.20
35	82539	0.67	0.45	0.59	0.16	67.35	6.83	-0.24	5.54	-0.22	20.11	-0.24
36	82539	0.80	0.53	0.75	0.30	80.32	3.78	-0.31	9.67	-0.32	5.92	-0.21
37	82539	0.64	0.41	0.53	0.16	64.26	11.36	-0.21	6.33	-0.26	17.90	-0.17
38	82539	0.77	0.52	0.73	0.16	76.93	5.75	-0.28	6.99	-0.28	10.14	-0.26
39	82539	0.61	0.51	0.65	0.19	61.02	7.84	-0.27	8.75	-0.30	22.19	-0.22
40	82539	0.71	0.52	0.68	0.19	70.66	12.65	-0.28	6.30	-0.25	10.19	-0.26

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

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Table 6.3.10 (continued)
2009 Spring AIMS Classical Item Analysis
Reading CRT Grade 5

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
41	82539	0.76	0.52	0.72	0.15	76.20	4.91	-0.28	14.37	-0.31	4.35	-0.24
42	82539	0.58	0.51	0.64	0.17	58.07	10.91	-0.28	9.99	-0.27	20.85	-0.19
43	82539	0.38	0.18	0.23	0.24	38.13	16.61	-0.13	19.01	-0.06	26.00	-0.03
44	82539	0.74	0.43	0.58	0.17	73.53	9.95	-0.23	9.79	-0.23	6.56	-0.21
45	82539	0.88	0.49	0.80	0.19	88.48	4.34	-0.27	3.42	-0.27	3.56	-0.26
46	82539	0.84	0.38	0.57	0.24	83.90	4.29	-0.29	8.08	-0.10	3.49	-0.26
47	82539	0.88	0.55	0.90	0.16	88.27	4.05	-0.29	4.68	-0.33	2.83	-0.29
48	82539	0.87	0.56	0.89	0.18	86.95	4.40	-0.32	4.84	-0.30	3.62	-0.30
49	82539	0.78	0.51	0.72	0.20	77.97	6.68	-0.33	12.48	-0.26	2.65	-0.24
50	82539	0.90	0.51	0.87	0.19	89.96	3.21	-0.28	3.69	-0.27	2.93	-0.30
51	82539	0.69	0.46	0.61	0.21	68.53	17.73	-0.21	7.44	-0.27	6.07	-0.26
52	82539	0.47	0.40	0.50	0.26	46.58	18.05	-0.21	28.99	-0.09	6.11	-0.31
53	82539	0.67	0.52	0.67	0.22	67.15	6.56	-0.31	11.92	-0.19	14.15	-0.29
54	82539	0.59	0.47	0.60	0.33	58.72	20.09	-0.20	7.28	-0.30	13.58	-0.20

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.11
2009 Spring AIMS Classical Item Analysis
Reading CRT Grade 6

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
1	80953	0.71	0.40	0.54	0.06	71.02	7.17	-0.21	6.17	-0.25	15.58	-0.18
2	80953	0.92	0.44	0.81	0.06	92.40	2.32	-0.23	3.01	-0.27	2.20	-0.23
3	80953	0.76	0.45	0.62	0.06	75.65	6.06	-0.24	14.66	-0.25	3.55	-0.25
4	80953	0.85	0.40	0.61	0.07	84.66	6.65	-0.32	7.51	-0.18	1.10	-0.15
5	80953	0.84	0.33	0.50	0.07	83.72	3.36	-0.19	7.10	-0.17	5.75	-0.18
6	80953	0.78	0.30	0.42	0.12	77.88	2.12	-0.23	2.98	-0.14	16.91	-0.17
7	80953	0.94	0.35	0.69	0.06	93.69	2.46	-0.18	2.21	-0.21	1.58	-0.19
8	80953	0.89	0.46	0.76	0.09	88.53	3.53	-0.24	3.80	-0.23	4.04	-0.29
9	80953	0.74	0.48	0.65	0.09	74.46	9.43	-0.24	12.38	-0.29	3.64	-0.22
10	80953	0.79	0.55	0.78	0.11	78.52	7.10	-0.32	7.24	-0.26	7.03	-0.29
11	80953	0.59	0.35	0.44	0.07	59.41	7.39	-0.23	21.66	-0.08	11.47	-0.24
12	80953	0.47	0.33	0.42	0.08	46.71	5.07	-0.29	38.16	-0.02	9.96	-0.30
13	80953	0.55	0.30	0.38	0.13	55.49	15.26	-0.13	16.43	-0.15	12.68	-0.14
14	80953	0.89	0.53	0.89	0.08	89.34	3.97	-0.33	2.40	-0.27	4.19	-0.29
15	80953	0.83	0.54	0.79	0.10	82.64	5.90	-0.28	5.43	-0.31	5.93	-0.27
16	80953	0.86	0.56	0.87	0.10	85.60	4.56	-0.30	5.99	-0.32	3.75	-0.30
17	80953	0.87	0.53	0.84	0.09	86.50	6.09	-0.29	4.03	-0.33	3.28	-0.27
18	80953	0.44	0.23	0.29	0.11	43.83	19.91	-0.14	17.28	-0.04	18.88	-0.10
19	80953	0.78	0.54	0.76	0.14	77.62	6.25	-0.27	9.92	-0.34	6.07	-0.24
20	80953	0.77	0.57	0.79	0.10	77.03	6.00	-0.29	7.84	-0.29	9.01	-0.32
21	80953	0.66	0.40	0.51	0.12	65.60	7.60	-0.23	22.11	-0.17	4.58	-0.26
22	80953	0.87	0.45	0.72	0.15	87.21	4.45	-0.25	3.96	-0.27	4.22	-0.22
23	80953	0.68	0.28	0.36	0.09	67.95	19.78	-0.02	4.97	-0.22	7.19	-0.27
24	80953	0.80	0.37	0.53	0.11	79.97	5.60	-0.19	8.90	-0.20	5.41	-0.20
25	80953	0.89	0.41	0.69	0.15	89.10	2.39	-0.24	6.41	-0.24	1.95	-0.23
26	80953	0.82	0.40	0.59	0.07	82.24	8.60	-0.20	6.85	-0.27	2.24	-0.20
27	80953	0.71	0.48	0.64	0.09	70.90	13.70	-0.27	10.82	-0.27	4.49	-0.19
28	80953	0.65	0.32	0.41	0.10	64.76	9.93	-0.18	10.85	-0.19	14.35	-0.11
29	80953	0.68	0.50	0.65	0.10	67.63	11.58	-0.35	13.46	-0.19	7.23	-0.20
30	80953	0.54	0.34	0.43	0.10	54.26	28.96	-0.07	11.42	-0.23	5.26	-0.29
31	80953	0.66	0.51	0.66	0.12	66.34	6.54	-0.28	15.23	-0.25	11.75	-0.25
32	80953	0.70	0.38	0.50	0.20	69.53	11.20	-0.20	10.76	-0.19	8.31	-0.19
33	80953	0.73	0.45	0.60	0.15	72.56	5.80	-0.21	14.05	-0.20	7.43	-0.30
34	80953	0.73	0.24	0.33	0.14	72.67	4.39	-0.13	6.61	-0.27	16.19	-0.03
35	80953	0.48	0.23	0.29	0.18	48.38	6.58	-0.26	39.71	0.01	5.14	-0.25
36	80953	0.67	0.46	0.60	0.21	67.35	14.39	-0.30	10.74	-0.16	7.32	-0.22
37	80953	0.78	0.52	0.73	0.13	78.06	8.92	-0.25	6.26	-0.27	6.63	-0.31
38	80953	0.61	0.37	0.47	0.14	61.09	13.39	-0.15	11.58	-0.22	13.79	-0.16
39	80953	0.75	0.39	0.54	0.13	75.28	10.38	-0.26	8.96	-0.14	5.24	-0.21
40	80953	0.67	0.40	0.52	0.29	67.15	13.19	-0.18	9.23	-0.20	10.12	-0.22

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

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Table 6.3.11 (continued)
2009 Spring AIMS Classical Item Analysis
Reading CRT Grade 6

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
41	80953	0.55	0.42	0.53	0.14	54.56	22.49	-0.12	7.07	-0.30	15.74	-0.22
42	80953	0.50	0.32	0.41	0.15	50.21	6.76	-0.30	17.98	-0.20	24.89	-0.01
43	80953	0.48	0.31	0.39	0.17	48.24	15.61	-0.14	14.43	-0.20	21.53	-0.08
44	80953	0.55	0.37	0.46	0.17	55.49	13.60	-0.18	17.95	-0.16	12.78	-0.17
45	80953	0.48	0.26	0.33	0.22	47.86	15.48	-0.16	10.47	-0.15	25.95	-0.06
46	80953	0.74	0.45	0.61	0.20	74.41	8.86	-0.22	8.45	-0.25	8.08	-0.22
47	80953	0.77	0.49	0.67	0.15	76.82	4.85	-0.27	10.00	-0.29	8.19	-0.21
48	80953	0.67	0.36	0.46	0.16	66.85	5.13	-0.25	23.20	-0.12	4.64	-0.27
49	80953	0.73	0.55	0.73	0.18	72.95	10.13	-0.30	8.21	-0.30	8.51	-0.24
50	80953	0.47	0.29	0.36	0.20	46.51	14.44	-0.17	18.46	-0.18	20.39	-0.03
51	80953	0.64	0.37	0.47	0.27	63.73	17.81	-0.14	6.54	-0.29	11.66	-0.15
52	80953	0.76	0.61	0.84	0.17	76.27	7.96	-0.30	7.33	-0.30	8.26	-0.35
53	80953	0.45	0.33	0.41	0.18	44.92	30.03	-0.11	10.45	-0.21	14.42	-0.13
54	80953	0.54	0.38	0.47	0.22	54.08	18.60	-0.21	14.52	-0.16	12.57	-0.14

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.12
2009 Spring AIMS Classical Item Analysis
Reading CRT Grade 7

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
1	81199	0.92	0.32	0.57	0.06	91.63	3.07	-0.15	2.12	-0.15	3.11	-0.24
2	81199	0.59	0.28	0.35	0.07	59.13	34.65	-0.12	4.12	-0.25	2.04	-0.18
3	81199	0.85	0.44	0.67	0.07	84.56	11.83	-0.32	1.41	-0.20	2.12	-0.22
4	81199	0.73	0.47	0.63	0.08	73.16	5.59	-0.30	6.84	-0.30	14.34	-0.18
5	81199	0.75	0.42	0.57	0.06	74.87	3.59	-0.24	16.58	-0.27	4.89	-0.16
6	81199	0.69	0.45	0.59	0.09	68.73	7.81	-0.26	5.20	-0.17	18.18	-0.26
7	81199	0.86	0.45	0.71	0.08	86.32	3.67	-0.28	3.30	-0.22	6.64	-0.25
8	81199	0.60	0.38	0.48	0.08	60.30	25.97	-0.13	7.80	-0.31	5.85	-0.19
9	81199	0.78	0.43	0.60	0.09	77.75	6.14	-0.30	2.91	-0.26	13.11	-0.18
10	81199	0.68	0.44	0.57	0.16	67.86	11.22	-0.20	5.33	-0.21	15.43	-0.25
11	81199	0.53	0.48	0.60	0.07	53.12	13.63	-0.16	15.76	-0.31	17.42	-0.19
12	81199	0.64	0.44	0.56	0.09	64.18	10.95	-0.26	9.26	-0.30	15.52	-0.12
13	81199	0.84	0.36	0.54	0.08	83.95	11.66	-0.19	2.29	-0.25	2.01	-0.22
14	81199	0.56	0.38	0.47	0.09	56.09	14.55	-0.12	10.95	-0.26	18.33	-0.15
15	81199	0.80	0.41	0.59	0.12	80.24	7.78	-0.24	3.71	-0.27	8.14	-0.18
16	81199	0.68	0.39	0.51	0.09	68.16	5.82	-0.21	17.48	-0.16	8.44	-0.25
17	81199	0.90	0.29	0.49	0.07	90.08	3.59	-0.16	2.24	-0.17	4.02	-0.15
18	81199	0.74	0.50	0.68	0.13	74.16	5.24	-0.26	12.40	-0.28	8.06	-0.25
19	81199	0.65	0.38	0.49	0.12	64.99	22.77	-0.10	6.66	-0.28	5.44	-0.30
20	81199	0.57	0.25	0.31	0.15	57.31	6.22	-0.21	25.59	-0.09	10.73	-0.10
21	81199	0.73	0.46	0.62	0.10	73.07	10.09	-0.28	4.58	-0.16	12.16	-0.26
22	81199	0.69	0.25	0.33	0.12	69.35	12.12	-0.09	12.94	-0.16	5.47	-0.14
23	81199	0.83	0.43	0.64	0.11	82.91	8.52	-0.23	3.90	-0.25	4.56	-0.23
24	81199	0.78	0.28	0.39	0.11	77.75	7.76	-0.08	6.13	-0.22	8.25	-0.15
25	81199	0.79	0.36	0.50	0.11	78.98	2.70	-0.22	5.21	-0.27	13.00	-0.14
26	81199	0.52	0.24	0.30	0.11	52.08	11.81	-0.19	6.46	-0.22	29.53	-0.01
27	81199	0.77	0.50	0.69	0.13	77.43	4.59	-0.23	7.00	-0.27	10.85	-0.28
28	81199	0.77	0.38	0.52	0.10	76.75	14.23	-0.14	5.13	-0.26	3.79	-0.27
29	81199	0.54	0.36	0.46	0.12	53.79	28.16	-0.13	6.73	-0.30	11.19	-0.15
30	81199	0.72	0.51	0.68	0.12	71.97	14.84	-0.22	7.79	-0.30	5.28	-0.29
31	81199	0.67	0.52	0.67	0.12	66.74	8.58	-0.27	5.46	-0.29	19.10	-0.26
32	81199	0.57	0.38	0.47	0.15	57.40	7.60	-0.30	10.83	-0.28	24.02	-0.04
33	81199	0.79	0.47	0.67	0.12	79.40	4.91	-0.27	10.48	-0.25	5.08	-0.25
34	81199	0.60	0.37	0.47	0.13	59.54	21.11	-0.12	8.86	-0.21	10.36	-0.23
35	81199	0.70	0.51	0.67	0.12	70.07	8.25	-0.33	15.70	-0.22	5.86	-0.25
36	81199	0.33	0.26	0.34	0.14	33.19	14.42	-0.21	18.05	-0.16	34.20	0.03
37	81199	0.58	0.37	0.47	0.21	57.79	17.61	-0.10	12.01	-0.16	12.37	-0.27
38	81199	0.68	0.32	0.42	0.20	67.60	15.55	-0.13	5.43	-0.23	11.21	-0.14
39	81199	0.47	0.19	0.24	0.21	47.27	16.07	0.02	11.96	-0.25	24.49	-0.04
40	81199	0.74	0.44	0.60	0.22	74.14	8.73	-0.21	8.50	-0.25	8.40	-0.22

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

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Table 6.3.12 (continued)
2009 Spring AIMS Classical Item Analysis
Reading CRT Grade 7

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
41	81199	0.76	0.45	0.62	0.22	76.00	11.36	-0.27	7.59	-0.21	4.83	-0.22
42	81199	0.72	0.37	0.49	0.18	72.45	4.63	-0.23	17.07	-0.19	5.65	-0.17
43	81199	0.79	0.42	0.59	0.19	79.25	10.13	-0.13	5.54	-0.25	4.89	-0.31
44	81199	0.70	0.37	0.49	0.20	70.44	11.72	-0.17	10.82	-0.22	6.81	-0.18
45	81199	0.66	0.44	0.57	0.20	66.38	8.82	-0.21	5.13	-0.28	19.46	-0.21
46	81199	0.41	0.19	0.24	0.24	40.60	20.18	-0.06	20.46	-0.15	18.52	-0.01
47	81199	0.80	0.53	0.75	0.39	79.51	9.21	-0.28	6.84	-0.29	4.04	-0.27
48	81199	0.53	0.38	0.48	0.19	52.79	16.76	-0.24	18.39	-0.14	11.86	-0.14
49	81199	0.66	0.44	0.57	0.21	66.07	10.77	-0.23	17.01	-0.17	5.93	-0.29
50	81199	0.77	0.49	0.68	0.20	76.64	5.56	-0.30	11.88	-0.19	5.72	-0.32
51	81199	0.60	0.41	0.52	0.20	59.98	20.40	-0.12	10.63	-0.24	8.78	-0.27
52	81199	0.76	0.49	0.67	0.20	76.46	10.46	-0.29	7.06	-0.30	5.82	-0.16
53	81199	0.75	0.42	0.58	0.20	75.28	4.48	-0.28	9.19	-0.24	10.85	-0.17
54	81199	0.60	0.39	0.50	0.21	60.00	9.86	-0.26	11.11	-0.15	18.80	-0.16

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.13
2009 Spring AIMS Classical Item Analysis
Reading CRT Grade 8

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
1	79673	0.89	0.29	0.48	0.08	88.93	0.88	-0.13	4.37	-0.11	5.74	-0.23
2	79673	0.66	0.30	0.39	0.07	66.21	4.13	-0.26	25.86	-0.14	3.73	-0.16
3	79673	0.64	0.34	0.44	0.09	63.58	14.61	-0.17	19.49	-0.19	2.23	-0.19
4	79673	0.79	0.40	0.56	0.10	79.23	7.32	-0.16	8.36	-0.27	4.99	-0.20
5	79673	0.83	0.48	0.71	0.08	82.86	7.61	-0.25	3.13	-0.23	6.31	-0.29
6	79673	0.86	0.44	0.69	0.09	86.49	3.42	-0.28	2.89	-0.24	7.11	-0.23
7	79673	0.82	0.32	0.47	0.08	82.49	9.04	-0.17	6.88	-0.22	1.51	-0.14
8	79673	0.60	0.26	0.33	0.13	60.02	14.39	-0.10	7.29	-0.24	18.17	-0.07
9	79673	0.69	0.33	0.43	0.10	69.34	20.10	-0.11	6.09	-0.23	4.36	-0.25
10	79673	0.75	0.46	0.62	0.10	74.54	7.99	-0.26	7.63	-0.25	9.74	-0.21
11	79673	0.64	0.42	0.54	0.11	63.61	15.53	-0.12	8.34	-0.29	12.40	-0.24
12	79673	0.60	0.41	0.52	0.11	60.35	32.89	-0.26	3.06	-0.25	3.58	-0.19
13	79673	0.57	0.39	0.49	0.10	57.04	19.27	-0.17	14.34	-0.17	9.24	-0.22
14	79673	0.82	0.46	0.67	0.10	82.01	4.93	-0.28	9.56	-0.26	3.40	-0.22
15	79673	0.63	0.30	0.39	0.13	63.33	25.37	-0.13	7.02	-0.19	4.14	-0.20
16	79673	0.68	0.49	0.63	0.13	67.63	13.03	-0.19	12.80	-0.29	6.40	-0.26
17	79673	0.66	0.42	0.54	0.12	65.52	16.17	-0.20	10.19	-0.18	7.99	-0.24
18	79673	0.62	0.41	0.52	0.12	62.31	5.79	-0.28	24.51	-0.22	7.26	-0.13
19	79673	0.69	0.41	0.54	0.11	69.22	24.93	-0.26	3.55	-0.26	2.19	-0.20
20	79673	0.44	0.30	0.37	0.17	44.05	23.69	-0.05	15.96	-0.18	16.12	-0.15
21	79673	0.63	0.36	0.46	0.12	63.26	4.51	-0.16	3.30	-0.17	28.80	-0.23
22	79673	0.76	0.46	0.63	0.12	76.34	4.19	-0.25	17.09	-0.30	2.25	-0.19
23	79673	0.86	0.37	0.58	0.17	85.55	6.22	-0.23	4.44	-0.21	3.63	-0.16
24	79673	0.56	0.35	0.43	0.12	55.99	8.04	-0.22	5.57	-0.21	30.28	-0.13
25	79673	0.79	0.32	0.46	0.16	78.95	6.25	-0.17	11.71	-0.19	2.92	-0.16
26	79673	0.80	0.39	0.56	0.12	80.18	3.52	-0.18	8.09	-0.20	8.09	-0.23
27	79673	0.74	0.52	0.70	0.12	73.71	8.74	-0.23	10.71	-0.30	6.72	-0.26
28	79673	0.72	0.39	0.52	0.14	72.10	9.50	-0.17	4.91	-0.22	13.35	-0.22
29	79673	0.68	0.29	0.38	0.18	68.45	19.59	-0.09	5.56	-0.24	6.22	-0.16
30	79673	0.68	0.45	0.59	0.13	68.46	18.88	-0.19	5.67	-0.27	6.85	-0.26
31	79673	0.54	0.33	0.41	0.14	54.00	24.06	-0.12	13.29	-0.18	8.50	-0.19
32	79673	0.51	0.18	0.23	0.16	50.58	24.97	0.05	12.83	-0.18	11.45	-0.16
33	79673	0.69	0.40	0.52	0.25	69.13	3.36	-0.20	10.13	-0.28	17.12	-0.16
34	79673	0.71	0.39	0.51	0.26	70.59	14.16	-0.19	6.97	-0.24	8.02	-0.16
35	79673	0.82	0.47	0.68	0.24	82.11	3.66	-0.23	4.25	-0.27	9.73	-0.26
36	79673	0.85	0.43	0.65	0.25	84.69	2.21	-0.22	3.35	-0.25	9.49	-0.25
37	79673	0.47	0.31	0.39	0.39	47.14	15.34	-0.12	15.04	-0.25	22.09	-0.05
38	79673	0.71	0.47	0.62	0.24	71.41	8.51	-0.30	14.80	-0.24	5.03	-0.18
39	79673	0.56	0.31	0.39	0.25	55.91	10.69	-0.25	6.20	-0.25	26.94	-0.03
40	79673	0.62	0.30	0.38	0.26	62.06	8.59	-0.23	5.12	-0.25	23.96	-0.05

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

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Table 6.3.13 (continued)
2009 Spring AIMS Classical Item Analysis
Reading CRT Grade 8

Item	N	P-Value	rpb	rbi	% Omit	Key %	Distractor 1 %	Distractor 1 rpb	Distractor 2 %	Distractor 2 rpb	Distractor 3 %	Distractor 3 rpb
41	79673	0.52	0.39	0.49	0.33	52.13	9.27	-0.21	29.65	-0.11	8.62	-0.28
42	79673	0.84	0.43	0.64	0.28	83.83	5.05	-0.22	6.40	-0.20	4.43	-0.26
43	79673	0.43	0.31	0.39	0.28	42.97	13.98	-0.10	25.78	-0.14	16.99	-0.13
44	79673	0.61	0.39	0.50	0.33	61.40	11.17	-0.20	13.83	-0.27	13.27	-0.08
45	79673	0.56	0.25	0.32	0.30	56.14	4.35	-0.25	6.74	-0.22	32.46	-0.02
46	79673	0.67	0.44	0.58	0.26	67.18	11.75	-0.23	8.72	-0.29	12.09	-0.15
47	79673	0.68	0.49	0.64	0.26	67.82	9.01	-0.25	13.25	-0.21	9.64	-0.26
48	79673	0.77	0.53	0.73	0.30	76.98	7.31	-0.31	4.25	-0.27	11.15	-0.26
49	79673	0.79	0.49	0.70	0.26	79.05	4.99	-0.24	7.62	-0.26	8.07	-0.27
50	79673	0.64	0.44	0.57	0.29	64.43	16.53	-0.21	11.10	-0.23	7.63	-0.22
51	79673	0.72	0.53	0.70	0.42	71.61	6.72	-0.28	8.95	-0.25	12.29	-0.27
52	79673	0.71	0.46	0.61	0.27	70.97	6.40	-0.23	15.63	-0.25	6.71	-0.23
53	79673	0.68	0.50	0.65	0.26	67.92	10.29	-0.23	8.74	-0.30	12.78	-0.22
54	79673	0.72	0.43	0.58	0.30	72.19	9.40	-0.22	6.97	-0.25	11.14	-0.19

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.14
2009 Spring AIMS Classical Item Analysis
Reading CRT High School

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
1	74672	0.71	0.42	0.56	0.05	70.71	11.63	-0.21	8.17	-0.23	9.42	-0.21
2	74672	0.70	0.34	0.45	0.04	70.02	13.63	-0.27	11.87	-0.08	4.43	-0.19
3	74672	0.84	0.34	0.51	0.03	83.83	8.71	-0.26	1.45	-0.16	5.99	-0.13
4	74672	0.73	0.38	0.51	0.03	73.41	4.58	-0.33	3.33	-0.16	18.63	-0.17
5	74672	0.64	0.32	0.41	0.06	64.46	18.65	-0.14	10.17	-0.18	6.64	-0.18
6	74672	0.67	0.28	0.36	0.03	66.80	3.16	-0.16	9.84	-0.16	20.15	-0.13
7	74672	0.73	0.36	0.48	0.05	72.53	15.17	-0.15	7.57	-0.21	4.66	-0.24
8	74672	0.82	0.36	0.53	0.06	82.26	3.99	-0.22	5.21	-0.20	8.47	-0.18
9	74672	0.87	0.42	0.67	0.05	87.03	6.13	-0.25	2.55	-0.19	4.23	-0.25
10	74672	0.96	0.35	0.79	0.02	95.73	1.43	-0.22	1.48	-0.18	1.35	-0.20
11	74672	0.89	0.43	0.72	0.03	88.90	3.69	-0.23	3.97	-0.24	3.40	-0.26
12	74672	0.79	0.35	0.49	0.03	78.56	7.30	-0.20	2.60	-0.22	11.51	-0.17
13	74672	0.78	0.30	0.42	0.04	78.02	13.75	-0.13	2.73	-0.23	5.45	-0.18
14	74672	0.71	0.27	0.35	0.05	71.15	21.54	-0.09	2.97	-0.25	4.28	-0.19
15	74672	0.64	0.34	0.43	0.04	63.58	10.85	-0.19	4.10	-0.24	21.41	-0.14
16	74672	0.75	0.41	0.57	0.03	75.38	6.69	-0.25	5.69	-0.26	12.20	-0.16
17	74672	0.81	0.43	0.62	0.08	80.65	8.44	-0.28	8.15	-0.21	2.67	-0.20
18	74672	0.75	0.35	0.47	0.09	74.60	5.11	-0.12	9.28	-0.26	10.91	-0.16
19	74672	0.72	0.39	0.51	0.06	71.92	9.61	-0.24	9.17	-0.19	9.22	-0.16
20	74672	0.48	0.43	0.54	0.08	48.50	15.68	-0.31	12.10	-0.18	23.63	-0.10
21	74672	0.54	0.36	0.45	0.08	53.88	9.68	-0.23	23.50	-0.21	12.86	-0.06
22	74672	0.86	0.44	0.69	0.06	86.12	2.86	-0.25	6.69	-0.34	4.28	-0.12
23	74672	0.53	0.39	0.49	0.08	52.54	9.09	-0.32	19.03	-0.13	19.26	-0.13
24	74672	0.63	0.48	0.61	0.07	62.53	14.52	-0.21	10.46	-0.22	12.42	-0.26
25	74672	0.68	0.53	0.70	0.09	67.99	6.00	-0.26	8.55	-0.29	17.37	-0.28
26	74672	0.88	0.49	0.80	0.09	88.01	3.20	-0.25	4.14	-0.29	4.55	-0.27
27	74672	0.92	0.43	0.78	0.06	91.71	2.25	-0.23	3.41	-0.27	2.54	-0.22
28	74672	0.76	0.52	0.72	0.06	76.19	14.40	-0.48	5.88	-0.18	3.46	-0.06
29	74672	0.68	0.37	0.48	0.08	68.30	5.76	-0.28	4.63	-0.31	21.21	-0.10
30	74672	0.66	0.40	0.52	0.08	65.81	13.99	-0.32	17.51	-0.10	2.60	-0.24
31	74672	0.68	0.45	0.58	0.06	68.14	19.95	-0.28	9.65	-0.21	2.20	-0.21
32	74672	0.73	0.47	0.62	0.05	72.58	7.98	-0.38	7.49	-0.26	11.90	-0.11
33	74672	0.42	0.31	0.39	0.13	42.45	20.74	-0.16	34.55	-0.13	2.11	-0.17
34	74672	0.62	0.51	0.66	0.07	61.61	16.28	-0.23	8.13	-0.26	13.90	-0.27
35	74672	0.71	0.41	0.54	0.06	71.15	4.68	-0.22	13.25	-0.23	10.85	-0.19
36	74672	0.77	0.39	0.54	0.06	76.69	5.25	-0.25	2.25	-0.22	15.73	-0.20
37	74672	0.62	0.49	0.63	0.08	62.09	8.15	-0.19	13.46	-0.27	16.22	-0.26
38	74672	0.75	0.45	0.61	0.08	74.73	3.11	-0.25	7.70	-0.34	14.37	-0.17
39	74672	0.71	0.45	0.60	0.08	71.44	6.13	-0.25	16.25	-0.23	6.08	-0.23
40	74672	0.59	0.45	0.57	0.08	59.49	23.90	-0.20	7.67	-0.27	8.85	-0.22

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

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Table 6.3.14 (continued)
2009 Spring AIMS Classical Item Analysis
Reading CRT High School

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
41	74672	0.76	0.51	0.69	0.08	75.52	8.78	-0.30	7.64	-0.27	7.97	-0.22
42	74672	0.68	0.39	0.50	0.25	68.36	23.59	-0.19	4.96	-0.27	2.83	-0.22
43	74672	0.79	0.44	0.62	0.07	79.22	9.18	-0.20	7.77	-0.32	3.74	-0.17
44	74672	0.65	0.27	0.35	0.10	64.72	12.58	-0.12	10.11	-0.24	12.49	-0.05
45	74672	0.42	0.25	0.32	0.14	41.75	9.24	-0.24	11.44	-0.32	37.42	0.10
46	74672	0.56	0.34	0.43	0.09	56.43	13.08	-0.15	11.73	-0.15	18.65	-0.19
47	74672	0.64	0.41	0.53	0.11	64.30	9.65	-0.25	6.85	-0.22	19.08	-0.16
48	74672	0.54	0.53	0.66	0.14	53.77	6.14	-0.12	32.44	-0.36	7.48	-0.25
49	74672	0.63	0.53	0.67	0.10	63.49	24.80	-0.30	6.56	-0.25	5.04	-0.28
50	74672	0.45	0.34	0.43	0.11	44.94	16.78	-0.16	24.73	-0.10	13.41	-0.18
51	74672	0.44	0.27	0.34	0.10	44.25	35.33	0.00	6.73	-0.23	13.57	-0.22
52	74672	0.55	0.26	0.33	0.11	55.14	25.13	-0.12	6.29	-0.25	13.32	-0.05
53	74672	0.64	0.41	0.52	0.10	63.86	22.87	-0.12	6.16	-0.30	6.99	-0.27
54	74672	0.49	0.41	0.51	0.11	49.16	10.07	-0.22	33.02	-0.18	7.63	-0.19

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.15
2009 Spring AIMS Classical Item Analysis
Science CRT Grade 4

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
1	81732	0.95	0.31	0.66	0.15	94.94	1.70	-0.19	2.16	-0.18	1.04	-0.16
2	81732	0.78	0.27	0.39	0.04	78.44	15.89	-0.11	3.24	-0.24	2.35	-0.20
3	81732	0.66	0.46	0.59	0.09	65.55	5.88	-0.25	18.70	-0.21	9.74	-0.25
4	81732	0.89	0.45	0.75	0.11	88.76	5.02	-0.28	2.98	-0.22	3.05	-0.25
5	81732	0.79	0.36	0.51	0.13	78.97	8.30	-0.13	8.24	-0.21	4.28	-0.24
6	81732	0.77	0.18	0.25	0.12	76.82	3.85	-0.08	18.33	-0.13	0.79	-0.11
7	81732	0.85	0.43	0.67	0.06	85.24	3.65	-0.20	5.81	-0.23	5.18	-0.28
8	81732	0.56	0.35	0.44	0.05	56.46	15.85	-0.17	11.10	-0.09	16.51	-0.22
9	81732	0.80	0.44	0.64	0.07	80.49	6.44	-0.25	6.99	-0.25	5.96	-0.21
10	81732	0.96	0.28	0.63	0.11	95.92	0.99	-0.15	1.11	-0.17	1.81	-0.16
11	81732	0.93	0.26	0.50	0.15	93.16	3.54	-0.11	1.93	-0.19	1.18	-0.16
12	81732	0.70	0.37	0.48	0.18	70.08	6.69	-0.23	8.30	-0.27	14.70	-0.09
13	81732	0.79	0.45	0.64	0.51	79.15	6.92	-0.29	6.83	-0.21	6.55	-0.21
14	81732	0.87	0.44	0.71	0.05	87.13	5.08	-0.26	3.30	-0.22	4.39	-0.25
15	81732	0.81	0.31	0.45	0.08	80.85	6.97	-0.12	6.27	-0.21	5.75	-0.17
16	81732	0.66	0.45	0.58	0.12	66.47	8.42	-0.19	11.10	-0.24	13.81	-0.23
17	81732	0.73	0.31	0.41	0.10	72.73	3.08	-0.23	20.69	-0.13	3.31	-0.22
18	81732	0.74	0.53	0.72	0.12	73.76	6.91	-0.31	10.90	-0.32	8.26	-0.19
19	81732	0.61	0.44	0.55	0.19	60.86	16.32	-0.22	15.24	-0.21	7.31	-0.20
20	81732	0.57	0.33	0.41	0.05	57.19	11.64	-0.17	12.75	-0.17	18.31	-0.13
21	81732	0.72	0.38	0.51	0.09	71.51	13.32	-0.15	5.78	-0.25	9.25	-0.22
22	81732	0.46	0.28	0.35	0.18	46.13	11.88	-0.21	16.45	0.01	25.31	-0.16
23	81732	0.45	0.36	0.45	0.23	44.83	9.55	-0.20	35.82	-0.14	9.50	-0.16
24	81732	0.39	0.23	0.30	0.23	39.17	19.91	-0.12	18.13	-0.09	22.49	-0.07
25	81732	0.47	0.25	0.31	0.48	47.33	14.38	-0.14	17.84	-0.07	19.92	-0.11
26	81732	0.48	0.28	0.36	0.09	47.53	13.77	-0.15	17.97	-0.09	20.61	-0.14
27	81732	0.29	0.13	0.17	0.10	29.04	8.54	-0.18	8.89	-0.24	53.39	0.12
28	81732	0.49	0.33	0.41	0.26	49.00	20.94	-0.10	16.16	-0.17	13.63	-0.16
29	81732	0.76	0.37	0.52	0.10	76.05	12.85	-0.23	5.83	-0.12	5.13	-0.23
30	81732	0.82	0.52	0.77	0.19	82.34	4.93	-0.27	4.41	-0.26	8.04	-0.30
31	81732	0.89	0.33	0.55	0.15	89.21	5.51	-0.22	2.90	-0.17	2.17	-0.14
32	81732	0.66	0.41	0.53	0.17	66.24	9.77	-0.23	8.34	-0.18	15.40	-0.20
33	81732	0.79	0.38	0.53	0.18	78.84	10.13	-0.14	5.89	-0.24	4.89	-0.24
34	81732	0.59	0.43	0.55	0.11	58.73	13.38	-0.22	14.28	-0.18	13.44	-0.22
35	81732	0.62	0.31	0.40	0.10	61.70	10.37	-0.18	19.89	-0.12	7.90	-0.17
36	81732	0.55	0.44	0.55	0.13	54.83	6.32	-0.26	6.99	-0.32	31.68	-0.15
37	81732	0.58	0.37	0.46	0.24	57.97	15.10	-0.18	19.40	-0.11	7.20	-0.27
38	81732	0.75	0.48	0.65	0.25	74.88	7.49	-0.27	8.96	-0.25	8.35	-0.22
39	81732	0.77	0.49	0.67	0.34	77.19	9.20	-0.23	7.27	-0.28	5.92	-0.25
40	81732	0.34	0.24	0.31	0.58	34.19	22.23	-0.08	15.11	-0.14	27.83	-0.05

Note. Item number is not the item number in test booklet as some items might have been suppressed. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

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Table 6.3.15 (continued)
2009 Spring AIMS Classical Item Analysis
Science CRT Grade 4

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
41	81732	0.78	0.48	0.67	0.12	78.46	7.99	-0.25	7.69	-0.25	5.68	-0.26
42	81732	0.48	0.29	0.36	0.16	48.13	19.34	-0.16	20.35	-0.07	11.95	-0.15
43	81732	0.78	0.37	0.51	0.21	77.79	11.29	-0.22	5.96	-0.20	4.63	-0.17
44	81732	0.89	0.36	0.60	0.18	88.65	3.52	-0.20	5.04	-0.19	2.49	-0.20
45	81732	0.73	0.43	0.57	0.17	72.89	10.75	-0.23	11.30	-0.22	4.80	-0.21
46	81732	0.46	0.20	0.25	0.38	46.40	20.76	0.03	19.60	-0.10	12.79	-0.20
47	81732	0.44	0.14	0.18	0.12	44.02	17.23	-0.10	21.46	-0.09	17.07	0.01
48	81732	0.46	0.34	0.43	0.17	45.50	16.52	-0.12	16.85	-0.21	20.86	-0.11
49	81732	0.49	0.35	0.44	0.29	49.29	18.90	-0.11	12.73	-0.26	18.68	-0.10
50	81732	0.44	0.35	0.44	0.27	43.81	15.75	-0.19	15.71	-0.24	24.34	-0.04
51	81732	0.43	0.30	0.38	0.33	43.24	16.35	-0.15	16.04	-0.18	23.91	-0.05
52	81732	0.59	0.46	0.59	0.50	58.76	19.94	-0.25	13.98	-0.19	6.73	-0.23
53	81732	0.41	0.31	0.39	0.19	40.70	11.68	-0.11	30.40	-0.08	16.96	-0.21
54	81732	0.44	0.28	0.36	0.28	43.63	6.96	-0.20	38.17	-0.09	10.93	-0.13

Note. Item number is not the item number in test booklet as some items might have been suppressed. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.16
2009 Spring AIMS Classical Item Analysis
Science CRT Grade 8

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
1	78502	0.91	0.32	0.55	0.13	90.58	2.38	-0.18	3.01	-0.18	3.89	-0.18
2	78502	0.79	0.38	0.53	0.05	78.51	4.58	-0.24	5.87	-0.20	10.98	-0.19
3	78502	0.78	0.50	0.71	0.07	78.32	7.84	-0.28	7.63	-0.25	6.14	-0.27
4	78502	0.93	0.37	0.71	0.09	93.48	1.89	-0.20	2.80	-0.22	1.74	-0.20
5	78502	0.89	0.26	0.43	0.12	88.82	5.48	-0.15	3.05	-0.14	2.50	-0.13
6	78502	0.86	0.44	0.69	0.29	86.46	1.03	-0.18	1.50	-0.20	10.70	-0.34
7	78502	0.79	0.43	0.61	0.15	79.35	6.36	-0.22	5.59	-0.21	8.53	-0.25
8	78502	0.67	0.33	0.43	0.04	66.63	6.56	-0.14	10.87	-0.14	15.87	-0.21
9	78502	0.67	0.31	0.40	0.07	67.33	5.15	-0.21	23.15	-0.11	4.28	-0.24
10	78502	0.59	0.15	0.19	0.09	58.80	14.43	-0.09	21.39	-0.01	5.26	-0.17
11	78502	0.85	0.45	0.69	0.06	85.09	3.14	-0.20	8.13	-0.30	3.57	-0.22
12	78502	0.62	0.29	0.37	0.21	62.10	14.90	-0.09	12.60	-0.22	10.17	-0.10
13	78502	0.71	0.26	0.34	0.42	71.45	4.22	-0.20	5.50	-0.23	18.37	-0.05
14	78502	0.66	0.38	0.49	0.05	66.10	13.81	-0.16	8.66	-0.23	11.35	-0.19
15	78502	0.78	0.40	0.55	0.07	77.63	4.34	-0.24	4.44	-0.27	13.50	-0.18
16	78502	0.60	0.27	0.34	0.12	59.59	3.72	-0.23	7.12	-0.26	29.42	-0.04
17	78502	0.68	0.42	0.55	0.12	68.47	9.11	-0.11	12.73	-0.21	9.54	-0.31
18	78502	0.67	0.42	0.55	0.19	67.04	17.26	-0.24	6.26	-0.17	9.22	-0.22
19	78502	0.82	0.35	0.51	0.11	81.97	10.38	-0.20	2.74	-0.21	4.78	-0.18
20	78502	0.73	0.47	0.63	0.05	72.68	7.51	-0.24	10.31	-0.24	9.43	-0.25
21	78502	0.67	0.32	0.41	0.07	66.78	10.44	-0.12	15.43	-0.21	7.26	-0.14
22	78502	0.67	0.47	0.61	0.14	66.67	10.18	-0.26	9.76	-0.24	13.22	-0.21
23	78502	0.66	0.51	0.67	0.12	66.10	11.54	-0.29	14.86	-0.26	7.36	-0.22
24	78502	0.65	0.46	0.59	0.21	65.48	7.49	-0.26	19.03	-0.20	7.77	-0.25
25	78502	0.60	0.40	0.51	0.49	59.90	8.06	-0.23	7.65	-0.30	23.89	-0.12
26	78502	0.59	0.32	0.40	0.07	58.97	6.74	-0.24	28.28	-0.18	5.92	-0.06
27	78502	0.64	0.40	0.52	0.08	63.69	9.96	-0.22	15.19	-0.13	11.04	-0.26
28	78502	0.37	0.24	0.31	0.09	37.30	6.75	-0.23	43.37	0.03	12.47	-0.22
29	78502	0.79	0.39	0.55	0.07	78.83	4.86	-0.26	4.73	-0.24	11.50	-0.16
30	78502	0.75	0.38	0.52	0.15	75.03	7.35	-0.15	5.94	-0.17	11.52	-0.26
31	78502	0.47	0.34	0.43	0.10	47.26	5.48	-0.28	8.73	-0.25	38.42	-0.07
32	78502	0.18	0.12	0.17	0.10	17.80	21.91	0.06	44.21	-0.03	15.96	-0.14
33	78502	0.65	0.36	0.46	0.12	65.09	8.56	-0.26	9.98	-0.10	16.22	-0.18
34	78502	0.64	0.42	0.54	0.14	64.06	16.42	-0.18	10.65	-0.22	8.71	-0.23
35	78502	0.59	0.32	0.40	0.18	58.73	18.30	-0.10	16.63	-0.16	6.14	-0.24
36	78502	0.57	0.43	0.54	0.13	56.89	11.02	-0.26	8.63	-0.22	23.30	-0.16
37	78502	0.70	0.50	0.66	0.07	70.25	4.37	-0.28	11.16	-0.33	14.13	-0.19
38	78502	0.69	0.33	0.43	0.08	69.46	11.07	-0.09	15.40	-0.22	3.97	-0.23
39	78502	0.57	0.31	0.39	0.12	57.27	9.51	-0.26	6.63	-0.27	26.42	-0.02
40	78502	0.85	0.47	0.72	0.17	84.72	4.39	-0.25	5.72	-0.27	4.97	-0.23

Note. Item number is not the item number in test booklet as some items might have been suppressed. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

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Table 6.3.16 (continued)
2009 Spring AIMS Classical Item Analysis
Science CRT Grade 8

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
41	78502	0.54	0.42	0.53	0.24	53.64	15.13	-0.21	26.51	-0.21	4.46	-0.20
42	78502	0.55	0.44	0.55	0.65	55.14	23.16	-0.16	7.63	-0.29	13.41	-0.19
43	78502	0.48	0.46	0.58	0.09	47.95	12.22	-0.30	11.92	-0.28	27.78	-0.09
44	78502	0.50	0.37	0.46	0.12	50.45	13.11	-0.23	11.45	-0.27	24.84	-0.04
45	78502	0.87	0.43	0.68	0.14	86.79	5.43	-0.25	4.80	-0.25	2.80	-0.21
46	78502	0.39	0.36	0.46	0.15	39.16	30.53	-0.09	12.33	-0.20	17.80	-0.17
47	78502	0.77	0.51	0.71	0.18	77.07	10.90	-0.29	5.52	-0.27	6.29	-0.24
48	78502	0.59	0.40	0.50	0.15	59.40	15.63	-0.20	7.21	-0.27	17.57	-0.14
49	78502	0.41	0.24	0.31	0.09	41.42	26.44	-0.11	24.76	-0.02	7.26	-0.24
50	78502	0.52	0.33	0.42	0.10	52.21	23.57	-0.10	12.70	-0.18	11.38	-0.19
51	78502	0.47	0.42	0.52	0.20	46.53	21.77	-0.13	12.36	-0.22	19.10	-0.20
52	78502	0.43	0.42	0.53	0.17	42.70	26.02	-0.13	26.34	-0.24	4.71	-0.20
53	78502	0.57	0.47	0.59	0.31	56.91	17.38	-0.25	8.91	-0.22	16.44	-0.19
54	78502	0.31	0.15	0.20	0.60	30.80	6.87	-0.23	47.56	0.08	14.15	-0.14
55	78502	0.57	0.46	0.58	0.12	57.47	14.73	-0.24	11.45	-0.26	16.18	-0.16
56	78502	0.55	0.31	0.38	0.12	54.64	21.14	-0.03	13.20	-0.27	10.85	-0.16
57	78502	0.54	0.51	0.64	0.15	53.56	17.94	-0.15	13.98	-0.27	14.34	-0.29
58	78502	0.48	0.06	0.08	0.13	48.05	27.11	0.07	12.08	-0.07	12.58	-0.12

Note. Item number is not the item number in test booklet as some items might have been suppressed. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.17
2009 Spring AIMS Classical Item Analysis
Science CRT High School

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
1	50472	0.87	0.37	0.60	0.03	87.10	5.09	-0.22	3.16	-0.21	4.61	-0.19
2	50472	0.88	0.30	0.49	0.03	88.37	4.83	-0.13	4.03	-0.20	2.73	-0.17
3	50472	0.73	0.45	0.61	0.08	73.43	9.10	-0.21	8.50	-0.23	8.88	-0.26
4	50472	0.87	0.43	0.68	0.13	86.91	4.58	-0.23	4.80	-0.25	3.57	-0.22
5	50472	0.80	0.30	0.43	0.03	80.44	2.86	-0.20	11.29	-0.16	5.36	-0.16
6	50472	0.66	0.28	0.36	0.07	66.23	10.93	-0.10	9.78	-0.15	12.97	-0.17
7	50472	0.75	0.43	0.58	0.16	75.27	10.62	-0.21	9.37	-0.25	4.57	-0.21
8	50472	0.77	0.41	0.57	0.20	77.43	14.47	-0.22	4.36	-0.25	3.51	-0.21
9	50472	0.73	0.49	0.66	0.07	72.78	9.49	-0.23	10.78	-0.30	6.85	-0.22
10	50472	0.68	0.31	0.41	0.07	68.47	18.25	-0.15	7.04	-0.16	6.11	-0.19
11	50472	0.60	0.43	0.55	0.10	59.94	10.11	-0.20	17.80	-0.18	11.98	-0.24
12	50472	0.58	0.38	0.49	0.31	57.63	12.25	-0.10	16.28	-0.24	13.48	-0.19
13	50472	0.72	0.41	0.55	0.03	71.80	16.52	-0.25	3.84	-0.19	7.78	-0.21
14	50472	0.52	0.28	0.36	0.09	51.66	16.68	-0.06	24.55	-0.19	6.95	-0.15
15	50472	0.67	0.46	0.59	0.12	66.64	16.88	-0.23	7.80	-0.29	8.53	-0.17
16	50472	0.65	0.35	0.46	0.63	65.02	12.78	-0.19	15.47	-0.14	6.08	-0.21
17	50472	0.80	0.53	0.75	0.04	79.78	6.27	-0.29	5.77	-0.29	8.11	-0.27
18	50472	0.71	0.50	0.66	0.08	71.07	7.60	-0.29	11.87	-0.30	9.34	-0.18
19	50472	0.74	0.51	0.69	0.08	74.41	10.60	-0.27	9.42	-0.29	5.45	-0.24
20	50472	0.60	0.35	0.44	0.07	59.56	4.68	-0.26	14.01	-0.24	21.64	-0.08
21	50472	0.36	0.29	0.37	0.10	36.46	12.08	-0.18	17.55	-0.19	33.78	-0.01
22	50472	0.68	0.40	0.52	0.11	68.10	10.84	-0.27	8.68	-0.21	12.25	-0.13
23	50472	0.55	0.27	0.34	0.13	55.48	9.95	-0.19	24.23	-0.09	10.16	-0.12
24	50472	0.49	0.34	0.43	0.56	48.85	23.92	-0.06	13.93	-0.22	12.70	-0.19
25	50472	0.61	0.43	0.55	0.10	60.82	10.93	-0.20	10.49	-0.25	17.61	-0.19
26	50472	0.61	0.37	0.47	0.07	60.76	16.46	-0.14	14.47	-0.25	8.20	-0.15
27	50472	0.60	0.40	0.50	0.18	60.36	10.10	-0.22	15.54	-0.22	13.79	-0.14
28	50472	0.60	0.44	0.56	0.39	60.11	7.66	-0.25	15.86	-0.26	15.94	-0.14
29	50472	0.33	0.32	0.42	0.06	33.26	21.68	-0.15	7.70	-0.22	37.27	-0.07
30	50472	0.53	0.32	0.41	0.09	52.59	21.57	-0.13	16.17	-0.20	9.55	-0.11
31	50472	0.48	0.36	0.45	0.22	47.51	16.55	-0.19	22.29	-0.23	13.39	-0.05
32	50472	0.46	0.39	0.50	0.14	46.21	20.82	-0.16	20.61	-0.09	12.17	-0.28
33	50472	0.50	0.34	0.42	0.08	50.39	12.09	-0.23	20.59	-0.11	16.81	-0.13
34	50472	0.50	0.33	0.42	0.09	50.04	6.84	-0.21	27.31	-0.16	15.69	-0.11
35	50472	0.40	0.38	0.48	0.20	40.29	10.91	-0.18	20.80	-0.25	27.76	-0.06
36	50472	0.56	0.39	0.49	0.71	55.58	9.61	-0.20	19.06	-0.13	15.00	-0.22
37	50472	0.38	0.33	0.42	0.08	38.35	30.44	-0.13	16.85	-0.14	14.23	-0.14
38	50472	0.44	0.30	0.37	0.09	44.39	14.18	-0.14	35.98	-0.11	5.29	-0.20
39	50472	0.35	0.23	0.29	0.20	34.80	6.19	-0.24	51.36	0.04	7.40	-0.27
40	50472	0.53	0.20	0.25	0.53	52.78	9.09	-0.20	28.46	0.06	9.09	-0.23

Note. Item number is not the item number in test booklet as some items might have been suppressed. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

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Table 6.3.17 (continued)
2009 Spring AIMS Classical Item Analysis
Science CRT High School

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	% Omit	Key %	%	rpb	%	rpb	%	rpb
41	50472	0.77	0.48	0.67	0.08	77.35	10.92	-0.26	6.83	-0.27	4.77	-0.24
42	50472	0.56	0.40	0.50	0.10	56.13	19.30	-0.11	18.19	-0.27	6.24	-0.21
43	50472	0.31	0.22	0.29	0.14	30.96	22.49	-0.08	31.05	0.02	15.33	-0.21
44	50472	0.43	0.35	0.44	0.11	43.17	21.29	-0.21	21.38	-0.04	14.01	-0.19
45	50472	0.34	0.38	0.50	0.08	33.71	14.21	-0.23	16.96	-0.20	35.00	-0.05
46	50472	0.39	0.38	0.49	0.09	38.72	9.13	-0.25	36.87	-0.05	15.14	-0.25
47	50472	0.65	0.39	0.50	0.24	65.10	12.49	-0.17	13.65	-0.22	8.47	-0.19
48	50472	0.65	0.34	0.44	0.76	65.48	10.01	-0.17	10.90	-0.19	12.79	-0.13
49	50472	0.57	0.49	0.61	0.10	57.15	12.11	-0.26	17.10	-0.23	13.50	-0.20
50	50472	0.38	0.32	0.41	0.09	38.11	12.99	-0.18	31.95	-0.06	16.81	-0.18
51	50472	0.46	0.40	0.50	0.24	45.98	22.09	-0.12	22.30	-0.21	9.35	-0.20
52	50472	0.61	0.48	0.60	0.57	60.55	13.44	-0.20	15.14	-0.26	10.24	-0.22
53	50472	0.48	0.30	0.38	0.15	48.45	8.03	-0.30	23.80	-0.11	19.53	-0.05
54	50472	0.37	0.23	0.29	0.11	37.25	18.55	-0.04	22.27	-0.08	21.75	-0.14
55	50472	0.35	0.21	0.28	0.14	35.26	30.85	-0.12	19.44	-0.06	14.27	-0.06
56	50472	0.60	0.34	0.43	0.20	60.29	9.54	-0.22	15.92	-0.10	13.99	-0.18
57	50472	0.57	0.44	0.55	0.06	56.65	11.31	-0.25	13.42	-0.27	18.52	-0.12
58	50472	0.34	0.18	0.23	0.10	34.50	32.12	0.02	19.37	-0.20	13.85	-0.04
59	50472	0.34	0.36	0.46	0.24	34.30	14.84	-0.20	23.89	-0.12	26.67	-0.11
60	50472	0.37	0.27	0.34	0.52	36.76	13.20	-0.18	33.76	0.01	15.69	-0.19
61	50472	0.33	0.14	0.19	0.11	32.85	18.13	-0.20	35.85	0.15	12.98	-0.18
62	50472	0.35	0.19	0.25	0.14	34.60	16.22	-0.08	34.04	-0.08	14.94	-0.07
63	50472	0.29	0.19	0.25	0.12	28.65	29.66	-0.03	24.73	-0.06	16.76	-0.12
64	50472	0.22	0.17	0.24	0.17	21.67	24.81	0.03	30.87	-0.07	22.41	-0.12
65	50472	0.32	0.13	0.17	0.26	32.20	34.33	0.01	18.52	-0.14	14.65	-0.02

Note. Item number is not the item number in test booklet as some items might have been suppressed. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.18
2009 Spring AIMS Classical Item Analysis
Writing CRT Grade 3

				Percentages								
Trait	**N**	**P-Value**	**Adj r**	**Omit**	**at 0**	**at 1**	**at 2**	**at 3**	**at 4**	**at 5**	**at 6**	**Invalid**
1	83261	0.53	0.86	0.46	2.79	1.69	10.39	47.62	34.18	2.66	0.18	0.04
2	83261	0.53	0.85	0.45	2.79	1.66	10.17	44.09	38.24	2.40	0.16	0.04
3	83261	0.55	0.85	0.45	2.34	2.59	10.88	38.84	38.33	5.93	0.61	0.04
4	83261	0.52	0.87	0.45	2.33	2.69	12.90	48.49	28.59	4.05	0.45	0.04
5	83261	0.52	0.87	0.45	2.34	2.91	14.23	47.19	28.27	4.08	0.49	0.04
6	83261	0.53	0.83	0.45	2.79	1.45	11.42	44.82	36.61	2.25	0.16	0.04

Note. This test included a single prompt item scored on the analytic six-trait rubric. Blank responses were treated as omit. Illegible responses, non-English responses, and off-topic responses were treated as 0. Note that the N count in this table is higher than that in the test statistics table, due to the inclusion of students omitting a response in computations. The statistics presented in this table are based on census data.
P-value = Sum of all students' scores /(N 6) for a trait..

Table 6.3.19
2009 Spring AIMS Classical Item Analysis
Writing CRT Grade 4

				Percentages								
Trait	**N**	**P-Value**	**Adj r**	**Omit**	**at 0**	**at 1**	**at 2**	**at 3**	**at 4**	**at 5**	**at 6**	**Invalid**
1	82606	0.55	0.85	0.30	1.18	1.11	8.72	47.72	36.70	3.86	0.39	0.02
2	82606	0.54	0.85	0.30	1.18	1.14	9.21	49.55	35.33	3.00	0.28	0.02
3	82606	0.53	0.85	0.30	0.74	1.60	11.07	53.00	30.58	2.51	0.17	0.02
4	82606	0.52	0.86	0.30	0.74	1.64	12.10	54.65	28.35	2.04	0.15	0.02
5	82606	0.52	0.86	0.30	0.74	1.68	12.13	55.45	27.78	1.76	0.14	0.02
6	82606	0.54	0.82	0.30	1.18	1.20	9.25	50.84	34.31	2.64	0.26	0.02

Note. This test included a single prompt item scored on the analytic six-trait rubric. Blank responses were treated as omit. Illegible responses, non-English responses, and off-topic responses were treated as 0. Note that the N count in this table is higher than that in the test statistics table, due to the inclusion of students omitting a response in computations. The statistics presented in this table are based on census data.
P-value = Sum of all students' scores /(N 6) for a trait..

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Table 6.3.20
2009 Spring AIMS Classical Item Analysis
Writing CRT Grade 5

				Percentages								
Trait	**N**	**P-Value**	**Adj r**	**Omit**	**at 0**	**at 1**	**at 2**	**at 3**	**at 4**	**at 5**	**at 6**	**Invalid**
1	81270	0.57	0.85	0.28	1.06	1.06	7.65	40.41	44.28	4.75	0.49	0.01
2	81270	0.57	0.85	0.28	1.06	1.10	7.83	40.13	44.90	4.25	0.44	0.01
3	81270	0.55	0.89	0.28	1.05	2.96	12.94	37.64	37.50	6.69	0.93	0.01
4	81270	0.54	0.89	0.28	1.05	3.08	13.25	41.12	35.43	5.06	0.72	0.01
5	81270	0.54	0.89	0.28	1.05	3.14	14.68	40.66	34.49	4.94	0.74	0.01
6	81270	0.58	0.83	0.28	1.06	1.08	6.28	37.28	49.54	4.08	0.39	0.01

Note. This test included a single prompt item scored on the analytic six-trait rubric. Blank responses were treated as omit. Illegible responses, non-English responses, and off-topic responses were treated as 0. Note that the N count in this table is higher than that in the test statistics table, due to the inclusion of students omitting a response in computations. The statistics presented in this table are based on census data.
P-value = Sum of all students' scores /(N 6) for a trait.

Table 6.3.21
2009 Spring AIMS Classical Item Analysis
Writing CRT Grade 6

				Percentages								
Trait	**N**	**P-Value**	**Adj r**	**Omit**	**at 0**	**at 1**	**at 2**	**at 3**	**at 4**	**at 5**	**at 6**	**Invalid**
1	81102	0.57	0.82	0.33	0.61	0.80	6.15	42.79	43.85	5.08	0.37	0.02
2	81102	0.57	0.82	0.33	0.61	0.87	6.32	43.13	43.70	4.69	0.33	0.02
3	81102	0.57	0.88	0.33	0.68	1.36	8.86	41.44	40.59	6.12	0.60	0.02
4	81102	0.56	0.89	0.33	0.68	1.37	8.97	41.91	40.36	5.79	0.57	0.02
5	81102	0.56	0.89	0.33	0.68	1.47	9.47	41.53	40.20	5.69	0.61	0.02
6	81102	0.59	0.78	0.33	0.61	0.88	5.22	37.51	50.27	4.81	0.35	0.02

Note. This test included a single prompt item scored on the analytic six-trait rubric. Blank responses were treated as omit. Illegible responses, non-English responses, and off-topic responses were treated as 0. Note that the N count in this table is higher than that in the test statistics table, due to the inclusion of students omitting a response in computations. The statistics presented in this table are based on census data.
P-value = Sum of all students' scores /(N 6) for a trait.

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Table 6.3.22
2009 Spring AIMS Classical Item Analysis
Writing CRT Grade 7

				Percentages								
Trait	**N**	**P-Value**	**Adj r**	**Omit**	**at 0**	**at 1**	**at 2**	**at 3**	**at 4**	**at 5**	**at 6**	**Invalid**
1	81538	0.58	0.85	0.34	0.56	1.31	8.58	36.57	45.39	6.57	0.65	0.01
2	81538	0.58	0.85	0.34	0.56	1.28	8.09	37.54	45.02	6.56	0.59	0.01
3	81538	0.56	0.88	0.34	0.64	1.76	10.38	41.57	38.07	6.29	0.94	0.01
4	81538	0.56	0.88	0.34	0.64	1.69	10.23	42.82	37.49	5.87	0.91	0.01
5	81538	0.56	0.88	0.34	0.64	1.76	10.90	42.14	37.33	5.94	0.93	0.01
6	81538	0.58	0.84	0.34	0.56	1.23	7.55	36.55	47.93	5.29	0.54	0.01

Note. This test included a single prompt item scored on the analytic six-trait rubric. Blank responses were treated as omit. Illegible responses, non-English responses, and off-topic responses were treated as 0. Note that the N count in this table is higher than that in the test statistics table, due to the inclusion of students omitting a response in computations. The statistics presented in this table are based on census data.
P-value = Sum of all students' scores /(N 6) for a trait.

Table 6.3.23
2009 Spring AIMS Classical Item Analysis
Writing CRT Grade 8

				Percentages								
Trait	**N**	**P-Value**	**Adj r**	**Omit**	**at 0**	**at 1**	**at 2**	**at 3**	**at 4**	**at 5**	**at 6**	**Invalid**
1	80035	0.60	0.83	0.34	0.38	0.90	6.37	34.24	48.62	8.22	0.92	0.02
2	80035	0.60	0.84	0.34	0.38	0.92	6.00	33.64	50.14	7.69	0.88	0.02
3	80035	0.57	0.88	0.34	0.39	1.83	8.66	38.41	43.44	6.10	0.81	0.02
4	80035	0.57	0.88	0.34	0.39	1.86	8.68	40.14	42.43	5.37	0.77	0.02
5	80035	0.57	0.88	0.34	0.39	1.94	8.94	40.00	42.01	5.56	0.80	0.02
6	80035	0.60	0.82	0.34	0.38	0.86	5.36	30.90	53.08	8.16	0.91	0.02

Note. This test included a single prompt item scored on the analytic six-trait rubric. Blank responses were treated as omit. Illegible responses, non-English responses, and off-topic responses were treated as 0. Note that the N count in this table is higher than that in the test statistics table, due to the inclusion of students omitting a response in computations. The statistics presented in this table are based on census data.
P-value = Sum of all students' scores /(N 6) for a trait.

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Table 6.3.24
2009 Spring AIMS Classical Item Analysis
Writing CRT High School Prompt A

				Percentages													
Trait	N	P-Value	Adj r	Omit	at 0	at 1	at 1.5	at 2	at 2.5	at 3	at 3.5	at 4	at 4.5	at 5	at 5.5	at 6	Invalid
1	106693	0.54	0.97	9.52	0.41	0.56	0.77	3.12	4.58	19.84	16.95	30.23	8.62	4.18	0.93	0.24	0.02
2	106693	0.54	0.97	9.53	0.41	0.61	0.82	3.27	4.69	19.62	16.98	31.01	8.23	3.72	0.86	0.21	0.02
3	106693	0.53	0.97	9.52	0.43	0.67	0.85	3.42	5.84	21.53	19.73	25.37	7.89	3.36	1.07	0.29	0.02
4	106693	0.53	0.97	9.53	0.42	0.61	0.76	3.15	5.44	23.78	19.63	25.37	7.03	2.99	0.99	0.28	0.02
5	106693	0.53	0.97	9.52	0.43	0.71	0.92	3.73	6.08	22.27	19.24	25.46	7.33	3.01	0.99	0.27	0.02
6	106693	0.54	0.97	9.52	0.41	0.62	0.87	3.20	5.00	19.50	17.41	30.80	8.04	3.50	0.87	0.21	0.02

Note. This test included a single prompt item scored on the analytic six-trait rubric. Blank responses were treated as omit. Illegible responses, non-English responses, and off-topic responses were treated as 0. Note that the N count in this table is higher than that in the test statistics table, due to the inclusion of students omitting a response in computations. The statistics presented in this table are based on census data.
P-value = Sum of all students' scores /(N ´ 6) for a trait.

Table 6.3.25
2009 Spring AIMS Classical Item Analysis
Writing CRT High School Prompt T

				Percentages													
Trait	N	P-Value	Adj r	Omit	at 0	at 1	at 1.5	at 2	at 2.5	at 3	at 3.5	at 4	at 4.5	at 5	at 5.5	at 6	Invalid
1	3676	0.50	0.93	2.72	1.58	2.26	3.59	8.65	13.68	27.61	17.17	12.95	5.66	3.07	0.65	0.16	0.05
2	3676	0.51	0.93	2.72	1.58	2.26	3.43	9.49	11.32	26.09	16.78	16.08	6.12	2.88	0.87	0.16	0.05
3	3676	0.54	0.94	2.72	1.61	1.09	1.66	7.51	8.54	22.01	20.24	21.08	7.78	3.92	1.36	0.41	0.05
4	3676	0.55	0.94	2.72	1.61	1.06	1.31	7.02	8.68	22.82	19.91	20.97	7.73	3.92	1.50	0.68	0.05
5	3676	0.54	0.95	2.72	1.61	1.09	1.96	7.78	10.17	22.01	20.35	19.02	7.29	3.81	1.47	0.63	0.05
6	3676	0.52	0.91	2.72	1.58	1.80	2.94	6.15	11.18	23.94	19.80	18.91	6.69	3.26	0.79	0.08	0.05

Note. This test included a single prompt item scored on the analytic six-trait rubric. Blank responses were treated as omit. Illegible responses, non-English responses, and offtopic responses were treated as 0. Note that the N count in this table is higher than that in the test statistics table, due to the inclusion of students omitting a response in computations. The statistics presented in this table are based on census data.
P-value = Sum of all students' scores /(N ´ 6) for a trait.
Note: Form T is the makeup prompt and is not reflective of the total population

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Table 6.3.26
2009 Spring AIMS Classical Item Analysis
Mathematics NRT Grade 3

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	Omit	Key	%	rpb	%	rpb	%	rpb
1	83190	0.99	0.17	0.61	0.16	98.82	0.24	-0.09	0.31	-0.09	0.46	-0.10
2	83190	0.72	0.35	0.47	0.38	71.94	8.53	-0.23	11.44	-0.19	7.67	-0.11
3	83190	0.38	0.23	0.29	0.48	38.28	26.98	-0.07	20.85	-0.09	13.38	-0.12
4	83190	0.52	0.31	0.39	0.50	51.61	6.13	-0.17	34.29	-0.15	7.45	-0.17
5	83190	0.79	0.36	0.51	0.47	78.66	1.36	-0.18	14.49	-0.16	5.01	-0.30
6	83190	0.83	0.29	0.43	0.59	82.96	1.86	-0.13	10.93	-0.17	3.62	-0.18
7	83190	0.96	0.24	0.56	0.41	96.41	1.31	-0.14	1.02	-0.12	0.79	-0.12
8	83190	0.74	0.45	0.61	0.90	74.19	10.63	-0.29	10.33	-0.24	3.93	-0.14
9	83190	0.60	0.43	0.54	0.33	59.70	2.27	-0.07	6.93	-0.10	30.66	-0.37
10	83190	0.79	0.52	0.73	0.36	78.69	7.32	-0.22	7.85	-0.32	5.76	-0.27
11	83190	0.87	0.41	0.64	0.28	86.85	9.25	-0.29	2.68	-0.19	0.92	-0.18
12	83190	0.83	0.43	0.64	0.23	82.95	3.65	-0.16	6.06	-0.24	7.11	-0.27
13	83190	0.90	0.38	0.66	0.25	89.96	2.50	-0.19	4.06	-0.20	3.22	-0.24
14	83190	0.94	0.34	0.68	0.91	93.98	1.39	-0.19	1.42	-0.21	2.30	-0.21
15	83190	0.67	0.22	0.29	0.29	66.52	9.01	-0.19	12.72	-0.08	11.42	-0.07
16	83190	0.55	0.32	0.41	0.60	54.95	14.21	-0.10	15.81	-0.18	14.42	-0.15
17	83190	0.83	0.27	0.41	0.59	82.77	9.94	-0.16	4.30	-0.15	2.39	-0.13
18	83190	0.64	0.36	0.47	0.77	63.54	16.72	-0.16	8.38	-0.15	10.55	-0.22
19	83190	0.83	0.35	0.52	0.47	83.07	6.56	-0.16	1.96	-0.20	7.87	-0.22
20	83190	0.64	0.42	0.54	0.71	64.15	12.70	-0.19	9.24	-0.16	13.20	-0.25
21	83190	0.47	0.38	0.48	0.87	46.68	24.76	-0.17	12.57	-0.25	15.11	-0.08
22	83190	0.62	0.39	0.49	0.44	62.20	20.08	-0.22	8.99	-0.19	8.25	-0.15
23	83190	0.88	0.41	0.66	1.05	87.54	3.17	-0.25	4.99	-0.21	3.23	-0.23
24	83190	0.88	0.31	0.51	0.26	88.38	4.33	-0.27	1.33	-0.16	5.68	-0.10
25	83190	0.89	0.39	0.65	0.72	89.47	2.20	-0.21	3.90	-0.21	3.70	-0.24

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.27
2009 Spring AIMS Classical Item Analysis
Mathematics NRT Grade 4

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	Omit	Key	%	rpb	%	rpb	%	rpb
1	82526	0.86	0.42	0.65	0.07	85.90	6.35	-0.24	4.53	-0.22	3.14	-0.22
2	82526	0.86	0.36	0.57	0.10	86.20	1.54	-0.19	3.48	-0.23	8.65	-0.20
3	82526	0.83	0.20	0.30	0.08	83.49	1.06	-0.16	14.25	-0.13	1.10	-0.12
4	82526	0.86	0.39	0.61	0.10	85.79	6.61	-0.18	3.41	-0.24	4.07	-0.23
5	82526	0.56	0.31	0.39	0.13	56.26	4.36	-0.21	9.23	-0.19	30.01	-0.11
6	82526	0.85	0.33	0.50	0.09	84.92	4.46	-0.19	7.09	-0.18	3.43	-0.18
7	82526	0.59	0.48	0.61	0.13	58.75	14.21	-0.09	14.75	-0.34	12.14	-0.25
8	82526	0.78	0.48	0.67	0.12	78.01	14.41	-0.34	3.57	-0.23	3.84	-0.17
9	82526	0.78	0.44	0.61	0.14	78.19	4.22	-0.21	12.46	-0.25	4.96	-0.25
10	82526	0.88	0.30	0.49	0.11	88.27	3.39	-0.15	5.27	-0.19	2.93	-0.14
11	82526	0.94	0.34	0.69	0.16	94.49	1.50	-0.19	2.68	-0.20	1.13	-0.17
12	82526	0.86	0.43	0.68	0.09	86.26	4.44	-0.26	4.13	-0.24	5.06	-0.21
13	82526	0.90	0.39	0.66	0.12	89.76	2.44	-0.20	3.18	-0.21	4.46	-0.23
14	82526	0.59	0.30	0.38	0.10	59.31	6.69	-0.22	5.09	-0.19	28.78	-0.11
15	82526	0.75	0.42	0.57	0.12	74.60	15.46	-0.21	4.20	-0.24	5.59	-0.25
16	82526	0.66	0.45	0.59	0.12	66.08	20.13	-0.25	7.39	-0.28	6.25	-0.16
17	82526	0.57	0.37	0.47	0.21	56.95	15.51	-0.17	12.32	-0.14	14.97	-0.21
18	82526	0.46	0.37	0.46	0.21	46.35	28.24	-0.07	14.90	-0.24	10.28	-0.21
19	82526	0.70	0.36	0.47	0.34	70.45	5.75	-0.26	8.35	-0.22	15.08	-0.11
20	82526	0.93	0.30	0.56	0.18	92.56	2.59	-0.18	2.56	-0.16	2.04	-0.15
21	82526	0.60	0.43	0.54	0.18	60.16	4.88	-0.17	6.64	-0.20	28.11	-0.27
22	82526	0.78	0.42	0.59	0.21	78.10	7.85	-0.24	6.24	-0.23	7.57	-0.19
23	82526	0.47	0.24	0.30	0.23	47.19	11.02	-0.16	14.86	-0.10	26.66	-0.06
24	82526	0.66	0.36	0.46	0.26	66.06	18.92	-0.14	7.27	-0.21	7.48	-0.20
25	82526	0.72	0.38	0.51	0.18	72.23	10.07	-0.26	12.49	-0.14	5.01	-0.19

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.28
2009 Spring AIMS Classical Item Analysis
Mathematics NRT Grade 5

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	Omit	Key	%	rpb	%	rpb	%	rpb
1	81189	0.71	0.31	0.41	0.05	70.92	2.82	-0.22	13.51	-0.19	12.69	-0.12
2	81189	0.55	0.34	0.43	0.06	54.98	6.69	-0.18	19.64	-0.11	18.62	-0.20
3	81189	0.52	0.33	0.42	0.08	52.06	16.52	-0.19	16.20	-0.18	15.11	-0.08
4	81189	0.45	0.37	0.47	0.10	44.78	24.68	-0.04	16.74	-0.21	13.68	-0.26
5	81189	0.78	0.37	0.51	0.08	77.60	9.94	-0.18	7.53	-0.16	4.85	-0.26
6	81189	0.92	0.34	0.62	0.07	92.17	3.40	-0.25	1.88	-0.16	2.47	-0.15
7	81189	0.77	0.49	0.67	0.09	76.81	10.16	-0.27	6.38	-0.27	6.53	-0.24
8	81189	0.85	0.45	0.68	0.09	84.58	6.57	-0.26	5.21	-0.24	3.54	-0.23
9	81189	0.81	0.52	0.76	0.07	81.23	9.74	-0.37	4.21	-0.25	4.73	-0.21
10	81189	0.62	0.46	0.59	0.09	61.84	11.34	-0.13	20.06	-0.36	6.66	-0.15
11	81189	0.92	0.22	0.41	0.07	92.50	2.39	-0.12	3.42	-0.12	1.61	-0.13
12	81189	0.68	0.41	0.53	0.12	68.31	8.34	-0.25	7.43	-0.22	15.78	-0.17
13	81189	0.72	0.45	0.60	0.16	71.50	5.56	-0.20	11.53	-0.24	11.23	-0.25
14	81189	0.64	0.51	0.66	0.14	63.79	15.06	-0.37	13.70	-0.20	7.29	-0.16
15	81189	0.68	0.47	0.62	0.15	68.40	3.32	-0.22	4.09	-0.24	24.01	-0.31
16	81189	0.62	0.47	0.60	0.19	61.55	24.27	-0.25	7.07	-0.24	6.91	-0.23
17	81189	0.82	0.43	0.64	0.13	82.37	7.73	-0.28	5.49	-0.25	4.26	-0.16
18	81189	0.78	0.28	0.39	0.17	78.29	3.10	-0.13	11.60	-0.15	6.82	-0.16
19	81189	0.89	0.34	0.56	0.17	88.75	4.43	-0.22	2.81	-0.16	3.81	-0.17
20	81189	0.71	0.43	0.57	0.20	70.69	10.11	-0.19	13.77	-0.23	5.20	-0.24
21	81189	0.86	0.39	0.62	0.17	86.28	3.40	-0.20	4.21	-0.24	5.92	-0.20
22	81189	0.60	0.34	0.43	0.15	59.63	15.71	-0.23	13.24	-0.10	11.24	-0.14
23	81189	0.59	0.37	0.47	0.26	59.43	6.87	-0.18	12.90	-0.16	20.49	-0.20
24	81189	0.51	0.47	0.58	0.20	50.82	4.35	-0.26	39.99	-0.25	4.63	-0.26
25	81189	0.60	0.38	0.48	0.33	59.94	13.02	-0.17	12.18	-0.16	14.51	-0.21

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.29
2009 Spring AIMS Classical Item Analysis
Mathematics NRT Grade 6

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	Omit	Key	%	rpb	%	rpb	%	rpb
1	80963	0.77	0.51	0.71	0.08	77.43	12.17	-0.31	8.06	-0.30	2.26	-0.18
2	80963	0.63	0.40	0.51	0.10	62.72	10.26	-0.14	15.99	-0.17	10.93	-0.28
3	80963	0.66	0.46	0.59	0.09	66.37	14.55	-0.28	3.19	-0.11	15.78	-0.26
4	80963	0.77	0.47	0.65	0.09	77.40	8.52	-0.29	7.14	-0.26	6.84	-0.18
5	80963	0.75	0.44	0.61	0.08	75.29	5.90	-0.20	9.73	-0.31	8.99	-0.18
6	80963	0.55	0.36	0.45	0.10	54.62	20.71	-0.26	18.00	-0.05	6.56	-0.21
7	80963	0.38	0.34	0.44	0.11	38.36	15.51	-0.06	19.99	-0.16	26.02	-0.17
8	80963	0.74	0.40	0.54	0.16	74.21	9.85	-0.16	5.41	-0.21	10.35	-0.26
9	80963	0.81	0.47	0.68	0.12	80.94	6.02	-0.29	8.07	-0.27	4.82	-0.18
10	80963	0.94	0.33	0.66	0.09	94.03	0.88	-0.11	1.16	-0.16	3.84	-0.25
11	80963	0.81	0.49	0.70	0.09	80.87	8.38	-0.31	5.37	-0.26	5.28	-0.21
12	80963	0.79	0.36	0.51	0.11	78.82	6.00	-0.24	11.05	-0.14	4.01	-0.23
13	80963	0.68	0.42	0.55	0.12	68.36	4.86	-0.19	10.24	-0.26	16.39	-0.19
14	80963	0.79	0.48	0.68	0.13	78.65	2.29	-0.19	5.49	-0.19	13.44	-0.36
15	80963	0.69	0.45	0.59	0.09	68.83	8.26	-0.23	15.92	-0.21	6.89	-0.27
16	80963	0.67	0.34	0.44	0.11	67.29	12.11	-0.19	9.61	-0.16	10.84	-0.15
17	80963	0.73	0.56	0.75	0.12	72.90	13.07	-0.29	4.29	-0.24	9.59	-0.34
18	80963	0.57	0.34	0.43	0.11	56.51	6.12	-0.25	9.31	-0.23	27.92	-0.09
19	80963	0.69	0.48	0.63	0.12	68.83	13.68	-0.18	9.16	-0.30	8.19	-0.27
20	80963	0.56	0.39	0.49	0.20	56.08	22.82	-0.26	10.98	-0.11	9.90	-0.17
21	80963	0.72	0.38	0.51	0.17	72.34	12.29	-0.24	4.72	-0.20	10.46	-0.15
22	80963	0.62	0.36	0.46	0.17	62.17	21.42	-0.15	10.48	-0.29	5.75	-0.09
23	80963	0.78	0.47	0.66	0.17	77.68	8.20	-0.24	8.16	-0.28	5.77	-0.22
24	80963	0.72	0.54	0.72	0.20	72.46	11.33	-0.26	8.50	-0.27	7.49	-0.30
25	80963	0.52	0.35	0.44	0.21	52.09	14.66	-0.17	16.44	-0.18	16.59	-0.13

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.30
2009 Spring AIMS Classical Item Analysis
Mathematics NRT Grade 7

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	Omit	Key	%	rpb	%	rpb	%	rpb
1	81190	0.57	0.34	0.43	0.11	57.05	11.57	-0.11	11.01	-0.24	20.26	-0.14
2	81190	0.44	0.41	0.52	0.08	43.67	16.21	-0.21	22.73	-0.03	17.31	-0.30
3	81190	0.65	0.41	0.52	0.08	64.87	11.54	-0.09	9.91	-0.29	13.60	-0.23
4	81190	0.71	0.39	0.52	0.09	70.86	4.95	-0.16	12.78	-0.19	11.31	-0.24
5	81190	0.62	0.44	0.56	0.08	62.31	7.08	-0.17	23.66	-0.31	6.85	-0.14
6	81190	0.82	0.37	0.53	0.09	81.72	5.17	-0.22	6.74	-0.15	6.28	-0.22
7	81190	0.40	0.33	0.42	0.14	40.29	11.59	-0.17	31.92	-0.04	16.05	-0.23
8	81190	0.56	0.43	0.54	0.11	55.86	9.96	-0.06	24.36	-0.24	9.70	-0.31
9	81190	0.43	0.42	0.53	0.14	43.20	9.61	-0.08	24.21	-0.28	22.84	-0.15
10	81190	0.61	0.50	0.64	0.20	61.20	24.24	-0.34	9.95	-0.21	4.40	-0.16
11	81190	0.85	0.31	0.48	0.13	85.30	6.40	-0.16	4.25	-0.17	3.91	-0.18
12	81190	0.81	0.40	0.58	0.13	80.83	9.94	-0.24	5.54	-0.17	3.55	-0.24
13	81190	0.70	0.42	0.55	0.14	69.78	7.27	-0.10	13.14	-0.23	9.65	-0.29
14	81190	0.72	0.47	0.62	0.16	71.63	11.10	-0.23	12.17	-0.26	4.93	-0.22
15	81190	0.84	0.41	0.62	0.12	84.19	7.39	-0.26	5.09	-0.21	3.19	-0.19
16	81190	0.74	0.42	0.57	0.13	73.93	12.01	-0.26	6.59	-0.24	7.33	-0.16
17	81190	0.41	0.40	0.50	0.16	41.43	20.24	-0.20	21.46	-0.18	16.70	-0.10
18	81190	0.36	0.30	0.38	0.15	36.49	7.09	-0.08	45.38	-0.17	10.86	-0.12
19	81190	0.54	0.33	0.41	0.18	54.16	12.96	-0.21	27.19	-0.14	5.49	-0.13
20	81190	0.40	0.33	0.42	0.23	40.21	43.10	-0.31	7.86	-0.03	8.59	0.02
21	81190	0.67	0.45	0.58	0.27	67.40	13.83	-0.24	10.32	-0.24	8.17	-0.18
22	81190	0.90	0.35	0.58	0.20	89.54	3.11	-0.19	3.28	-0.19	3.86	-0.19
23	81190	0.46	0.36	0.45	0.24	46.40	7.11	-0.09	22.95	-0.05	23.29	-0.31
24	81190	0.55	0.45	0.57	0.25	54.60	16.35	-0.20	19.95	-0.19	8.82	-0.24
25	81190	0.48	0.42	0.53	0.22	47.71	15.06	-0.20	23.51	-0.20	13.48	-0.14

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration

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Table 6.3.31
2009 Spring AIMS Classical Item Analysis
Mathematics NRT Grade 8

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	Omit	Key	%	rpb	%	rpb	%	rpb
1	79663	0.74	0.36	0.49	0.12	73.63	4.08	-0.18	12.54	-0.17	9.62	-0.22
2	79663	0.80	0.38	0.55	0.12	80.22	4.70	-0.11	7.12	-0.27	7.82	-0.22
3	79663	0.49	0.43	0.53	0.12	48.67	11.15	-0.13	28.89	-0.20	11.15	-0.25
4	79663	0.72	0.38	0.51	0.17	72.24	7.75	-0.14	9.61	-0.21	10.21	-0.23
5	79663	0.59	0.50	0.64	0.13	59.06	14.70	-0.33	13.14	-0.26	12.95	-0.13
6	79663	0.74	0.38	0.52	0.14	74.25	6.14	-0.24	8.87	-0.22	10.58	-0.15
7	79663	0.84	0.34	0.52	0.11	84.12	1.40	-0.14	11.65	-0.24	2.72	-0.18
8	79663	0.78	0.46	0.64	0.13	77.93	5.71	-0.22	11.09	-0.30	5.13	-0.19
9	79663	0.57	0.30	0.38	0.19	57.49	24.92	-0.06	5.35	-0.23	12.05	-0.21
10	79663	0.86	0.39	0.62	0.13	86.29	4.26	-0.26	3.29	-0.21	6.01	-0.17
11	79663	0.65	0.45	0.57	0.16	64.68	8.91	-0.27	17.12	-0.18	9.12	-0.23
12	79663	0.80	0.38	0.54	0.14	80.11	11.25	-0.20	4.38	-0.19	4.12	-0.22
13	79663	0.55	0.26	0.33	0.15	55.35	8.22	-0.03	9.74	-0.02	26.53	-0.25
14	79663	0.72	0.35	0.47	0.15	72.31	7.54	-0.26	15.78	-0.13	4.21	-0.18
15	79663	0.38	0.32	0.41	0.14	37.89	49.93	-0.09	5.48	-0.26	6.54	-0.20
16	79663	0.77	0.32	0.45	0.13	77.05	6.52	-0.21	11.26	-0.08	5.03	-0.25
17	79663	0.87	0.31	0.50	0.12	87.12	7.16	-0.18	3.49	-0.19	2.09	-0.14
18	79663	0.51	0.42	0.53	0.14	50.91	19.96	-0.18	22.72	-0.19	6.25	-0.24
19	79663	0.53	0.43	0.54	0.29	52.62	19.97	-0.38	11.63	-0.20	15.47	0.02
20	79663	0.58	0.45	0.57	0.28	58.10	4.07	-0.21	33.76	-0.32	3.79	-0.14
21	79663	0.36	0.33	0.43	0.29	36.10	37.24	-0.27	17.24	-0.10	9.13	0.04
22	79663	0.47	0.30	0.38	0.27	47.00	14.25	-0.16	28.28	-0.13	10.18	-0.10
23	79663	0.61	0.43	0.55	0.27	60.60	5.66	-0.21	12.26	-0.22	21.20	-0.21
24	79663	0.64	0.31	0.40	0.27	64.49	11.27	-0.11	10.50	-0.17	13.45	-0.17
25	79663	0.31	0.26	0.34	0.28	31.38	11.60	-0.06	31.84	-0.04	24.89	-0.18

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.32
2009 Spring AIMS Classical Item Analysis
Reading NRT Grade 3

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	Omit	Key	%	rpb	%	rpb	%	rpb
1	83191	0.94	0.34	0.67	0.16	93.69	4.98	-0.28	1.16	-0.19	0.00	0.00
2	83191	0.74	0.39	0.53	0.28	73.89	4.58	-0.22	21.25	-0.30	0.00	0.00
3	83191	0.85	0.32	0.49	0.24	84.55	4.66	-0.23	10.55	-0.21	0.00	0.00
4	83191	0.95	0.31	0.64	0.16	94.59	2.51	-0.22	2.74	-0.20	0.00	0.00
5	83191	0.81	0.37	0.53	0.20	81.28	8.32	-0.27	10.20	-0.22	0.00	0.00
6	83191	0.71	0.39	0.52	0.63	71.16	11.24	-0.28	16.97	-0.23	0.00	0.00
7	83191	0.57	0.31	0.39	1.24	56.95	14.90	-0.26	26.91	-0.12	0.00	0.00
8	83191	0.62	0.28	0.35	0.27	61.86	4.85	-0.25	26.22	-0.10	6.80	-0.14
9	83191	0.44	0.34	0.43	0.40	43.94	29.54	-0.16	13.26	-0.18	12.86	-0.10
10	83191	0.30	0.28	0.37	1.89	30.39	10.60	-0.26	33.12	0.06	23.98	-0.15
11	83191	0.47	0.26	0.32	0.41	47.21	22.78	-0.08	9.69	-0.27	19.91	-0.02
12	83191	0.65	0.31	0.40	0.72	65.34	6.88	-0.28	6.94	-0.09	20.12	-0.12
13	83191	0.64	0.47	0.60	0.46	64.15	10.27	-0.24	10.77	-0.32	10.20	-0.15
14	83191	0.77	0.48	0.67	0.32	76.79	8.63	-0.29	5.30	-0.25	8.96	-0.22
15	83191	0.65	0.50	0.65	0.68	64.95	10.23	-0.27	8.15	-0.26	16.00	-0.23
16	83191	0.83	0.32	0.48	0.53	82.99	6.78	-0.16	4.73	-0.16	4.96	-0.19
17	83191	0.51	0.28	0.35	0.85	50.80	27.97	-0.01	11.64	-0.27	8.74	-0.15
18	83191	0.70	0.51	0.67	0.29	69.88	4.99	-0.26	6.69	-0.23	18.13	-0.30
19	83191	0.72	0.49	0.65	0.29	72.07	9.02	-0.27	10.55	-0.25	8.06	-0.23
20	83191	0.45	0.30	0.38	0.62	44.66	15.82	-0.20	24.94	0.02	13.95	-0.23
21	83191	0.54	0.39	0.48	1.26	53.55	19.28	-0.21	9.14	-0.18	16.77	-0.12
22	83191	0.47	0.47	0.59	0.85	46.87	6.80	-0.25	32.56	-0.17	12.90	-0.26
23	83191	0.57	0.37	0.47	1.15	57.08	21.65	-0.13	13.07	-0.25	7.04	-0.17
24	83191	0.68	0.50	0.65	0.93	67.98	7.94	-0.27	12.53	-0.27	10.61	-0.20
25	83191	0.72	0.33	0.45	0.38	72.23	11.49	-0.30	2.07	-0.22	13.81	-0.06

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration

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Table 6.3.33
2009 Spring AIMS Classical Item Analysis
Reading NRT Grade 4

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	Omit	Key	%	rpb	%	rpb	%	rpb
1	82539	0.81	0.40	0.58	0.04	81.11	7.56	-0.19	6.64	-0.26	4.63	-0.20
2	82539	0.85	0.40	0.61	0.05	85.47	7.64	-0.22	4.38	-0.24	2.46	-0.20
3	82539	0.86	0.43	0.67	0.05	86.43	9.41	-0.32	1.58	-0.18	2.51	-0.19
4	82539	0.69	0.30	0.39	0.04	69.24	14.92	-0.15	6.25	-0.16	9.54	-0.15
5	82539	0.95	0.36	0.75	0.05	94.87	1.34	-0.18	2.43	-0.22	1.30	-0.20
6	82539	0.78	0.47	0.66	0.10	78.35	10.81	-0.26	4.12	-0.26	6.59	-0.25
7	82539	0.78	0.42	0.58	0.11	77.60	12.72	-0.18	5.08	-0.26	4.48	-0.26
8	82539	0.91	0.46	0.80	0.15	90.73	2.67	-0.25	3.28	-0.23	3.15	-0.28
9	82539	0.52	0.34	0.43	0.10	52.28	9.42	-0.19	16.41	-0.26	21.79	-0.04
10	82539	0.81	0.42	0.61	0.14	81.12	7.95	-0.19	4.74	-0.22	6.04	-0.27
11	82539	0.77	0.44	0.62	0.09	77.15	7.57	-0.24	11.88	-0.26	3.31	-0.22
12	82539	0.87	0.44	0.70	0.09	87.09	3.15	-0.22	3.98	-0.25	5.67	-0.24
13	82539	0.80	0.44	0.63	0.10	80.34	5.50	-0.22	9.81	-0.24	4.22	-0.26
14	82539	0.60	0.39	0.50	0.12	59.92	19.82	-0.18	8.16	-0.26	11.95	-0.15
15	82539	0.67	0.43	0.56	0.11	67.00	11.77	-0.17	6.76	-0.17	14.34	-0.29
16	82539	0.76	0.34	0.46	0.19	76.15	6.27	-0.27	14.09	-0.10	3.30	-0.23
17	82539	0.75	0.57	0.78	0.13	75.14	8.90	-0.24	8.38	-0.30	7.44	-0.35
18	82539	0.78	0.39	0.54	0.15	78.04	11.07	-0.20	7.17	-0.20	3.54	-0.23
19	82539	0.56	0.19	0.24	0.17	55.52	10.90	-0.19	22.30	0.01	11.09	-0.11
20	82539	0.74	0.54	0.73	0.16	74.01	9.81	-0.25	6.21	-0.33	9.78	-0.27
21	82539	0.41	0.27	0.34	0.17	40.75	22.34	-0.07	12.13	-0.17	24.60	-0.11
22	82539	0.68	0.48	0.62	0.22	68.40	10.01	-0.25	10.45	-0.23	10.91	-0.24
23	82539	0.62	0.54	0.69	0.16	61.85	7.63	-0.36	20.38	-0.25	9.98	-0.21
24	82539	0.62	0.46	0.59	0.18	62.35	7.18	-0.22	23.73	-0.23	6.55	-0.26
25	82539	0.64	0.46	0.60	0.25	64.37	22.52	-0.25	6.67	-0.22	6.18	-0.24

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.34
2009 Spring AIMS Classical Item Analysis
Reading NRT Grade 5

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	Omit	Key	%	rpb	%	rpb	%	rpb
1	81189	0.60	0.40	0.50	0.08	59.98	8.21	-0.15	8.64	-0.11	23.09	-0.29
2	81189	0.85	0.31	0.48	0.05	84.96	6.20	-0.15	5.14	-0.14	3.64	-0.24
3	81189	0.51	0.31	0.39	0.10	50.80	18.51	-0.26	9.92	-0.03	20.66	-0.11
4	81189	0.84	0.42	0.64	0.06	84.04	3.55	-0.28	8.06	-0.20	4.29	-0.24
5	81189	0.74	0.38	0.51	0.06	74.45	14.85	-0.22	3.57	-0.21	7.06	-0.18
6	81189	0.75	0.38	0.52	0.07	75.45	11.87	-0.19	8.31	-0.19	4.30	-0.24
7	81189	0.61	0.34	0.44	0.06	60.58	15.07	-0.22	3.73	-0.24	20.56	-0.11
8	81189	0.69	0.41	0.53	0.07	68.82	7.30	-0.25	7.14	-0.22	16.67	-0.17
9	81189	0.84	0.45	0.67	0.06	84.21	4.35	-0.26	5.59	-0.23	5.78	-0.24
10	81189	0.75	0.39	0.53	0.07	74.69	15.86	-0.25	2.76	-0.18	6.62	-0.19
11	81189	0.71	0.44	0.58	0.07	70.51	1.67	-0.22	22.93	-0.28	4.80	-0.23
12	81189	0.91	0.36	0.63	0.07	90.84	1.35	-0.18	3.55	-0.20	4.19	-0.22
13	81189	0.81	0.24	0.35	0.08	81.19	2.69	-0.14	3.24	-0.19	12.78	-0.11
14	81189	0.86	0.44	0.68	0.06	85.73	8.05	-0.38	3.63	-0.12	2.54	-0.17
15	81189	0.52	0.21	0.26	0.08	51.63	7.71	-0.13	9.34	-0.16	31.24	-0.04
16	81189	0.81	0.44	0.63	0.08	80.99	3.63	-0.22	8.30	-0.21	7.01	-0.27
17	81189	0.88	0.47	0.76	0.07	87.93	6.27	-0.33	3.37	-0.24	2.36	-0.19
18	81189	0.73	0.53	0.70	0.08	72.73	4.64	-0.24	18.99	-0.35	3.55	-0.25
19	81189	0.61	0.21	0.26	0.11	61.11	9.65	-0.07	24.05	-0.06	5.07	-0.25
20	81189	0.59	0.45	0.57	0.10	59.23	19.22	-0.15	6.59	-0.28	14.84	-0.26
21	81189	0.45	0.39	0.49	0.12	45.49	21.30	-0.16	20.62	-0.17	12.46	-0.18
22	81189	0.40	0.27	0.34	0.08	39.75	15.97	-0.17	19.37	-0.11	24.82	-0.05
23	81189	0.72	0.45	0.60	0.13	71.74	4.37	-0.13	11.83	-0.36	11.92	-0.19
24	81189	0.60	0.28	0.36	0.15	60.22	17.34	-0.24	12.73	-0.03	9.55	-0.12
25	81189	0.37	0.18	0.23	0.15	36.89	27.73	-0.01	21.53	-0.06	13.67	-0.16

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.35
2009 Spring AIMS Classical Item Analysis
Reading NRT Grade 6

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	Omit	Key	%	rpb	%	rpb	%	rpb
1	80953	0.71	0.38	0.51	0.06	71.02	7.17	-0.21	6.17	-0.24	15.58	-0.17
2	80953	0.83	0.35	0.52	0.06	83.03	11.40	-0.19	2.41	-0.19	3.09	-0.23
3	80953	0.92	0.43	0.79	0.06	92.40	2.32	-0.22	3.01	-0.26	2.20	-0.23
4	80953	0.65	0.36	0.47	0.09	64.64	11.48	-0.17	14.89	-0.17	8.90	-0.21
5	80953	0.76	0.36	0.50	0.06	75.96	8.40	-0.21	6.03	-0.13	9.56	-0.22
6	80953	0.76	0.44	0.60	0.06	75.65	6.06	-0.24	14.66	-0.24	3.55	-0.24
7	80953	0.85	0.39	0.59	0.07	84.66	6.65	-0.31	7.51	-0.17	1.10	-0.15
8	80953	0.84	0.33	0.49	0.07	83.72	3.36	-0.19	7.10	-0.17	5.75	-0.18
9	80953	0.53	0.30	0.37	0.07	53.47	21.72	-0.18	4.82	-0.24	19.92	-0.05
10	80953	0.78	0.29	0.41	0.12	77.88	2.12	-0.23	2.98	-0.14	16.91	-0.17
11	80953	0.60	0.37	0.47	0.07	59.60	9.28	-0.19	19.08	-0.15	11.97	-0.20
12	80953	0.94	0.35	0.68	0.06	93.69	2.46	-0.18	2.21	-0.21	1.58	-0.19
13	80953	0.89	0.44	0.73	0.09	88.53	3.53	-0.24	3.80	-0.22	4.04	-0.27
14	80953	0.85	0.43	0.66	0.08	85.42	8.72	-0.37	1.14	-0.16	4.65	-0.13
15	80953	0.64	0.34	0.44	0.09	64.20	14.19	-0.12	11.00	-0.18	10.51	-0.21
16	80953	0.68	0.27	0.36	0.09	67.95	19.78	-0.03	4.97	-0.22	7.19	-0.27
17	80953	0.80	0.35	0.50	0.11	79.97	5.60	-0.18	8.90	-0.20	5.41	-0.19
18	80953	0.68	0.47	0.61	0.10	67.63	11.58	-0.34	13.46	-0.18	7.23	-0.19
19	80953	0.54	0.33	0.41	0.10	54.26	28.96	-0.06	11.42	-0.22	5.26	-0.27
20	80953	0.66	0.49	0.63	0.12	66.34	6.54	-0.28	15.23	-0.23	11.75	-0.23
21	80953	0.54	0.30	0.38	0.10	53.80	33.10	-0.06	7.66	-0.26	5.33	-0.23
22	80953	0.59	0.39	0.49	0.11	59.46	10.46	-0.18	15.14	-0.26	14.82	-0.11
23	80953	0.48	0.26	0.33	0.22	48.42	8.68	-0.20	16.64	-0.11	26.02	-0.07
24	80953	0.73	0.50	0.67	0.18	72.95	10.13	-0.28	8.21	-0.26	8.51	-0.22
25	80953	0.47	0.26	0.33	0.20	46.51	14.44	-0.15	18.46	-0.16	20.39	-0.02

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.36
2009 Spring AIMS Classical Item Analysis
Reading NRT Grade 7

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	Omit	Key	%	rpb	%	rpb	%	rpb
1	81199	0.92	0.28	0.51	0.06	91.63	3.07	-0.13	2.12	-0.13	3.11	-0.21
2	81199	0.59	0.27	0.34	0.07	59.13	34.65	-0.14	4.12	-0.22	2.04	-0.17
3	81199	0.85	0.40	0.61	0.07	84.56	11.83	-0.30	1.41	-0.17	2.12	-0.19
4	81199	0.73	0.44	0.59	0.08	73.16	5.59	-0.27	6.84	-0.27	14.34	-0.18
5	81199	0.72	0.50	0.67	0.33	72.32	5.83	-0.25	8.83	-0.30	12.69	-0.23
6	81199	0.71	0.49	0.64	0.11	70.52	8.18	-0.31	16.85	-0.24	4.34	-0.22
7	81199	0.74	0.50	0.68	0.13	74.16	5.24	-0.25	12.40	-0.28	8.06	-0.26
8	81199	0.65	0.38	0.49	0.12	64.99	22.77	-0.11	6.66	-0.27	5.44	-0.29
9	81199	0.65	0.40	0.52	0.15	65.11	14.02	-0.18	5.32	-0.28	15.39	-0.18
10	81199	0.57	0.26	0.32	0.15	57.31	6.22	-0.20	25.59	-0.10	10.73	-0.10
11	81199	0.54	0.38	0.47	0.12	53.79	28.16	-0.13	6.73	-0.30	11.19	-0.16
12	81199	0.35	0.26	0.33	0.13	34.86	7.09	-0.27	38.90	0.03	19.00	-0.17
13	81199	0.72	0.53	0.72	0.13	72.46	11.20	-0.29	6.66	-0.26	9.54	-0.28
14	81199	0.72	0.50	0.66	0.12	71.97	14.84	-0.23	7.79	-0.30	5.28	-0.27
15	81199	0.69	0.49	0.65	0.11	69.07	9.44	-0.32	11.86	-0.21	9.51	-0.21
16	81199	0.67	0.53	0.69	0.12	66.74	8.58	-0.28	5.46	-0.27	19.10	-0.28
17	81199	0.70	0.50	0.66	0.12	70.07	8.25	-0.32	15.70	-0.23	5.86	-0.23
18	81199	0.55	0.37	0.46	0.13	54.61	21.75	-0.09	13.25	-0.23	10.25	-0.22
19	81199	0.55	0.43	0.54	0.14	54.62	15.67	-0.22	14.07	-0.23	15.48	-0.14
20	81199	0.33	0.27	0.36	0.14	33.19	14.42	-0.21	18.05	-0.16	34.20	0.02
21	81199	0.62	0.46	0.59	0.15	62.46	11.00	-0.24	13.33	-0.21	13.05	-0.22
22	81199	0.76	0.47	0.64	0.20	76.46	10.46	-0.29	7.06	-0.28	5.82	-0.15
23	81199	0.75	0.43	0.59	0.20	75.28	4.48	-0.26	9.19	-0.24	10.85	-0.19
24	81199	0.66	0.46	0.59	0.22	66.14	10.03	-0.22	7.43	-0.26	16.16	-0.21
25	81199	0.60	0.38	0.48	0.21	60.00	9.86	-0.25	11.11	-0.14	18.80	-0.16

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration

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Table 6.3.37
2009 Spring AIMS Classical Item Analysis
Reading NRT Grade 8

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	Omit	Key	%	rpb	%	rpb	%	rpb
1	79673	0.89	0.28	0.47	0.08	88.93	0.88	-0.13	4.37	-0.11	5.74	-0.22
2	79673	0.95	0.29	0.61	0.06	95.09	2.95	-0.17	0.63	-0.14	1.26	-0.18
3	79673	0.88	0.33	0.55	0.08	88.25	3.25	-0.21	6.36	-0.17	2.06	-0.19
4	79673	0.89	0.30	0.50	0.07	89.21	4.61	-0.15	1.03	-0.16	5.09	-0.20
5	79673	0.93	0.24	0.45	0.06	92.66	0.53	-0.11	3.06	-0.17	3.70	-0.13
6	79673	0.66	0.29	0.37	0.07	66.21	4.13	-0.25	25.86	-0.13	3.73	-0.15
7	79673	0.64	0.41	0.52	0.11	63.61	15.53	-0.11	8.34	-0.28	12.40	-0.23
8	79673	0.60	0.40	0.51	0.11	60.35	32.89	-0.25	3.06	-0.25	3.58	-0.19
9	79673	0.57	0.39	0.49	0.10	57.04	19.27	-0.17	14.34	-0.17	9.24	-0.21
10	79673	0.66	0.46	0.60	0.16	66.40	12.54	-0.25	14.73	-0.25	6.18	-0.19
11	79673	0.82	0.44	0.64	0.10	82.01	4.93	-0.27	9.56	-0.24	3.40	-0.21
12	79673	0.58	0.28	0.35	0.11	58.31	5.04	-0.27	11.52	-0.18	25.02	-0.04
13	79673	0.70	0.40	0.52	0.14	69.72	8.23	-0.14	8.51	-0.19	13.40	-0.26
14	79673	0.89	0.45	0.75	0.14	89.34	2.76	-0.27	2.45	-0.23	5.30	-0.25
15	79673	0.74	0.51	0.68	0.12	73.71	8.74	-0.23	10.71	-0.30	6.72	-0.25
16	79673	0.72	0.37	0.50	0.14	72.10	9.50	-0.16	4.91	-0.21	13.35	-0.21
17	79673	0.52	0.37	0.46	0.33	52.13	9.27	-0.20	29.65	-0.09	8.62	-0.28
18	79673	0.84	0.41	0.61	0.28	83.83	5.05	-0.21	6.40	-0.20	4.43	-0.25
19	79673	0.62	0.39	0.49	0.27	62.03	11.61	-0.25	4.96	-0.28	21.14	-0.11
20	79673	0.82	0.49	0.71	0.24	82.03	6.99	-0.25	5.63	-0.30	5.10	-0.22
21	79673	0.43	0.30	0.37	0.28	42.97	13.98	-0.10	25.78	-0.14	16.99	-0.12
22	79673	0.61	0.37	0.47	0.33	61.40	11.17	-0.19	13.83	-0.25	13.27	-0.08
23	79673	0.56	0.24	0.30	0.30	56.14	4.35	-0.24	6.74	-0.21	32.46	-0.02
24	79673	0.67	0.42	0.54	0.26	67.18	11.75	-0.21	8.72	-0.28	12.09	-0.14
25	79673	0.68	0.45	0.59	0.26	67.82	9.01	-0.23	13.25	-0.20	9.64	-0.25

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.38
2009 Spring AIMS Classical Item Analysis
Language NRT Grade 3

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	Omit	Key	%	rpb	%	rpb	%	rpb
1	83191	0.83	0.44	0.65	0.18	83.06	14.33	-0.36	2.41	-0.23	0.00	0.00
2	83191	0.94	0.33	0.67	0.35	94.46	2.37	-0.22	2.82	-0.24	0.00	0.00
3	83191	0.63	0.28	0.35	0.25	62.60	29.88	-0.14	7.26	-0.26	0.00	0.00
4	83191	0.94	0.32	0.65	0.25	94.12	4.09	-0.24	1.53	-0.20	0.00	0.00
5	83191	0.46	0.30	0.37	0.52	46.03	31.38	-0.19	22.06	-0.13	0.00	0.00
6	83191	0.28	0.28	0.38	0.27	27.68	32.15	0.05	23.95	-0.17	15.94	-0.20
7	83191	0.46	0.35	0.44	3.13	46.32	29.99	-0.11	9.18	-0.24	11.36	-0.14
8	83191	0.76	0.43	0.59	0.63	76.10	6.42	-0.24	13.25	-0.26	3.24	-0.18
9	83191	0.77	0.50	0.69	0.51	77.27	7.33	-0.24	10.55	-0.30	4.33	-0.24
10	83191	0.48	0.17	0.22	0.60	47.68	9.73	-0.21	13.12	-0.13	28.87	0.05
11	83191	0.70	0.49	0.64	0.30	69.63	16.37	-0.37	2.96	-0.21	10.73	-0.16
12	83191	0.43	0.34	0.43	0.54	43.00	15.83	-0.12	19.68	-0.11	20.94	-0.19
13	83191	0.83	0.48	0.71	0.35	83.38	8.60	-0.31	4.24	-0.24	3.42	-0.22
14	83191	0.42	0.18	0.23	0.53	41.91	21.38	0.00	11.19	-0.26	24.98	0.00
15	83191	0.57	0.35	0.44	0.46	56.81	15.36	-0.19	17.17	-0.15	10.19	-0.14
16	83191	0.81	0.45	0.65	0.28	80.82	7.78	-0.31	3.72	-0.23	7.31	-0.19
17	83191	0.82	0.50	0.74	0.52	82.01	10.46	-0.33	4.13	-0.25	2.88	-0.23
18	83191	0.57	0.35	0.44	1.06	57.44	19.11	-0.25	14.37	-0.08	8.01	-0.16
19	83191	0.46	0.28	0.36	0.61	45.72	14.93	-0.14	7.86	-0.24	30.87	-0.04
20	83191	0.71	0.43	0.56	0.79	70.74	6.94	-0.25	9.01	-0.23	12.53	-0.18

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.39
2009 Spring AIMS Classical Item Analysis
Language NRT Grade 4

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	Omit	Key	%	rpb	%	rpb	%	rpb
1	82539	0.83	0.38	0.57	0.07	82.98	9.16	-0.22	3.54	-0.22	4.22	-0.18
2	82539	0.70	0.40	0.53	0.06	69.66	14.41	-0.23	6.91	-0.22	8.95	-0.16
3	82539	0.58	0.36	0.45	0.09	57.91	9.17	-0.21	20.81	-0.17	11.99	-0.15
4	82539	0.58	0.33	0.41	0.05	57.94	26.96	-0.19	9.15	-0.16	5.90	-0.13
5	82539	0.53	0.31	0.39	0.06	53.20	12.07	-0.09	11.70	-0.20	22.97	-0.15
6	82539	0.35	0.25	0.33	0.24	35.17	14.97	-0.20	33.95	-0.06	15.64	-0.05
7	82539	0.80	0.43	0.61	0.08	80.27	9.00	-0.23	4.87	-0.24	5.77	-0.22
8	82539	0.71	0.43	0.57	0.10	71.11	9.97	-0.24	7.19	-0.27	11.62	-0.16
9	82539	0.70	0.42	0.56	0.12	70.40	6.30	-0.27	7.65	-0.27	15.53	-0.14
10	82539	0.74	0.44	0.60	0.13	73.70	7.50	-0.23	7.26	-0.28	11.39	-0.18
11	82539	0.49	0.32	0.40	0.11	49.48	28.45	-0.07	7.92	-0.15	14.02	-0.25
12	82539	0.47	0.21	0.27	0.12	46.80	3.02	-0.23	3.97	-0.20	46.07	-0.05
13	82539	0.88	0.36	0.59	0.15	88.39	1.92	-0.18	4.81	-0.20	4.73	-0.22
14	82539	0.74	0.33	0.45	0.14	74.16	17.50	-0.16	4.38	-0.21	3.81	-0.20
15	82539	0.81	0.40	0.58	0.16	80.75	7.80	-0.23	6.54	-0.18	4.73	-0.23
16	82539	0.83	0.40	0.60	0.17	83.08	7.03	-0.27	3.98	-0.17	5.72	-0.20
17	82539	0.91	0.37	0.64	0.25	90.59	1.97	-0.21	3.50	-0.20	3.65	-0.20
18	82539	0.74	0.31	0.42	0.17	74.47	4.54	-0.18	5.73	-0.17	15.08	-0.15
19	82539	0.63	0.34	0.44	0.20	62.67	6.72	-0.29	6.91	-0.27	23.49	-0.06
20	82539	0.51	0.28	0.35	0.24	50.92	6.54	-0.24	29.12	-0.05	13.17	-0.16

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.40
2009 Spring AIMS Classical Item Analysis
Language NRT Grade 5

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	Omit	Key	%	rpb	%	rpb	%	rpb
1	81189	0.59	0.40	0.50	0.08	59.14	11.27	-0.17	19.07	-0.16	10.43	-0.25
2	81189	0.63	0.49	0.62	0.03	63.43	23.46	-0.30	8.13	-0.25	4.94	-0.17
3	81189	0.55	0.40	0.51	0.05	54.64	21.82	-0.17	11.38	-0.16	12.11	-0.24
4	81189	0.67	0.40	0.52	0.10	67.08	22.80	-0.24	7.42	-0.21	2.59	-0.21
5	81189	0.78	0.38	0.53	0.05	77.93	5.03	-0.22	3.65	-0.21	13.33	-0.21
6	81189	0.62	0.42	0.53	0.06	62.27	15.20	-0.23	11.45	-0.16	11.02	-0.22
7	81189	0.92	0.33	0.61	0.07	92.05	1.78	-0.16	2.73	-0.19	3.36	-0.21
8	81189	0.76	0.45	0.62	0.08	75.88	7.95	-0.23	5.53	-0.25	10.54	-0.23
9	81189	0.69	0.43	0.57	0.07	69.18	6.80	-0.23	14.49	-0.20	9.45	-0.25
10	81189	0.57	0.51	0.64	0.10	57.00	16.41	-0.30	9.20	-0.23	17.29	-0.19
11	81189	0.62	0.46	0.59	0.11	61.99	9.52	-0.25	19.54	-0.22	8.83	-0.22
12	81189	0.60	0.37	0.47	0.11	60.10	9.66	-0.23	20.38	-0.14	9.75	-0.19
13	81189	0.59	0.36	0.45	0.14	58.66	4.37	-0.23	14.16	-0.15	22.67	-0.19
14	81189	0.59	0.42	0.53	0.16	58.93	12.91	-0.12	14.63	-0.24	13.36	-0.23
15	81189	0.66	0.42	0.55	0.20	66.25	6.86	-0.23	16.80	-0.18	9.87	-0.25
16	81189	0.75	0.39	0.54	0.14	75.16	8.98	-0.21	5.36	-0.24	10.36	-0.18
17	81189	0.37	0.31	0.39	0.15	37.09	18.31	-0.12	26.65	-0.10	17.79	-0.15
18	81189	0.64	0.36	0.46	0.16	63.51	7.40	-0.22	17.07	-0.11	11.84	-0.23
19	81189	0.74	0.50	0.67	0.25	74.29	6.35	-0.23	9.23	-0.23	9.87	-0.30
20	81189	0.56	0.41	0.52	0.33	56.37	12.61	-0.20	16.75	-0.20	13.93	-0.18

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.41
2009 Spring AIMS Classical Item Analysis
Language NRT Grade 6

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	Omit	Key	%	rpb	%	rpb	%	rpb
1	80953	0.63	0.42	0.54	0.08	62.78	4.30	-0.19	20.43	-0.23	12.41	-0.22
2	80953	0.58	0.47	0.59	0.11	57.78	14.75	-0.24	19.81	-0.18	7.54	-0.28
3	80953	0.59	0.37	0.46	0.13	59.11	25.56	-0.10	9.56	-0.26	5.63	-0.24
4	80953	0.55	0.34	0.43	0.15	55.30	21.14	-0.16	18.09	-0.14	5.31	-0.23
5	80953	0.57	0.29	0.37	0.16	56.87	13.10	-0.17	9.62	-0.18	20.25	-0.08
6	80953	0.46	0.34	0.43	0.09	45.56	22.58	-0.08	10.71	-0.23	21.07	-0.15
7	80953	0.83	0.47	0.69	0.11	82.53	5.73	-0.24	5.16	-0.28	6.46	-0.23
8	80953	0.59	0.31	0.39	0.11	58.82	28.13	-0.10	7.32	-0.21	5.60	-0.22
9	80953	0.71	0.41	0.55	0.12	70.75	7.46	-0.19	6.58	-0.25	15.09	-0.20
10	80953	0.54	0.25	0.31	0.13	53.68	30.01	-0.05	3.75	-0.25	12.43	-0.15
11	80953	0.70	0.45	0.59	0.20	70.24	10.94	-0.20	9.11	-0.23	9.49	-0.26
12	80953	0.66	0.43	0.56	0.23	66.25	17.85	-0.24	7.28	-0.22	8.39	-0.19
13	80953	0.72	0.31	0.42	0.14	72.33	4.86	-0.18	16.83	-0.16	5.83	-0.16
14	80953	0.73	0.47	0.62	0.13	72.55	6.20	-0.25	7.99	-0.24	13.13	-0.24
15	80953	0.44	0.30	0.38	0.23	43.60	28.29	-0.10	16.80	-0.12	11.07	-0.18
16	80953	0.89	0.44	0.74	0.13	89.19	4.23	-0.26	4.06	-0.26	2.39	-0.20
17	80953	0.70	0.47	0.62	0.14	69.77	14.73	-0.29	8.19	-0.19	7.17	-0.23
18	80953	0.80	0.50	0.71	0.16	79.76	8.33	-0.27	6.07	-0.25	5.66	-0.27
19	80953	0.78	0.53	0.74	0.15	77.85	7.93	-0.27	5.45	-0.29	8.62	-0.28
20	80953	0.59	0.39	0.49	0.18	59.19	5.94	-0.20	9.51	-0.26	25.16	-0.15

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.42
2009 Spring AIMS Classical Item Analysis
Language NRT Grade 7

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	Omit	Key	%	rpb	%	rpb	%	rpb
1	81199	0.81	0.40	0.58	0.10	81.19	3.31	-0.22	3.04	-0.19	12.36	-0.25
2	81199	0.63	0.21	0.27	0.10	62.76	27.42	-0.11	2.32	-0.15	7.39	-0.11
3	81199	0.76	0.33	0.45	0.10	76.45	8.77	-0.08	2.90	-0.18	11.77	-0.26
4	81199	0.46	0.26	0.32	0.12	45.83	11.99	-0.16	8.95	-0.19	33.10	-0.04
5	81199	0.63	0.32	0.41	0.10	63.41	15.98	-0.07	6.97	-0.26	13.54	-0.18
6	81199	0.64	0.36	0.46	0.10	63.74	20.25	-0.24	13.39	-0.17	2.50	-0.10
7	81199	0.52	0.34	0.42	0.12	52.24	26.36	-0.17	11.09	-0.11	10.18	-0.19
8	81199	0.81	0.36	0.52	0.17	81.46	2.91	-0.23	8.18	-0.21	7.27	-0.15
9	81199	0.77	0.41	0.57	0.19	76.68	5.34	-0.25	7.45	-0.15	10.34	-0.24
10	81199	0.70	0.42	0.55	0.18	69.75	4.72	-0.23	12.91	-0.22	12.42	-0.21
11	81199	0.78	0.39	0.54	0.19	78.07	2.62	-0.20	11.16	-0.21	7.96	-0.21
12	81199	0.80	0.43	0.62	0.22	79.77	9.27	-0.24	4.73	-0.21	6.00	-0.23
13	81199	0.80	0.36	0.52	0.17	80.30	4.21	-0.22	3.70	-0.19	11.62	-0.19
14	81199	0.53	0.33	0.41	0.23	52.88	35.38	-0.09	6.75	-0.24	4.74	-0.26
15	81199	0.60	0.37	0.46	0.25	59.81	10.73	-0.23	20.98	-0.12	8.24	-0.19
16	81199	0.76	0.46	0.64	0.22	75.90	5.10	-0.25	7.47	-0.26	11.31	-0.22
17	81199	0.72	0.51	0.68	0.27	71.92	11.49	-0.24	6.81	-0.29	9.51	-0.25
18	81199	0.75	0.54	0.73	0.21	74.73	6.22	-0.27	8.40	-0.30	10.43	-0.26
19	81199	0.52	0.31	0.39	0.24	51.61	6.79	-0.28	34.18	-0.05	7.19	-0.22
20	81199	0.78	0.43	0.61	0.27	78.24	7.68	-0.21	6.55	-0.24	7.27	-0.23

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Table 6.3.43
2009 Spring AIMS Classical Item Analysis
Language NRT Grade 8

							Distractor 1		Distractor 2		Distractor 3	
Item	N	P-Value	rpb	rbi	Omit	Key	%	rpb	%	rpb	%	rpb
1	79673	0.66	0.42	0.55	0.16	65.77	12.82	-0.19	11.69	-0.23	9.56	-0.20
2	79673	0.92	0.33	0.60	0.12	91.84	1.88	-0.18	2.56	-0.20	3.61	-0.18
3	79673	0.40	0.28	0.36	0.13	39.62	3.08	-0.18	29.71	-0.12	27.47	-0.12
4	79673	0.70	0.44	0.57	0.22	70.10	13.49	-0.22	7.89	-0.28	8.29	-0.18
5	79673	0.32	0.26	0.34	0.12	32.08	17.94	-0.16	24.32	-0.17	25.54	0.03
6	79673	0.53	0.30	0.38	0.14	52.52	17.95	-0.17	19.14	-0.11	10.25	-0.14
7	79673	0.55	0.39	0.49	0.12	55.15	9.17	-0.22	20.23	-0.17	15.32	-0.16
8	79673	0.35	0.23	0.29	0.13	35.25	17.25	-0.11	35.07	0.00	12.29	-0.19
9	79673	0.39	0.24	0.31	0.15	39.00	14.09	-0.14	18.52	-0.07	28.24	-0.09
10	79673	0.89	0.42	0.69	0.13	89.22	4.22	-0.25	3.21	-0.24	3.22	-0.19
11	79673	0.56	0.41	0.51	0.14	56.45	9.20	-0.11	9.57	-0.21	24.64	-0.24
12	79673	0.65	0.41	0.53	0.15	64.95	9.00	-0.24	10.48	-0.23	15.42	-0.15
13	79673	0.80	0.44	0.64	0.22	80.08	5.31	-0.19	2.41	-0.21	11.98	-0.30
14	79673	0.83	0.39	0.58	0.23	83.41	8.56	-0.26	5.60	-0.18	2.19	-0.18
15	79673	0.67	0.35	0.45	0.27	67.26	15.18	-0.15	9.43	-0.21	7.86	-0.16
16	79673	0.90	0.35	0.60	0.26	89.70	2.88	-0.19	4.46	-0.18	2.70	-0.20
17	79673	0.71	0.42	0.55	0.29	71.06	10.53	-0.17	5.05	-0.24	13.06	-0.24
18	79673	0.82	0.31	0.45	0.24	81.70	10.85	-0.13	4.53	-0.21	2.68	-0.20
19	79673	0.75	0.41	0.56	0.26	74.55	10.59	-0.18	4.96	-0.23	9.63	-0.24
20	79673	0.72	0.42	0.57	0.26	71.80	7.08	-0.24	11.10	-0.20	9.75	-0.21

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

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Part 7: Calibration, Scaling and Equating

Part 7 of the technical report describes calibration and scaling procedures and results for the 2009 Spring AIMS assessments. All grade levels and content areas were calibrated and scaled with calibration samples that typically consisted of the entire student population. Part 7 of this report addresses the following AERA/APA/NCME standards: 1.13, 2.1, 2.2, 2.14, 4.1, 4.2, 4.3, 6.4, 6.5, and 13.6. Also note that the 2008 Fall AIMS assessment is described in Appendix A.

7.1 Ensuring Valid Records in Calibration Sample

In order to ensure valid calibration results, several data cleaning steps occurred upon receipt of raw data from the scanning and scoring processes. These steps allowed for calibration to be conducted on valid student responses at the targeted grade level. Records for students taking all forms of the tests were included.

The cleaning process removed the following records from the calibration datasets for each content area and grade level:

- Records with invalid tests noted by a special invalidation code obtained from ADE and marked on the answer document;
- Records with non-valid attempts noted by less than one response in any of the test sessions;
- Records for Bureau of Indian Affairs schools, juvenile corrections centers, state hospital schools, private schools, and home schooled students;
- Records where a student indicated they had already met expectations (high school tests only);
- Records for students in cohorts other than 10 (high school tests only);
- Records which indicated the student took a test other than their grade level test; and
- Duplicate records (score sheets were double scanned or students taking the test more than one time).

7.2 Calibration Methods

Item Response Theory (IRT) models were used in the item calibration for all Reading, Mathematics, and Science AIMS tests. All tests were calibrated separately by grade and content area. All calibration activities were replicated by ADE staff as an added quality control check.

7.2.1 Calibration Models

The AIMS Mathematics, Reading, and Science criterion-reference components are comprised of multiple-choice items. All items contributed to the AIMS CRT scores, including the *TerraNova* items that served dual purposes (Reading and Mathematics), and were calibrated using the Rasch model to create the CRT scale. Historically, the AIMS Mathematics and Reading CRT components have been developed and calibrated using the Rasch Model. The Rasch model (Rasch, 1960; Wright, 1977) can be conceptualized as a one-parameter IRT model in which item difficulty and student ability are estimated on the same scale. The Rasch model defines a multiple-choice item in terms of one parameter: item difficulty. In the Rasch model, the probability that a student with an ability estimate (θ) responds correctly to item i is

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$$P_i(\theta) = \frac{\exp[(\theta - b_i)]}{1 + \exp[(\theta - b_i)]},$$

where b_i is the item difficulty.

Norm-reference scores are reported based on the students' performance on the NRT component, and items reporting to the AIMS norm-referenced component were calibrated with the three-parameter logistic (3PL) model (Lord & Novick, 1968; Lord, 1980). Norm-referenced items were calibrated during the national standardization of *TerraNova* using the 3PL model, and the parameters used for scoring the AIMS NRT were those obtained during this standardization. Using the 3PL model to calibrate the NRT component was necessary in order to preserve the integrity of the norm-reference scores.

The 3PL model defines a multiple-choice item in terms of three item parameters: item difficulty or location, item discrimination, and the pseudo-guessing parameter. In the 3PL model, the probability that a student with an ability estimate (θ) responds correctly to item *i* is

$$P_i(\theta) = c_i + \frac{1 - c_i}{1 + \exp[-1.7 a_i(\theta - b_i)]},$$

where a_i is the item discrimination, b_i is the item difficulty, and c_i is the probability of a correct response by a low-scoring examinee. Norm-referenced items were calibrated during the national standardization of *TerraNova* and parameters used for scoring the AIMS NRT were those obtained during this standardization. Note that the NRT items have not changed over the previous four administrations of the AIMS.

7.2.2 Calibration Software

Parameter estimation for items on the criterion-referenced tests using the Rasch model was implemented using Winsteps 3.68.1 (Linacre, 2005). Winsteps uses joint maximum likelihood estimation (JMLE) as described by Wright and Masters (1982). To estimate the standard error of measurement at the extreme scores, calcSEM_Rasch.sas (Choi, 2005) was used. Item parameters for the NRT assessment were obtained from *TerraNova*.

7.3 Calibration Results

7.3.1 IRT Item Statistics

Item statistics resulting from calibration of the AIMS CRT tests in Reading, Mathematics, and Science are presented in Tables 7.3.1.1 through 7.3.1.17. All items for all Reading, Mathematics, and Science tests converged during calibration using typical procedures for Winsteps software. Standard error of estimates for the Rasch difficulty measures indicated that the parameters were well estimated. Model to item data fit was monitored using weighted mean-square (MNSQ) and unweighted MNSQ statistics, which indicate the degree of accuracy and predictability with which the data fits the model (Linacre, 2002). In Winsteps and Rasch literature, weighted mean-square is also referred to as infit MNSQ and unweighted mean-square is referred to as outfit MNSQ. The weighted mean-square statistic is sensitive to unexpected responses at or near the item's calibrated level, whereas unweighted mean-square statistic is sensitive to unexpected responses away from the

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item's calibrated level. Typically, values less than 0.6 and greater than 1.4 for weighted MNSQ indicate misfit, and values greater than 1.4 for unweighted MNSQ indicate misfit (Wright & Linacre, 1994). One item was flagged as having misfit as indicated by weighted MNSQ and 25 items were flagged as having misfit as indicated by unweighted MNSQ. Items on 11 of the 20 CRT tests, with between one and five items flagged per test, had misfit as indicated by unweighted MNSQ.

The items that were flagged for both weighted and unweighted MNSQ include:

1. Math Grade 3 Item 33 unweighted mean-square 1.48,
2. Math Grade 4 Item 4 unweighted mean-square 1.49,
3. Math Grade 4 Item 24 unweighted mean-square 1.52,
4. Math Grade 5 Item 1 unweighted mean-square 1.43,
5. Math Grade 7 Item 3 unweighted mean-square 1.44,
6 . Math Grade 7 Item 70 unweighted mean-square 1.49,
7. Math Grade 7 Item 78 unweighted mean-square 1.42,
8. Math Grade 8 Item 60 unweighted mean-square 1.41,
9. Math Grade 8 Item 86 unweighted mean-square 1.43,
10. Math Grade HS Item 19 unweighted mean-square 1.47,
11. Math Grade HS Item 49 unweighted mean-square 1.41,
12. Math Grade HS Item 54 unweighted mean-square 1.63,
13. Math Grade HS Item 65 unweighted mean-square 1.66,
14. Math Grade HS Item 70 unweighted mean-square 1.78,
15. Reading Grade 3 Item 35 weighted mean-square 1.42,
16. Reading Grade 3 Item 35 unweighted mean-square 1.96,
17. Reading Grade 3 Item 41 unweighted mean-square 1.53,
18. Reading Grade 3 Item 66 unweighted mean-square 1.44,
19. Reading Grade 4 Item 20 unweighted mean-square 1.51,
20. Reading Grade 4 Item 83 unweighted mean-square 1.59,
21. Reading Grade 7 Item 42 unweighted mean-square 1.44,
22. Reading Grade 7 Item 44 unweighted mean-square 1.61,
23. Science Grade 4 Item 27 unweighted mean-square 1.45,
24. Science Grade 8 Item 32 unweighted mean-square 1.65,
25. Science Grade 8 Item 54 unweighted mean-square 1.42,
26. Science Grade 8 Item 58 unweighted mean-square 1.47,

None of the misfits were so extreme as to warrant corrective action during operational analysis.

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Table 7.3.1.1
2009 Spring AIMS IRT Item Statistics
Mathematics Grade 3

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	0.29	0.01	0.98	0.92	37	0.43	0.01	0.88	0.81
2	-1.55	0.01	0.95	1.03	38	1.17	0.01	1.00	1.02
3	-0.21	0.01	0.98	1.00	39	1.36	0.01	0.97	0.97
4	-3.73	0.03	0.96	0.84	40	-1.03	0.01	0.93	0.76
5	0.12	0.01	1.05	1.15	41	-0.37	0.01	0.96	0.94
6	0.84	0.01	1.05	1.04	42	-0.93	0.01	1.02	1.31
7	-0.35	0.01	1.02	0.99	43	-1.21	0.01	0.90	0.74
8	-0.33	0.01	1.02	1.03	44	-0.26	0.01	0.91	0.83
9	-0.87	0.01	1.06	1.39	45	1.14	0.01	1.07	1.11
10	1.33	0.01	1.16	1.25	46	0.54	0.01	0.94	0.91
11	-0.66	0.01	1.05	1.17	47	1.32	0.01	1.09	1.13
12	-2.55	0.02	0.96	0.77	48	1.21	0.01	0.94	0.93
13	-0.02	0.01	0.93	0.81	49	-0.49	0.01	0.98	0.92
14	0.81	0.01	0.96	0.94	50	0.23	0.01	1.09	1.03
15	0.63	0.01	0.83	0.77	51	-0.87	0.01	1.05	1.24
16	-0.33	0.01	0.83	0.67	52	0.59	0.01	1.03	1.02
17	0.39	0.01	1.09	1.13	53	0.91	0.01	1.17	1.21
18	0.56	0.01	1.01	0.97	54	0.27	0.01	0.87	0.77
19	1.48	0.01	1.11	1.18	55	-0.78	0.01	0.88	0.81
20	-0.16	0.01	0.83	0.72	56	-0.76	0.01	0.97	1.08
21	1.40	0.01	1.20	1.29	57	1.11	0.01	0.99	0.96
22	-1.98	0.02	0.90	0.72	58	-0.33	0.01	0.95	0.92
23	-0.85	0.01	1.14	1.48	59	0.68	0.01	1.01	0.99
24	0.44	0.01	1.22	1.36	60	-0.74	0.01	0.89	0.81
25	1.06	0.01	1.09	1.11	61	-1.30	0.01	0.90	0.69
26	-0.64	0.01	1.06	1.25	62	-0.20	0.01	0.92	0.84
27	1.89	0.01	1.13	1.23	63	0.58	0.01	1.14	1.19
28	-0.67	0.01	0.99	0.94	64	-1.40	0.01	0.93	0.81
29	0.57	0.01	0.96	0.93	65	0.21	0.01	0.97	0.98
30	-0.95	0.01	0.83	0.81	66	-0.25	0.01	0.93	0.86
31	-1.98	0.02	0.90	0.78	67	0.16	0.01	1.04	1.12
32	1.23	0.01	1.06	1.08	68	1.14	0.01	1.23	1.37
33	-0.36	0.01	1.05	1.08	69	-0.31	0.01	0.95	0.88
34	0.91	0.01	0.88	0.84	70	-0.70	0.01	0.90	0.90
35	-0.20	0.01	0.92	0.85	71	0.79	0.01	0.99	0.98
36	-0.16	0.01	0.95	0.94	72	0.54	0.01	0.94	0.90

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Table 7.3.1.2
2009 Spring AIMS IRT Item Statistics
Mathematics Grade 4

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-0.33	0.01	1.02	1.01	36	-1.95	0.02	0.93	0.77
2	0.23	0.01	0.86	0.78	37	-0.81	0.01	0.92	0.78
3	-0.35	0.01	0.97	0.82	38	0.26	0.01	1.11	1.13
4	0.19	0.01	1.19	1.49	39	-1.20	0.01	0.91	0.78
5	0.67	0.01	1.14	1.26	40	1.02	0.01	1.18	1.28
6	-1.05	0.01	1.00	1.19	41	1.65	0.01	0.93	0.97
7	-1.56	0.01	0.86	0.55	42	-0.47	0.01	1.05	1.27
8	-0.53	0.01	0.82	0.65	43	1.69	0.01	1.23	1.38
9	0.49	0.01	0.99	0.97	44	0.23	0.01	1.12	1.15
10	-0.21	0.01	1.10	1.21	45	0.86	0.01	0.89	0.83
11	-0.78	0.01	0.91	0.86	46	-0.01	0.01	1.07	1.07
12	0.70	0.01	1.04	1.00	47	-0.96	0.01	0.86	0.69
13	-0.81	0.01	0.96	0.99	48	0.70	0.01	0.90	0.83
14	0.91	0.01	1.03	1.00	49	-0.29	0.01	1.01	1.05
15	-0.71	0.01	0.96	0.86	50	0.06	0.01	1.17	1.35
16	0.49	0.01	0.98	0.94	51	-0.04	0.01	1.11	1.27
17	-0.60	0.01	0.80	0.59	52	-0.10	0.01	0.77	0.60
18	-0.45	0.01	1.07	1.19	53	0.38	0.01	0.99	0.94
19	-0.56	0.01	1.16	1.52	54	0.50	0.01	1.11	1.16
20	-0.77	0.01	0.93	0.98	55	-0.98	0.01	0.88	0.79
21	0.92	0.01	1.02	1.01	56	0.16	0.01	0.86	0.74
22	1.19	0.01	1.14	1.22	57	0.07	0.01	0.82	0.69
23	1.87	0.01	1.02	1.14	58	-0.85	0.01	1.05	1.38
24	0.21	0.01	0.98	0.92	59	0.57	0.01	0.87	0.79
25	0.57	0.01	0.88	0.81	60	-1.60	0.01	0.97	0.92
26	-0.68	0.01	1.02	1.19	61	1.16	0.01	0.94	0.92
27	0.95	0.01	1.00	1.02	62	-0.36	0.01	1.02	1.11
28	0.06	0.01	0.85	0.70	63	0.96	0.01	1.04	1.04
29	1.05	0.01	0.90	0.89	64	-0.01	0.01	1.11	1.28
30	-0.87	0.01	0.83	0.72	65	1.05	0.01	1.06	1.05
31	0.51	0.01	1.03	1.07	66	0.27	0.01	1.01	1.03
32	0.13	0.01	0.92	0.83	67	-0.78	0.01	1.08	1.07
33	-0.12	0.01	0.88	0.78	68	0.33	0.01	1.07	1.06
34	-0.13	0.01	0.97	0.94	69	-1.31	0.01	0.82	0.73
35	-1.03	0.01	1.03	1.39	70	1.88	0.01	1.14	1.25

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Table 7.3.1.3
2009 Spring AIMS IRT Item Statistics
Mathematics Grade 5

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	0.22	0.01	1.16	1.43	35	0.54	0.01	1.13	1.33
2	-1.77	0.01	0.93	0.86	36	0.19	0.01	0.98	0.86
3	0.62	0.01	0.96	0.94	37	0.33	0.01	1.00	1.02
4	-1.05	0.01	0.99	1.09	38	0.65	0.01	0.92	0.87
5	-0.27	0.01	0.97	0.92	39	-0.56	0.01	1.03	0.95
6	-1.12	0.01	0.90	0.73	40	0.78	0.01	0.96	0.90
7	0.84	0.01	1.14	1.16	41	0.98	0.01	0.96	0.93
8	0.35	0.01	0.93	0.87	42	-0.15	0.01	0.88	0.82
9	0.23	0.01	1.10	1.28	43	0.10	0.01	0.92	0.89
10	-0.21	0.01	1.02	1.18	44	1.31	0.01	1.02	1.04
11	-0.36	0.01	0.95	1.00	45	0.83	0.01	1.08	1.11
12	0.49	0.01	0.96	0.90	46	0.84	0.01	1.12	1.19
13	-1.00	0.01	0.96	0.92	47	1.03	0.01	1.06	1.11
14	0.63	0.01	0.84	0.77	48	1.12	0.01	1.05	1.05
15	0.91	0.01	1.12	1.21	49	-1.19	0.01	0.95	0.97
16	0.55	0.01	1.01	1.03	50	1.48	0.01	0.99	1.02
17	1.44	0.01	1.07	1.12	51	0.41	0.01	0.83	0.72
18	0.31	0.01	1.09	1.10	52	0.11	0.01	0.90	0.81
19	-0.48	0.01	0.82	0.63	53	0.85	0.01	0.84	0.78
20	-0.12	0.01	1.02	0.95	54	0.85	0.01	1.04	1.04
21	-1.13	0.01	0.93	0.95	55	0.25	0.01	0.98	0.89
22	0.05	0.01	0.86	0.75	56	0.16	0.01	0.89	0.79
23	0.76	0.01	0.97	0.92	57	-0.30	0.01	0.84	0.72
24	-0.70	0.01	0.94	0.98	58	-1.73	0.01	1.03	0.81
25	-0.75	0.01	1.00	0.97	59	0.60	0.01	1.18	1.38
26	-0.50	0.01	0.89	0.72	60	-0.93	0.01	0.92	0.86
27	-1.69	0.01	1.02	1.22	61	-0.24	0.01	0.94	0.94
28	0.39	0.01	1.02	1.02	62	0.88	0.01	1.13	1.21
29	0.08	0.01	1.05	1.20	63	0.80	0.01	1.05	1.05
30	2.04	0.01	1.13	1.27	64	1.79	0.01	1.06	1.15
31	-0.43	0.01	1.08	1.23	65	0.23	0.01	1.10	1.10
32	1.30	0.01	1.04	1.04	66	0.67	0.01	1.11	1.13
33	0.69	0.01	1.09	1.11	67	0.90	0.01	1.08	1.08
34	-0.61	0.01	0.87	0.81	68	0.87	0.01	1.08	1.12

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Table 7.3.1.4
2009 Spring AIMS IRT Item Statistics
Mathematics Grade 6

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-0.74	0.01	1.09	1.36	35	-0.13	0.01	1.03	1.01
2	1.35	0.01	1.19	1.28	36	1.14	0.01	1.16	1.21
3	0.51	0.01	0.93	0.87	37	0.24	0.01	0.95	0.96
4	-0.09	0.01	0.95	0.90	38	-1.17	0.01	0.95	0.82
5	1.02	0.01	1.10	1.14	39	0.54	0.01	0.97	0.93
6	-1.46	0.01	0.78	0.73	40	-0.21	0.01	0.86	0.77
7	-0.20	0.01	0.88	0.78	41	0.20	0.01	0.86	0.79
8	0.39	0.01	0.98	0.93	42	0.54	0.01	1.09	1.14
9	-1.27	0.01	0.91	0.85	43	0.19	0.01	0.99	0.97
10	-0.32	0.01	0.92	0.87	44	0.12	0.01	0.82	0.70
11	0.83	0.01	1.16	1.24	45	0.11	0.01	0.91	0.80
12	-0.27	0.01	1.17	1.24	46	-0.37	0.01	0.82	0.68
13	-0.17	0.01	0.97	0.98	47	0.51	0.01	1.03	1.09
14	0.91	0.01	1.20	1.28	48	0.96	0.01	1.05	1.07
15	0.77	0.01	1.05	1.07	49	-0.99	0.01	0.75	0.64
16	1.36	0.01	1.05	1.09	50	0.02	0.01	1.03	1.05
17	0.74	0.01	1.22	1.33	51	0.52	0.01	1.10	1.19
18	0.79	0.01	0.94	0.90	52	0.86	0.01	0.99	0.98
19	0.42	0.01	1.03	1.00	53	-0.81	0.01	0.83	0.60
20	0.91	0.01	1.02	1.01	54	-0.13	0.01	1.08	1.19
21	-0.58	0.01	0.89	0.74	55	-0.34	0.01	0.91	0.76
22	-2.09	0.02	0.89	0.77	56	0.40	0.01	0.97	0.94
23	-1.37	0.01	1.01	1.03	57	0.30	0.01	1.05	1.04
24	0.30	0.01	0.98	0.91	58	0.74	0.01	1.02	1.02
25	0.09	0.01	1.13	1.19	59	0.16	0.01	1.00	0.97
26	-0.63	0.01	0.99	1.08	60	0.14	0.01	1.00	0.96
27	-1.75	0.01	0.88	0.82	61	-0.56	0.01	1.06	1.19
28	-0.47	0.01	0.99	0.98	62	0.02	0.01	0.86	0.77
29	0.45	0.01	1.07	1.10	63	0.30	0.01	1.00	0.90
30	-0.58	0.01	0.86	0.72	64	1.21	0.01	0.98	0.99
31	-0.42	0.01	1.02	1.26	65	-0.27	0.01	1.01	1.09
32	1.16	0.01	1.04	1.07	66	-0.82	0.01	0.98	0.89
33	-0.41	0.01	0.91	0.85	67	1.17	0.01	1.10	1.16
34	0.24	0.01	0.98	0.97	68	-0.86	0.01	0.92	0.82

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Table 7.3.1.5
2009 Spring AIMS IRT Item Statistics
Mathematics Grade 7

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	1.10	0.01	1.10	1.12	35	0.24	0.01	0.92	0.83
2	1.16	0.01	1.13	1.18	36	-0.68	0.01	0.88	0.73
3	-0.07	0.01	1.25	1.44	37	0.09	0.01	0.94	0.84
4	-0.53	0.01	0.93	0.92	38	1.91	0.01	1.03	1.15
5	-0.14	0.01	1.01	1.05	39	0.01	0.01	0.96	0.84
6	-0.24	0.01	0.94	0.93	40	0.54	0.01	1.03	1.03
7	0.18	0.01	0.94	0.88	41	1.88	0.01	1.16	1.32
8	-1.26	0.01	1.14	1.12	42	0.74	0.01	0.90	0.83
9	0.29	0.01	1.03	1.06	43	-0.02	0.01	0.98	0.95
10	0.79	0.01	1.02	1.03	44	2.18	0.01	1.17	1.35
11	0.89	0.01	1.12	1.14	45	1.23	0.01	1.16	1.24
12	-1.06	0.01	1.08	1.09	46	-0.45	0.01	1.00	1.14
13	0.75	0.01	1.14	1.20	47	-0.07	0.01	1.04	1.08
14	0.39	0.01	0.98	0.92	48	0.51	0.01	0.96	0.92
15	1.29	0.01	1.19	1.30	49	-1.24	0.01	0.89	0.75
16	-0.47	0.01	0.94	1.03	50	0.02	0.01	0.84	0.74
17	1.97	0.01	1.13	1.33	51	1.33	0.01	0.91	0.90
18	1.14	0.01	1.05	1.07	52	-0.45	0.01	1.03	1.49
19	-1.12	0.01	1.04	0.92	53	0.54	0.01	0.96	0.91
20	0.19	0.01	0.99	1.09	54	-0.04	0.01	0.95	0.92
21	-1.06	0.01	1.02	1.02	55	1.11	0.01	1.04	1.04
22	0.48	0.01	1.21	1.27	56	-1.16	0.01	1.04	1.20
23	1.35	0.01	0.90	0.90	57	-0.57	0.01	0.77	0.56
24	-0.40	0.01	1.01	1.19	58	-0.32	0.01	0.90	0.83
25	0.76	0.01	0.91	0.86	59	-0.46	0.01	1.16	1.42
26	-0.65	0.01	1.11	1.21	60	1.22	0.01	1.19	1.29
27	-0.19	0.01	0.96	0.98	61	-1.38	0.01	0.91	0.92
28	0.85	0.01	0.93	0.87	62	-0.26	0.01	0.85	0.76
29	-2.23	0.02	0.90	0.66	63	0.69	0.01	1.16	1.23
30	-0.20	0.01	0.88	0.72	64	0.79	0.01	0.88	0.85
31	0.56	0.01	0.92	0.83	65	-0.99	0.01	0.91	1.00
32	0.42	0.01	0.88	0.81	66	-0.16	0.01	0.81	0.70
33	-0.40	0.01	0.95	0.92	67	0.10	0.01	0.87	0.75
34	0.35	0.01	0.99	0.98	68	1.10	0.01	0.99	0.97

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Table 7.3.1.6
2009 Spring AIMS IRT Item Statistics
Mathematics Grade 8

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	0.95	0.01	1.00	0.99	34	-0.74	0.01	1.00	0.89
2	0.28	0.01	1.02	0.97	35	1.75	0.01	1.10	1.20
3	-1.31	0.01	0.75	0.68	36	0.80	0.01	1.04	1.04
4	-0.14	0.01	1.00	0.97	37	-0.43	0.01	1.03	1.32
5	0.86	0.01	1.04	1.04	38	0.75	0.01	0.98	0.98
6	1.84	0.01	1.13	1.25	39	-0.38	0.01	1.16	1.36
7	1.19	0.01	1.09	1.14	40	1.46	0.01	1.07	1.17
8	0.28	0.01	1.06	1.02	41	-0.62	0.01	1.15	1.41
9	0.24	0.01	1.01	0.96	42	0.97	0.01	0.99	1.01
10	-0.21	0.01	1.02	1.05	43	-1.77	0.01	0.98	0.80
11	0.15	0.01	0.98	0.99	44	0.68	0.01	0.96	0.94
12	-0.66	0.01	0.97	0.90	45	-0.11	0.01	0.84	0.72
13	1.18	0.01	0.98	1.00	46	-0.28	0.01	1.13	1.34
14	-0.82	0.01	0.98	1.01	47	-0.52	0.01	0.87	0.75
15	0.47	0.01	1.11	1.16	48	0.42	0.01	1.09	1.13
16	-0.90	0.01	1.07	1.00	49	0.25	0.01	1.07	1.04
17	-0.50	0.01	0.88	0.72	50	0.43	0.01	0.92	0.91
18	-0.07	0.01	0.86	0.76	51	-1.18	0.01	0.85	0.58
19	1.22	0.01	1.18	1.27	52	-0.80	0.01	0.91	0.89
20	0.20	0.01	0.97	0.94	53	1.85	0.01	1.07	1.23
21	-0.23	0.01	0.95	0.94	54	-0.13	0.01	1.00	0.99
22	-0.25	0.01	0.88	0.84	55	-0.33	0.01	0.80	0.71
23	-0.98	0.01	0.97	0.92	56	-1.23	0.01	0.85	0.85
24	-0.50	0.01	0.89	0.83	57	-0.35	0.01	1.03	1.04
25	0.38	0.01	1.03	1.02	58	-0.04	0.01	1.01	1.00
26	0.01	0.01	0.89	0.77	59	0.54	0.01	1.02	1.05
27	0.37	0.01	1.12	1.10	60	-0.24	0.01	1.08	1.16
28	-1.18	0.01	0.88	0.83	61	0.26	0.01	1.12	1.20
29	-1.20	0.01	1.03	1.39	62	-0.70	0.01	0.87	0.73
30	1.48	0.01	0.95	0.97	63	0.04	0.01	1.01	1.04
31	0.68	0.01	1.03	1.01	64	2.13	0.01	1.18	1.43
32	-0.65	0.01	0.96	0.98	65	-0.16	0.01	0.91	0.85
33	1.09	0.01	1.09	1.12	66	-0.95	0.01	0.90	0.74

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Table 7.3.1.7
2009 Spring AIMS IRT Item Statistics
Mathematics High School

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	1.13	0.01	1.15	1.22	44	1.09	0.01	1.10	1.13
2	-1.42	0.01	0.93	0.80	45	-0.44	0.01	1.01	1.00
3	0.19	0.01	1.01	1.03	46	-0.09	0.01	1.16	1.63
4	0.53	0.01	1.10	1.13	47	0.69	0.01	0.98	0.94
5	-1.81	0.01	0.99	1.08	48	-0.20	0.01	0.87	0.80
6	0.34	0.01	0.93	0.85	49	0.82	0.01	1.13	1.25
7	-0.80	0.01	1.07	1.26	50	-0.79	0.01	0.87	0.85
8	-1.84	0.01	0.95	1.01	51	1.35	0.01	1.09	1.15
9	0.87	0.01	1.10	1.12	52	-0.15	0.01	1.07	1.16
10	-0.31	0.01	0.88	0.77	53	-0.35	0.01	0.92	0.88
11	-0.46	0.01	0.93	0.92	54	1.23	0.01	1.02	1.05
12	0.11	0.01	0.91	0.78	55	1.23	0.01	0.84	0.81
13	-1.49	0.01	0.89	0.83	56	0.87	0.01	1.07	1.04
14	0.02	0.01	1.09	1.18	57	-0.29	0.01	1.17	1.66
15	1.52	0.01	1.02	1.11	58	-0.89	0.01	0.90	0.79
16	1.15	0.01	0.93	0.93	59	-0.10	0.01	0.84	0.71
17	-0.50	0.01	1.01	1.12	60	0.85	0.01	1.14	1.23
18	1.03	0.01	1.06	1.08	61	-0.22	0.01	0.85	0.71
19	1.36	0.01	1.31	1.47	62	2.74	0.01	1.19	1.78
20	0.39	0.01	0.88	0.85	63	-0.01	0.01	0.80	0.65
21	-2.03	0.02	0.92	1.01	64	0.64	0.01	1.05	1.05
22	-0.75	0.01	0.80	0.64	65	0.32	0.01	1.09	1.12
23	0.12	0.01	0.93	0.93	66	0.58	0.01	1.14	1.18
24	1.03	0.01	1.11	1.16	67	0.98	0.01	1.14	1.17
25	-1.87	0.01	0.74	0.76	68	1.85	0.01	1.03	1.26
26	-1.18	0.01	1.04	0.89	69	-0.10	0.01	0.95	0.97
27	0.76	0.01	1.10	1.11	70	-0.58	0.01	0.86	0.77
28	0.45	0.01	0.89	0.86	71	0.33	0.01	0.99	1.04
29	-1.48	0.01	0.89	0.70	72	0.74	0.01	0.98	0.97
30	-0.14	0.01	0.83	0.71	73	-1.25	0.01	0.86	0.65
31	0.21	0.01	0.85	0.77	74	0.22	0.01	1.05	1.08
32	0.75	0.01	1.04	1.05	75	1.04	0.01	0.96	0.94
33	-1.25	0.01	0.93	1.05	76	1.25	0.01	1.14	1.18
34	0.82	0.01	0.93	0.91	77	0.24	0.01	0.99	0.99
35	-0.67	0.01	0.90	0.85	78	-0.23	0.01	0.96	0.83
36	0.74	0.01	0.76	0.68	79	-0.17	0.01	0.95	0.90
37	0.51	0.01	0.87	0.79	80	0.59	0.01	1.12	1.19
38	-1.10	0.01	0.83	0.56	81	-1.03	0.01	0.98	1.05
39	-0.84	0.01	0.94	1.01	82	-0.55	0.01	0.91	0.89
40	0.60	0.01	1.08	1.19	83	0.57	0.01	0.83	0.74
41	0.86	0.01	1.25	1.41	84	-0.66	0.01	0.98	0.98
42	0.80	0.01	1.08	1.09	85	0.50	0.01	1.09	1.13
43	-0.35	0.01	0.92	0.89					

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Table 7.3.1.8
2009 Spring AIMS IRT Item Statistics
Reading Grade 3

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-2.10	0.02	0.89	0.54	28	-0.73	0.01	0.85	0.69
2	-0.94	0.01	1.02	1.13	29	0.62	0.01	1.14	1.17
3	-2.28	0.02	0.90	0.63	30	0.81	0.01	1.08	1.08
4	-0.66	0.01	1.00	1.00	31	-0.35	0.01	0.92	0.87
5	0.41	0.01	1.07	1.10	32	-0.33	0.01	0.93	0.82
6	0.55	0.01	0.95	0.91	33	0.64	0.01	1.04	1.05
7	1.68	0.01	1.09	1.23	34	-0.32	0.01	0.90	0.80
8	-1.08	0.01	0.81	0.60	35	0.13	0.01	0.90	0.83
9	-0.80	0.01	0.85	0.68	36	0.00	0.01	0.90	0.80
10	1.04	0.01	1.10	1.15	37	-1.83	0.01	0.72	0.40
11	0.04	0.01	0.89	0.85	38	-0.54	0.01	0.90	0.75
12	-1.66	0.01	0.87	0.57	39	0.26	0.01	1.18	1.44
13	-0.24	0.01	0.83	0.68	40	-0.66	0.01	0.88	0.74
14	-0.37	0.01	0.97	1.00	41	-1.22	0.01	0.86	0.75
15	0.27	0.01	0.98	0.98	42	-0.33	0.01	1.16	1.33
16	2.32	0.01	1.11	1.35	43	1.42	0.01	1.07	1.14
17	0.14	0.01	1.04	1.05	44	1.40	0.01	0.94	0.98
18	0.32	0.01	1.42	1.96	45	0.86	0.01	1.09	1.10
19	0.15	0.01	0.92	0.87	46	0.25	0.01	0.91	0.81
20	0.87	0.01	1.08	1.10	47	-0.02	0.01	1.10	1.26
21	-0.60	0.01	0.94	0.90	48	1.45	0.01	1.17	1.29
22	-0.64	0.01	0.86	0.76	49	0.47	0.01	1.10	1.19
23	0.23	0.01	0.95	0.87	50	1.44	0.01	0.91	0.94
24	1.77	0.01	1.33	1.53	51	0.68	0.01	1.01	0.99
25	0.30	0.01	0.96	0.91	52	0.79	0.01	0.96	0.93
26	-0.11	0.01	0.97	0.88	53	0.30	0.01	0.86	0.75

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Table 7.3.1.9
2009 Spring AIMS IRT Item Statistics
Reading Grade 4

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-1.02	0.01	0.94	0.94	28	-0.28	0.01	1.04	1.08
2	0.07	0.01	1.18	1.25	29	0.00	0.01	0.88	0.76
3	0.54	0.01	0.96	0.91	30	0.75	0.01	0.87	0.82
4	1.12	0.01	1.20	1.31	31	0.12	0.01	1.09	1.21
5	-0.65	0.01	0.94	0.79	32	0.23	0.01	1.00	0.98
6	0.22	0.01	1.20	1.31	33	-0.37	0.01	0.96	0.98
7	-0.20	0.01	0.85	0.70	34	0.72	0.01	1.10	1.11
8	-0.32	0.01	1.11	1.32	35	0.43	0.01	1.01	0.98
9	0.22	0.01	1.07	1.08	36	-0.46	0.01	0.89	0.74
10	1.24	0.01	1.13	1.23	37	0.61	0.01	1.06	1.08
11	0.47	0.01	1.27	1.51	38	-0.15	0.01	0.89	0.73
12	-0.31	0.01	0.95	0.86	39	0.83	0.01	0.92	0.88
13	-0.25	0.01	1.02	1.07	40	0.22	0.01	0.93	0.84
14	-1.53	0.01	0.85	0.63	41	-0.07	0.01	0.89	0.74
15	1.28	0.01	1.12	1.22	42	1.05	0.01	0.91	0.90
16	-0.22	0.01	0.98	0.93	43	1.86	0.01	1.27	1.59
17	-1.09	0.01	0.92	0.81	44	0.00	0.01	1.04	1.00
18	-0.46	0.01	0.97	0.96	45	-1.20	0.01	0.85	0.68
19	0.86	0.01	1.08	1.12	46	-0.76	0.01	1.01	1.32
20	0.45	0.01	1.03	1.02	47	-1.22	0.01	0.80	0.53
21	-0.15	0.01	1.12	1.27	48	-1.06	0.01	0.79	0.58
22	-1.56	0.01	0.80	0.54	49	-0.26	0.01	0.91	0.80
23	-1.10	0.01	0.96	0.94	50	-1.43	0.01	0.82	0.59
24	0.36	0.01	1.09	1.20	51	0.36	0.01	1.00	0.95
25	-1.12	0.01	0.85	0.81	52	1.59	0.01	1.01	1.12
26	-0.45	0.01	0.99	1.12	53	0.44	0.01	0.93	0.85
27	-0.08	0.01	0.83	0.71	54	0.93	0.01	0.97	0.98

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Table 7.3.1.10
2009 Spring AIMS IRT Item Statistics
Reading Grade 5

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-0.56	0.01	1.13	1.16	28	-1.03	0.01	0.88	0.83
2	-2.04	0.02	1.08	0.99	29	1.15	0.01	1.27	1.39
3	-0.66	0.01	0.84	0.69	30	-0.82	0.01	0.89	0.81
4	0.68	0.01	1.24	1.36	31	0.87	0.01	1.13	1.20
5	-0.90	0.01	0.91	0.77	32	-1.12	0.01	0.85	0.66
6	0.48	0.01	1.01	1.00	33	-1.49	0.01	0.85	0.65
7	-0.95	0.01	1.04	1.05	34	0.77	0.01	1.08	1.11
8	-0.14	0.01	1.01	1.06	35	-1.28	0.01	0.90	0.87
9	0.68	0.01	1.08	1.09	36	-0.18	0.01	0.98	0.93
10	0.21	0.01	1.01	0.96	37	0.12	0.01	1.02	1.04
11	-0.88	0.01	0.88	0.72	38	0.18	0.01	1.02	1.01
12	0.50	0.01	1.07	1.08	39	-0.03	0.01	0.84	0.72
13	-0.27	0.01	0.89	0.76	40	0.65	0.01	1.27	1.33
14	0.53	0.01	0.97	0.93	41	0.75	0.01	0.98	0.95
15	0.29	0.01	0.94	0.90	42	1.76	0.01	1.12	1.30
16	-0.97	0.01	0.93	0.86	43	0.03	0.01	0.94	0.89
17	-0.43	0.01	0.95	0.91	44	0.69	0.01	1.18	1.23
18	0.18	0.01	0.85	0.75	45	0.78	0.01	1.24	1.33
19	0.53	0.01	1.09	1.13	46	0.60	0.01	1.16	1.21
20	0.89	0.01	1.00	1.01	47	-1.18	0.01	0.87	0.75
21	0.56	0.01	1.14	1.23	48	0.98	0.01	1.14	1.20
22	0.48	0.01	0.88	0.82	49	-0.67	0.01	0.92	0.80
23	-0.30	0.01	0.83	0.68	50	-0.04	0.01	0.95	0.90
24	0.01	0.01	0.93	0.87	51	0.23	0.01	0.91	0.83
25	-0.74	0.01	0.81	0.64	52	-0.98	0.01	0.83	0.59
26	-0.16	0.01	1.01	1.07	53	1.25	0.01	0.97	0.99
27	0.11	0.01	0.99	0.92	54	0.65	0.01	0.96	0.94

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Table 7.3.1.11
2009 Spring AIMS IRT Item Statistics
Reading Grade 6

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-0.02	0.01	1.02	1.00	28	0.35	0.01	1.12	1.20
2	-1.93	0.01	0.85	0.54	29	0.18	0.01	0.92	0.91
3	-0.32	0.01	0.95	0.90	30	0.91	0.01	1.09	1.12
4	-1.02	0.01	0.96	0.94	31	0.26	0.01	0.90	0.82
5	-0.93	0.01	1.04	1.03	32	0.01	0.01	1.07	1.04
6	-0.47	0.01	1.11	1.23	33	-0.11	0.01	0.97	0.89
7	-2.15	0.02	0.91	0.75	34	-0.12	0.01	1.19	1.29
8	-1.41	0.01	0.86	0.69	35	1.03	0.01	1.22	1.32
9	-0.03	0.01	0.87	0.77	36	0.20	0.01	0.96	0.95
10	-0.27	0.01	0.76	0.62	37	-0.49	0.01	0.87	0.77
11	0.66	0.01	1.09	1.14	38	0.55	0.01	1.07	1.08
12	1.30	0.01	1.07	1.15	39	-0.29	0.01	1.02	1.04
13	0.84	0.01	1.14	1.20	40	0.21	0.01	1.03	1.00
14	-1.51	0.01	0.79	0.46	41	0.82	0.01	0.99	0.99
15	-0.84	0.01	0.83	0.66	42	1.30	0.01	1.09	1.22
16	-1.10	0.01	0.79	0.53	43	1.26	0.01	1.10	1.20
17	-1.19	0.01	0.81	0.58	44	0.81	0.01	1.06	1.07
18	1.44	0.01	1.20	1.34	45	1.27	0.01	1.16	1.28
19	-0.74	0.01	0.99	0.81	46	-0.31	0.01	0.98	0.94
20	-0.41	0.01	0.83	0.65	47	-0.36	0.01	0.90	0.82
21	0.30	0.01	1.03	1.05	48	-0.02	0.01	1.16	1.25
22	-1.27	0.01	0.88	0.76	49	-0.14	0.01	0.86	0.73
23	0.17	0.01	1.17	1.33	50	1.31	0.01	1.13	1.23
24	-0.63	0.01	1.02	1.02	51	0.50	0.01	1.05	1.08
25	-1.32	0.01	0.82	0.69	52	-0.23	0.01	0.74	0.59
26	-0.89	0.01	1.02	0.93	53	1.36	0.01	1.05	1.16
27	-0.01	0.01	0.93	0.86	54	0.94	0.01	1.04	1.06

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Table 7.3.1.12
2009 Spring AIMS IRT Item Statistics
Reading Grade 7

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-1.76	0.01	0.95	0.91	28	-0.37	0.01	1.00	1.03
2	0.66	0.01	1.15	1.19	29	0.93	0.01	1.04	1.07
3	-0.97	0.01	0.91	0.76	30	-0.06	0.01	0.89	0.80
4	-0.13	0.01	0.93	0.87	31	0.25	0.01	0.88	0.79
5	-0.42	0.01	1.05	1.01	32	0.63	0.01	1.06	1.09
6	0.15	0.01	0.94	0.90	33	-0.47	0.01	0.87	0.73
7	-1.11	0.01	0.86	0.70	34	0.70	0.01	1.04	1.07
8	0.32	0.01	1.10	1.11	35	0.06	0.01	0.89	0.80
9	-0.39	0.01	0.93	0.86	36	2.00	0.01	1.06	1.31
10	0.18	0.01	0.97	0.93	37	0.91	0.01	1.04	1.06
11	0.97	0.01	0.91	0.89	38	0.13	0.01	1.12	1.12
12	0.39	0.01	0.97	0.96	39	0.98	0.01	1.27	1.38
13	-0.92	0.01	0.98	0.98	40	-0.21	0.01	0.95	0.93
14	0.82	0.01	1.04	1.08	41	-0.35	0.01	0.95	0.88
15	-0.49	0.01	0.90	0.86	42	-0.02	0.01	1.01	1.04
16	0.16	0.01	1.02	1.02	43	-0.54	0.01	0.95	0.97
17	-1.37	0.01	0.89	0.92	44	0.13	0.01	1.01	1.01
18	-0.20	0.01	0.89	0.81	45	0.45	0.01	0.93	0.89
19	0.35	0.01	1.04	1.07	46	1.61	0.01	1.22	1.39
20	0.75	0.01	1.18	1.23	47	-0.58	0.01	0.86	0.69
21	-0.12	0.01	0.93	0.86	48	1.28	0.01	1.02	1.08
22	-0.11	0.01	1.24	1.44	49	0.12	0.01	1.01	1.00
23	-0.79	0.01	0.90	0.80	50	-0.31	0.01	0.87	0.82
24	-0.72	0.01	1.23	1.61	51	0.77	0.01	0.99	0.98
25	-0.52	0.01	1.02	1.02	52	-0.35	0.01	0.89	0.82
26	1.02	0.01	1.19	1.26	53	-0.27	0.01	0.96	0.91
27	-0.41	0.01	0.88	0.80	54	0.61	0.01	1.02	1.02

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Table 7.3.1.13
2009 Spring AIMS IRT Item Statistics
Reading Grade 8

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-1.53	0.01	1.00	1.04	28	-0.19	0.01	1.00	1.08
2	0.15	0.01	1.11	1.16	29	-0.06	0.01	1.14	1.29
3	0.29	0.01	1.07	1.04	30	0.08	0.01	0.94	0.91
4	-0.66	0.01	0.97	0.91	31	0.95	0.01	1.10	1.18
5	-0.94	0.01	0.87	0.74	32	0.97	0.01	1.27	1.39
6	-1.27	0.01	0.88	0.81	33	-0.02	0.01	1.00	0.97
7	-1.00	0.01	1.06	1.13	34	-0.10	0.01	1.01	1.03
8	0.75	0.01	1.16	1.21	35	-0.88	0.01	0.89	0.74
9	-0.11	0.01	1.10	1.14	36	-1.10	0.01	0.91	0.76
10	-0.38	0.01	0.94	0.83	37	1.08	0.01	1.10	1.15
11	0.29	0.01	0.98	0.94	38	-0.15	0.01	0.92	0.83
12	0.46	0.01	1.00	0.98	39	0.64	0.01	1.12	1.16
13	0.64	0.01	1.02	1.00	40	0.39	0.01	1.12	1.12
14	-0.87	0.01	0.90	0.74	41	0.89	0.01	1.01	1.03
15	0.31	0.01	1.11	1.13	42	-1.03	0.01	0.91	0.86
16	0.07	0.01	0.91	0.84	43	1.35	0.01	1.08	1.16
17	0.19	0.01	0.99	0.98	44	0.41	0.01	1.02	0.98
18	0.36	0.01	1.00	0.99	45	0.68	0.01	1.18	1.25
19	-0.06	0.01	1.00	0.95	46	0.10	0.01	0.96	0.90
20	1.32	0.01	1.11	1.18	47	0.06	0.01	0.91	0.85
21	0.31	0.01	1.06	1.11	48	-0.36	0.01	0.80	0.66
22	-0.46	0.01	0.92	0.81	49	-0.66	0.01	0.88	0.71
23	-1.34	0.01	1.05	1.00	50	0.20	0.01	0.97	0.93
24	0.67	0.01	1.07	1.09	51	-0.17	0.01	0.87	0.76
25	-0.64	0.01	1.04	1.07	52	-0.30	0.01	1.00	0.92
26	-0.53	0.01	0.90	0.84	53	-0.07	0.01	0.93	0.88
27	-0.29	0.01	0.87	0.77	54	-0.15	0.01	0.94	0.88

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Table 7.3.1.14
2009 Spring AIMS IRT Item Statistics
Reading High School

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	0.02	0.01	0.99	0.96	28	-0.18	0.01	0.83	0.76
2	0.13	0.01	1.06	1.09	29	0.37	0.01	1.01	1.09
3	-0.88	0.01	1.02	1.00	30	0.15	0.01	1.07	1.26
4	-0.21	0.01	1.06	1.14	31	0.24	0.01	0.96	0.88
5	0.42	0.01	1.11	1.13	32	-0.05	0.01	0.93	0.82
6	0.29	0.01	1.14	1.18	33	1.57	0.01	1.10	1.19
7	-0.05	0.01	1.04	1.09	34	0.69	0.01	0.87	0.81
8	-0.73	0.01	0.98	1.11	35	0.07	0.01	0.99	0.96
9	-1.16	0.01	0.90	0.78	36	-0.28	0.01	0.98	0.98
10	-2.50	0.02	0.87	0.52	37	0.72	0.01	0.89	0.85
11	-1.37	0.01	0.88	0.68	38	-0.19	0.01	0.95	0.86
12	-0.44	0.01	1.03	1.07	39	0.02	0.01	0.95	0.87
13	-0.41	0.01	1.07	1.19	40	0.69	0.01	0.96	0.92
14	0.04	0.01	1.14	1.40	41	-0.24	0.01	0.88	0.78
15	0.47	0.01	1.09	1.11	42	0.20	0.01	1.02	1.05
16	-0.23	0.01	0.97	0.95	43	-0.49	0.01	0.93	0.92
17	-0.60	0.01	0.93	0.87	44	0.41	0.01	1.16	1.33
18	-0.17	0.01	1.04	1.18	45	1.60	0.01	1.16	1.29
19	-0.01	0.01	1.02	1.02	46	0.85	0.01	1.08	1.14
20	1.26	0.01	0.97	0.98	47	0.43	0.01	1.00	0.96
21	0.98	0.01	1.05	1.08	48	0.99	0.01	0.87	0.83
22	-1.07	0.01	0.89	0.78	49	0.48	0.01	0.87	0.80
23	0.95	0.01	1.03	1.05	50	1.44	0.01	1.05	1.12
24	0.36	0.01	0.97	0.92	51	1.47	0.01	1.14	1.24
25	0.12	0.01	0.90	0.82	52	0.88	0.01	1.17	1.23
26	-1.29	0.01	0.84	0.59	53	0.32	0.01	1.04	1.06
27	-1.63	0.01	0.79	0.52	54	1.39	0.01	1.00	1.05

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Table 7.3.1.15
2009 Spring AIMS IRT Item Statistics
Science Grade 4

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-2.49	0.02	0.91	0.60	28	0.94	0.01	1.04	1.08
2	-0.67	0.01	1.05	1.18	29	-0.50	0.01	0.97	0.97
3	0.11	0.01	0.92	0.85	30	-0.95	0.01	0.82	0.63
4	-1.55	0.01	0.84	0.58	31	-1.60	0.01	0.95	0.86
5	-0.70	0.01	0.98	0.95	32	0.07	0.01	0.96	0.94
6	-0.55	0.01	1.15	1.32	33	-0.69	0.01	0.96	0.96
7	-1.20	0.01	0.88	0.74	34	0.46	0.01	0.94	0.92
8	0.58	0.01	1.03	1.04	35	0.31	0.01	1.07	1.07
9	-0.81	0.01	0.89	0.78	36	0.66	0.01	0.93	0.91
10	-2.73	0.02	0.91	0.70	37	0.50	0.01	1.01	1.02
11	-2.15	0.01	0.95	1.05	38	-0.43	0.01	0.88	0.80
12	-0.14	0.01	0.99	1.03	39	-0.58	0.01	0.87	0.75
13	-0.71	0.01	0.89	0.79	40	1.69	0.01	1.07	1.25
14	-1.38	0.01	0.86	0.67	41	-0.67	0.01	0.87	0.77
15	-0.84	0.01	1.00	1.15	42	0.99	0.01	1.08	1.12
16	0.06	0.01	0.93	0.88	43	-0.62	0.01	0.97	0.95
17	-0.30	0.01	1.05	1.05	44	-1.54	0.01	0.91	0.84
18	-0.36	0.01	0.83	0.73	45	-0.31	0.01	0.94	0.86
19	0.35	0.01	0.94	0.90	46	1.07	0.01	1.18	1.26
20	0.54	0.01	1.05	1.04	47	1.19	0.01	1.22	1.34
21	-0.22	0.01	0.98	0.97	48	1.11	0.01	1.03	1.06
22	1.08	0.01	1.09	1.15	49	0.93	0.01	1.01	1.04
23	1.15	0.01	1.00	1.05	50	1.20	0.01	1.00	1.05
24	1.43	0.01	1.12	1.23	51	1.23	0.01	1.06	1.11
25	1.02	0.01	1.13	1.18	52	0.46	0.01	0.92	0.90
26	1.02	0.01	1.09	1.14	53	1.35	0.01	1.04	1.11
27	1.98	0.01	1.20	1.45	54	1.21	0.01	1.08	1.14

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Table 7.3.1.16
2009 Spring AIMS IRT Item Statistics
Science Grade 8

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-1.91	0.01	0.94	0.90	30	-0.58	0.01	0.97	1.00
2	-0.81	0.01	0.96	0.96	31	0.89	0.01	1.05	1.06
3	-0.80	0.01	0.85	0.73	32	2.60	0.01	1.15	1.65
4	-2.34	0.02	0.87	0.63	33	-0.01	0.01	1.02	1.09
5	-1.70	0.01	1.00	1.04	34	0.05	0.01	0.97	0.93
6	-1.45	0.01	0.87	0.67	35	0.32	0.01	1.07	1.11
7	-0.87	0.01	0.92	0.83	36	0.42	0.01	0.96	0.94
8	-0.09	0.01	1.05	1.07	37	-0.29	0.01	0.88	0.80
9	-0.13	0.01	1.07	1.10	38	-0.25	0.01	1.04	1.15
10	0.32	0.01	1.25	1.39	39	0.40	0.01	1.09	1.14
11	-1.33	0.01	0.87	0.71	40	-1.29	0.01	0.86	0.65
12	0.15	0.01	1.10	1.15	41	0.58	0.01	0.96	0.95
13	-0.36	0.01	1.11	1.21	42	0.50	0.01	0.95	0.93
14	-0.06	0.01	1.00	1.00	43	0.86	0.01	0.91	0.90
15	-0.75	0.01	0.94	1.00	44	0.74	0.01	1.01	1.03
16	0.28	0.01	1.13	1.16	45	-1.49	0.01	0.88	0.69
17	-0.19	0.01	0.96	0.93	46	1.30	0.01	0.98	1.06
18	-0.11	0.01	0.96	0.91	47	-0.71	0.01	0.85	0.71
19	-1.06	0.01	0.97	0.98	48	0.29	0.01	0.99	1.00
20	-0.44	0.01	0.90	0.79	49	1.18	0.01	1.13	1.20
21	-0.10	0.01	1.06	1.07	50	0.65	0.01	1.06	1.07
22	-0.09	0.01	0.91	0.87	51	0.93	0.01	0.95	0.96
23	-0.06	0.01	0.87	0.79	52	1.12	0.01	0.94	0.96
24	-0.03	0.01	0.93	0.88	53	0.42	0.01	0.92	0.89
25	0.26	0.01	0.99	0.97	54	1.75	0.01	1.19	1.42
26	0.31	0.01	1.07	1.08	55	0.39	0.01	0.93	0.90
27	0.07	0.01	0.98	0.98	56	0.53	0.01	1.09	1.12
28	1.40	0.01	1.12	1.23	57	0.58	0.01	0.87	0.84
29	-0.83	0.01	0.95	0.97	58	0.85	0.01	1.34	1.47

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Table 7.3.1.17
2009 Spring AIMS IRT Item Statistics
Science Grade HS

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-1.96	0.01	0.90	0.70	34	0.24	0.01	1.03	1.03
2	-2.09	0.01	0.95	0.84	35	0.71	0.01	0.97	0.99
3	-0.95	0.01	0.88	0.82	36	-0.02	0.01	0.98	0.98
4	-1.94	0.01	0.85	0.62	37	0.81	0.01	1.02	1.06
5	-1.41	0.01	0.99	1.00	38	0.51	0.01	1.06	1.09
6	-0.56	0.01	1.06	1.12	39	0.99	0.01	1.11	1.19
7	-1.06	0.01	0.90	0.84	40	0.11	0.01	1.15	1.22
8	-1.20	0.01	0.91	0.84	41	-1.20	0.01	0.84	0.74
9	-0.92	0.01	0.86	0.75	42	-0.05	0.01	0.97	0.94
10	-0.67	0.01	1.02	1.01	43	1.20	0.01	1.11	1.21
11	-0.24	0.01	0.93	0.89	44	0.57	0.01	1.01	1.03
12	-0.12	0.01	0.98	0.98	45	1.05	0.01	0.96	1.00
13	-0.86	0.01	0.92	0.89	46	0.79	0.01	0.96	1.00
14	0.16	0.01	1.08	1.12	47	-0.50	0.01	0.96	0.95
15	-0.58	0.01	0.90	0.85	48	-0.52	0.01	1.00	1.03
16	-0.49	0.01	0.99	1.01	49	-0.10	0.01	0.88	0.86
17	-1.36	0.01	0.79	0.63	50	0.82	0.01	1.03	1.06
18	-0.82	0.01	0.85	0.78	51	0.43	0.01	0.96	0.96
19	-1.01	0.01	0.83	0.72	52	-0.27	0.01	0.89	0.85
20	-0.22	0.01	1.01	1.03	53	0.32	0.01	1.06	1.09
21	0.91	0.01	1.06	1.10	54	0.86	0.01	1.11	1.20
22	-0.66	0.01	0.94	0.95	55	0.97	0.01	1.13	1.20
23	-0.02	0.01	1.08	1.13	56	-0.25	0.01	1.02	1.01
24	0.30	0.01	1.02	1.02	57	-0.08	0.01	0.93	0.92
25	-0.28	0.01	0.93	0.92	58	1.01	0.01	1.15	1.25
26	-0.28	0.01	0.98	1.01	59	1.02	0.01	0.98	1.02
27	-0.26	0.01	0.96	0.95	60	0.89	0.01	1.07	1.14
28	-0.25	0.01	0.92	0.89	61	1.09	0.01	1.18	1.33
29	1.07	0.01	1.01	1.08	62	1.00	0.01	1.13	1.25
30	0.12	0.01	1.04	1.06	63	1.33	0.01	1.12	1.27
31	0.36	0.01	1.00	1.01	64	1.76	0.01	1.09	1.38
32	0.42	0.01	0.97	0.97	65	1.13	0.01	1.18	1.35
33	0.22	0.01	1.02	1.03					

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7.4 Scaling Methods

In 2005, a scale of measurement was determined for each of the AIMS CRT Reading and Mathematics. The AIMS CRT Reading and Mathematics in grades 3-8 were placed on a vertical scale through the use of external anchor items comprised of *TerraNova* NRT items for which item parameters had been obtained during national standardization. The desired AIMS scales for Grades 3-8 ranged from 200 to 800. The high school Reading and Mathematics were placed on a separate scale that ranged from 500 to 900 with an approximate mean of 700. The standard deviations were 40, 50, and 25 for Mathematics, Reading, and Writing, respectively. The AIMS high school assessments were not placed on the grades 3-8 vertical scale. A detailed description concerning the development of the scale of measurement for the AIMS can be found in section 7.2.1 of the 2005 AIMS Technical Report and is available from the Arizona Department of Education: www.azed.gov/standards/aims/Administering/AIMSTechReport2005.pdf. A scale of measurement was determined for Science using Spring 2008 operational test results and Meet cut score from standard setting. A detailed description concerning the development of the scale of measurement can be found in Appendix B of the 2008 AIMS Technical Report. Since one item was dropped from the 2008 calibration of the high school Science scale, it was necessary to recalibrate the Science scale using all 65 items in HS Science in Spring 2009. This was accomplished using the description in Appendix B of the 2008 AIMS Technical Report. Science scales are not on a vertical scale. Each grade has its own unique scale so that the scale scores for different grades can not be compared. The desired AIMS scales for each grade 4, 8, and high school ranged from 200 to 800.

7.5 Equating

7.5.1 Reading, Mathematics, and Science

The 2009 AIMS Reading and Mathematics tests were equated and placed on the operational 2005 AIMS scale using a common-item, non-equivalent groups design. A set of anchor items were selected from the 2008 operational assessments before the item selection workshop. The anchor items were selected with two principles in mind. First, the subset of anchor items should represent the content covered by the full AIMS assessment. Second, the subset of anchor items should be representative of the distribution of item difficulties for the full assessment. All items, including the dual purpose items in DPA Reading and Mathematics tests, were eligible to be considered anchor items.

In Spring 2008, two Science forms A and B were spiraled within classroom to be administered to two equivalent groups. These two forms had common items set to be used for equating two alternate forms. Using common item randomly equivalent design, two forms were equated. A detailed description concerning the equating process can be found in Appendix B of the 2008 AIMS Technical Report. In Spring 2009, intact AIMS Science Form A was administered. Because pre-equating design was applied, the item parameters scaled in Spring 2008 were used for grades 4 and 8, and the item parameters re-scaled in Spring 2009 were used for HS.

Table 7.5.1.1 presents the number of anchor/common items for each grade/subject area. Tables 7.5.1.2 through 7.5.1.3 present representation of content charts for the 2009 anchor/common items compared against the 2009 operational form. Tables 7.5.1.4 through 7.5.1.5 present descriptive statistics for the 2009 anchor/common item difficulties and the 2008 operational form.

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Table 7.5.1.1
Spring 2009 AIMS Anchor Items

Content	Grade	CRT Total	Anchor
Mathematics	3	72	33
	4	70	35
	5	68	29
	6	68	26
	7	68	30
	8	66	36
	HS	85	28
Reading	3	54	20
	4	54	18
	5	54	18
	6	54	21
	7	54	28
	8	54	24
	HS	54	20

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Table 7.5.1.2
Representation of Content by 2009 Anchor Sets, Mathematics

			Strand																				
			1 Concept			2 Concept					3 Concept					4 Concept					5 Concept		Total
			1	2	3	1	2	34	1	1/2	2	3	3/4	4	1	1/2	2	3	3/4	4	1	1/2	2	
MA03	All	N	11	10	4	4	4	4		8			8			6			9			4		72
		Pct	15.28	13.89	5.56	5.56	5.56	5.56		11.11			11.11			8.33			12.5			5.56		100
	Anchor	N	4	4	2	1	2	3		5			3			3			4			2		33
		Pct	12.12	12.12	6.06	3.03	6.06	9.09		15.15			9.09			9.09			12.12			6.06		100
MA04	All	N	9	8	4	4	4	4		8			8			7			10			4		70
		Pct	12.86	11.43	5.71	5.71	5.71	5.71		11.43			11.43			10			14.29			5.71		100
	Anchor	N	3	3	2	1	4	1		6			5			3			4			3		35
		Pct	8.57	8.57	5.71	2.86	11.43	2.86		17.14			14.29			8.57			11.43			8.57		100
MA05	All	N	7	9	4	4	4	4		8			8			7			9			4		68
		Pct	10.29	13.24	5.88	5.88	5.88	5.88		11.76			11.76			10.29			13.24			5.88		100
	Anchor	N	2	4	1	3	2	1		5			4			2			2			3		29
		Pct	6.9	13.79	3.45	10.34	6.9	3.45		17.24			13.79			6.9			6.9			10.34		100
MA06	All	N	4	7	4	4	4	6		8			8			8			11			4		68
		Pct	5.88	10.29	5.88	5.88	5.88	8.82		11.76			11.76			11.76			16.18			5.88		100
	Anchor	N	1	2	1	1	2	3		3			4			2			5			2		26
		Pct	3.85	7.69	3.85	3.85	7.69	11.54		11.54			15.38			7.69			19.23			7.69		100
MA07	All	N	5	6	4	6	4	4		8			8			9			10			4		68
		Pct	7.35	8.82	5.88	8.82	5.88	5.88		11.76			11.76			13.24			14.71			5.88		100
	Anchor	N	2	2	1	1	3	1		5			3			4			6			2		30
		Pct	6.67	6.67	3.33	3.33	10	3.33		16.67			10			13.33			20			6.67		100
MA08	All	N	4	4	4	7	4	4	4		4		10			9		4		4		4		66
		Pct	6.06	6.06	6.06	10.61	6.06	6.06	6.06		6.06		15.15			13.64		6.06		6.06		6.06		100
	Anchor	N	2	1	1	5	1	2			2		6			7		3		4		2		36
		Pct	5.56	2.78	2.78	13.89	2.78	5.56			5.56		16.67			19.44		8.33		11.11		5.56		100
MAHS	All	N	4	4	4	8	4	4	4		6	12		4	8		4	6		5	4		4	85
		Pct	4.71	4.71	4.71	9.41	4.71	4.71	4.71		7.06	14.12		4.71	9.41		4.71	7.06		5.88	4.71		4.71	100
	Anchor	N		1	2	2	1	1	1		2	5		1	3		1	2		2	2		2	28
		Pct		3.57	7.14	7.14	3.57	3.57	3.57		7.14	17.86		3.57	10.71		3.57	7.14		7.14	7.14		7.14	100

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Table 7.5.1.3
Representation of Content by 2009 Anchor Sets, Reading

			Strand									
			1				2		3			
			Concept				Concept		Concept			Total
			1	3	4	6	1	2	1	2	3	
RD03	All	N	4	5	6	9	12		6	6	6	54
		Pct	7.41	9.26	11.11	16.67	22.22		11.11	11.11	11.11	100
	Anchor	N	3	3	1	1	5		3	2	2	20
		Pct	15	15	5	5	25		15	10	10	100
RD04	All	N			4	8	17		13	6	6	54
		Pct			7.41	14.81	31.48		24.07	11.11	11.11	100
	Anchor	N			1	3	2		6	3	3	18
		Pct			5.56	16.67	11.11		33.33	16.67	16.67	100
RD05	All	N			6	6	17		13	6	6	54
		Pct			11.11	11.11	31.48		24.07	11.11	11.11	100
	Anchor	N			2	1	6		4	3	2	18
		Pct			11.11	5.56	33.33		22.22	16.67	11.11	100
RD06	All	N			6	6	17		13	6	6	54
		Pct			11.11	11.11	31.48		24.07	11.11	11.11	100
	Anchor	N			1	3	6		5	3	3	21
		Pct			4.76	14.29	28.57		23.81	14.29	14.29	100
RD07	All	N			6	6	13	4	12	7	6	54
		Pct			11.11	11.11	24.07	7.41	22.22	12.96	11.11	100
	Anchor	N			2	2	7	4	5	4	4	28
		Pct			7.14	7.14	25	14.29	17.86	14.29	14.29	100
RD08	All	N			4	5	14	4	13	8	6	54
		Pct			7.41	9.26	25.93	7.41	24.07	14.81	11.11	100
	Anchor	N			1	2	6	4	3	4	4	24
		Pct			4.17	8.33	25	16.67	12.5	16.67	16.67	100
RDHS	All	N			4	4	14	4	12	8	8	54
		Pct			7.41	7.41	25.93	7.41	22.22	14.81	14.81	100
	Anchor	N			1	2	6	1	3	3	4	20
		Pct			5	10	30	5	15	15	20	100

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Table 7.5.1.4
Representation of Difficulty by 2009 Anchor Sets, Mathematics

			Difficulty Parameter		P-Value	
Content	**Grade**	**Statistic**	**Entire 2008 Test**	**All Anchor Items**	**Entire 2008 Test**	**All Anchor Items**
MA	3	N	72	33	72	33
		Mean	0.0292	0.2615	0.705	0.6782
		Std Dev	1.0721	0.8886	0.1474	0.1429
		Min	-3.6692	-1.2116	0.39	0.39
		Max	1.8927	1.8927	0.99	0.9
MA	4	N	70	35	70	35
		Mean	0.071	0.0653	0.7319	0.7369
		Std Dev	0.816	0.6842	0.1213	0.1044
		Min	-1.9031	-1.3142	0.4	0.44
		Max	2.0036	1.6923	0.94	0.91
MA	5	N	68	29	68	29
		Mean	0.1773	0.2559	0.6965	0.6838
		Std Dev	0.8722	0.8887	0.1275	0.1305
		Min	-1.7979	-1.7301	0.31	0.41
		Max	2.4715	2.0354	0.93	0.9
MA	6	N	68	26	68	26
		Mean	0.1155	0.1984	0.6918	0.6819
		Std Dev	0.7643	0.6402	0.1187	0.1063
		Min	-2.0477	-1.4566	0.45	0.49
		Max	1.4946	1.2086	0.94	0.92
MA	7	N	68	30	68	30
		Mean	0.1612	-0.0068	0.6984	0.7267
		Std Dev	0.8341	0.722	0.1332	0.1127
		Min	-1.4549	-1.2614	0.36	0.48
		Max	2.0907	1.2875	0.91	0.88
MA	8	N	66	36	66	36
		Mean	0.1298	-0.0161	0.66	0.685
		Std Dev	0.8827	0.7795	0.1481	0.1226
		Min	-1.7704	-1.7704	0.32	0.37
		Max	2.0347	1.8403	0.89	0.89
MA	HS	N	85	28	85	28
		Mean	0.1178	0.0393	0.6662	0.6796
		Std Dev	0.8631	0.8426	0.1368	0.1339
		Min	-2.0551	-1.8719	0.37	0.47
		Max	1.7913	1.3607	0.93	0.93

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Table 7.5.1.5
Representation of Difficulty by 2009 Anchor Sets, Reading

			Difficulty Parameter		P-Value	
Content	**Grade**	**Statistic**	**Entire 2008 Test**	**All Anchor Items**	**Entire 2008 Test**	**All Anchor Items**
RD	3	N	54	20	54	20
		Mean	0.105	0.2676	0.6724	0.648
		Std Dev	0.976	0.9509	0.1477	0.1525
		Min	-2.2439	-1.834	0.32	0.37
		Max	2.1871	1.7748	0.94	0.92
RD	4	N	54	18	54	18
		Mean	-0.0047	-0.0406	0.715	0.72
		Std Dev	0.8549	0.8519	0.1281	0.1262
		Min	-1.4796	-1.2246	0.29	0.4
		Max	2.4927	1.8556	0.9	0.87
RD	5	N	54	18	54	18
		Mean	0.0726	0.0192	0.6804	0.6822
		Std Dev	0.715	0.8816	0.1108	0.1269
		Min	-2.0399	-2.0399	0.4	0.51
		Max	1.6154	0.9819	0.92	0.92
RD	6	N	54	21	54	21
		Mean	0.0036	0.3379	0.6809	0.6286
		Std Dev	0.8974	0.8189	0.1396	0.1374
		Min	-1.9712	-1.3166	0.4	0.43
		Max	1.5982	1.3644	0.92	0.88
RD	7	N	54	28	54	28
		Mean	0.0826	-0.0248	0.6772	0.6968
		Std Dev	0.7186	0.6364	0.1176	0.101
		Min	-1.7159	-1.3681	0.34	0.48
		Max	1.9454	1.2822	0.91	0.9
RD	8	N	54	24	54	24
		Mean	0.0114	0.0251	0.6607	0.6617
		Std Dev	0.7275	0.6399	0.121	0.1087
		Min	-1.9484	-1.3378	0.41	0.42
		Max	1.3792	1.3218	0.92	0.85
RD	HS	N	54	20	54	20
		Mean	0.2481	0.0972	0.65	0.679
		Std Dev	0.902	0.7299	0.1506	0.1165
		Min	-1.6738	-1.628	0.32	0.43
		Max	2.0807	1.3874	0.91	0.91

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A fixed-parameter equating was implemented within WINSTEPS in order to link the 2009 Reading and Mathematics tests to the operational reporting scale. This is implemented by constraining the 2009 parameter estimates for the common anchor items to equal the final parameter estimates obtained in the 2005 AIMS calibration analyses. Displacement statistics that estimate the difference between the fixed parameter and the estimate had the item parameter not been constrained were evaluated for each anchor item. Displacement statistics greater than 0.5 or less than -0.5 are considered significant in the Rasch literature and caused the anchor item to be removed from the anchor set. The following procedure was used to examine anchor item performance and determine whether to remove anchor items that exhibited significant displacement statistics from the annual equating:

1. All anchor items with displacement statistics greater than 0.3 or less than -0.3 were flagged. Any item with displacement statistics greater than 0.5 or less than -0.5 was dropped from the anchor item set. If more than one item is observed with displacement statistics greater than 0.5 or less than -0.5, then only the first item with the largest displacement value will be dropped from the anchor set. The displacement values of the remaining anchor items will be re-estimated by equating the test again using the remaining anchor items. All additional items will be noted and carried over for removal from the anchor set next year. The second or succeeding items will not be selected as anchors for that year.

2. Anchor items with displacement statistics greater than 0.3 and less than 0.5 or less than -0.3 and greater than -0.5 were investigated using infit, outfit, item difficulty, and point-biserial correlation. If either infit and outfit were flagged for the anchor item, the removal of this item was considered. Also, if any item shows point-biserial correlation less than 0.3 the removal of this item was considered.

3. Whenever anchor item(s) were removed, content and difficulty representativeness of the remaining anchor set was examined. In instances where more than one anchor item was considered for removal for a given content and grade, content strand and difficulty level of the item was considered to prevent removal of more than one item from the same content strand and difficulty level.

4. If more than one item is removed from the same content strand, a note will/should be made to address the problem in the setup of anchors for the succeeding year's assessment.

In all Reading and Mathematics grades, there was one High school Mathematics anchor item that was removed from equating.

7.5.2 Writing

In order to expedite score reporting, the Writing prompts administered in the 2007 field test were taken from a prompt bank that had been linked to the AIMS Writing scale prior to actual administration. The technical report, "2008 Writing Assessment Pre-Linking Study," describes pre-linking sampling, design, linking process, and final scoring tables.

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7.5.3 Scoring and Standard Error of Measurement

Item response theory makes available two types of scoring: number-correct and item-pattern. With number-correct scoring, a student's number-correct score (or raw score) is converted to a scale score. Item-pattern scoring calculates a student's scale score, taking into account not only how many items a student answered correctly but also which items and the characteristics of each item. For groups of 25 or more students, the two methods produce tau-equivalent results (Yen, 1984.) Tau-equivalent means that examinees are expected to receive the same score on average between the two methods. Number-correct scoring was used to derive scales scores for the AIMS CRT tests, while the AIMS NRT tests were scored using item-pattern scoring with *TerraNova* national standardization item parameters.

Typically, a test score is obtained from a single observation of behavior and represents an estimate of the trait being measured. As an estimate, an observed test score contains some measurement error and does not perfectly reflect an individual's true score. The degree of measurement error in a test score can be estimated using a statistic called the standard error of measurement (SEM).

A student's exact true score cannot be known. The true score is defined as the average test score that would result if the test could be administered repeatedly without the effects of practice or fatigue. The standard error of measurement is an estimate of the standard deviation of an individual's observed scores from these repeated administrations. For practical purposes, this statistic can be used to obtain a range within which a student's true score is likely to fall. Using item response theory, the standard error of measurement can be calculated for every possible scale score. These SEM values can be computed for both number-correct and item-pattern scoring.

Tables 7.5.3.1 through 7.5.3.25 present raw score to scale score conversion tables and IRT conditional standard errors of measurement for all AIMS CRT tests. The values in bold represent the scale score with the smallest value greater than or equal to the established cut score for each grade level and content area. The greater than portion of this rule is evoked when the actual scale score is not observed in any given table. Tables 7.5.3.26 through 7.5.3.34 present IRT conditional standard errors of measurement for all AIMS NRT tests.

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Table 7.5.3.1
2009 Spring AIMS Raw Score to Scale Score Table
Mathematics CRT Grade 3

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	200	40	37	399	11
1	200	40	38	402	11
2	225	31	39	405	11
3	244	26	40	408	11
4	258	23	41	411	11
5	269	21	42	413	11
6	279	19	43	416	11
7	287	18	44	419	11
8	294	17	45	**422**	11
9	301	16	46	425	11
10	306	15	47	428	11
11	312	15	48	431	11
12	317	14	49	434	11
13	322	14	50	437	11
14	326	13	51	440	11
15	330	13	52	443	12
16	334	13	53	447	12
17	338	13	54	450	12
18	342	12	55	454	12
19	346	12	56	457	12
20	349	12	57	461	13
21	353	12	58	465	13
22	356	12	59	469	13
23	359	11	60	474	14
24	362	11	61	478	14
25	365	11	62	483	15
26	368	11	63	489	15
27	371	11	64	**495**	16
28	374	11	65	501	17
29	377	11	66	509	18
30	380	11	67	517	19
31	383	11	68	527	21
32	**386**	11	69	540	25
33	388	11	70	558	30
34	391	11	71	588	42
35	394	11	72	650	87
36	397	11			

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 386, 420, 492.

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Table 7.5.3.2
2009 Spring AIMS Raw Score to Scale Score Table
Mathematics CRT Grade 4

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	230	39	36	423	12
1	230	39	37	426	12
2	248	32	38	429	12
3	267	27	39	432	12
4	281	24	40	435	12
5	292	21	41	438	12
6	302	20	42	441	12
7	310	18	43	444	12
8	317	17	44	447	12
9	323	17	45	**450**	12
10	329	16	46	454	12
11	335	15	47	457	12
12	340	15	48	460	12
13	345	14	49	464	12
14	349	14	50	467	13
15	353	14	51	471	13
16	358	13	52	475	13
17	362	13	53	478	13
18	365	13	54	482	13
19	369	13	55	487	14
20	373	13	56	491	14
21	376	12	57	496	15
22	380	12	58	500	15
23	383	12	59	505	15
24	386	12	60	511	16
25	390	12	61	517	17
26	393	12	62	**523**	17
27	396	12	63	531	19
28	399	12	64	539	20
29	402	12	65	548	21
30	405	12	66	559	23
31	408	12	67	573	27
32	411	12	68	593	33
33	**414**	12	69	625	45
34	417	12	70	675	78
35	420	12			

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 414, 448, 521.

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Table 7.5.3.3
2009 Spring AIMS Raw Score to Scale Score Table
Mathematics CRT Grade 5

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	255	51	35	462	11
1	274	41	36	465	11
2	303	30	37	468	11
3	321	24	38	470	11
4	334	21	39	473	11
5	344	19	40	**476**	11
6	353	18	41	479	11
7	360	17	42	482	11
8	367	16	43	484	11
9	373	15	44	487	11
10	378	15	45	490	11
11	383	14	46	493	11
12	388	14	47	496	11
13	392	13	48	500	11
14	397	13	49	503	12
15	401	13	50	506	12
16	404	12	51	510	12
17	408	12	52	513	12
18	412	12	53	517	12
19	415	12	54	521	13
20	418	12	55	525	13
21	422	11	56	529	13
22	425	11	57	534	14
23	428	11	58	539	14
24	431	11	59	544	15
25	434	11	60	**550**	16
26	437	11	61	556	17
27	440	11	62	563	18
28	**443**	11	63	572	19
29	445	11	64	582	21
30	448	11	65	594	24
31	451	11	66	612	29
32	454	11	67	641	41
33	457	11	68	700	84
34	459	11			

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 442, 476, 550.

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Table 7.5.3.4
2009 Spring AIMS Raw Score to Scale Score Table
Mathematics CRT Grade 6

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	270	43	35	471	12
1	270	43	36	474	12
2	295	33	37	477	12
3	315	27	38	480	12
4	329	24	39	484	12
5	341	22	40	487	12
6	350	20	41	490	12
7	359	19	42	493	12
8	366	18	43	**496**	12
9	373	17	44	499	12
10	379	16	45	503	12
11	384	16	46	506	12
12	390	15	47	509	13
13	394	15	48	513	13
14	399	14	49	516	13
15	404	14	50	520	13
16	408	14	51	524	13
17	412	13	52	528	14
18	416	13	53	532	14
19	420	13	54	536	14
20	423	13	55	541	15
21	427	13	56	546	15
22	430	13	57	551	15
23	434	12	58	556	16
24	437	12	59	562	17
25	440	12	60	569	18
26	444	12	61	**576**	19
27	447	12	62	584	20
28	450	12	63	593	21
29	453	12	64	604	24
30	456	12	65	618	27
31	459	12	66	638	33
32	462	12	67	670	46
33	**465**	12	68	725	83
34	468	12			

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 463, 496, 574.

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Table 7.5.3.5
2009 Spring AIMS Raw Score to Scale Score Table
Mathematics CRT Grade 7

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	290	49	35	501	11
1	300	44	36	504	11
2	331	32	37	507	11
3	350	26	38	510	11
4	364	23	39	513	11
5	375	21	40	516	12
6	384	19	41	**519**	12
7	392	18	42	523	12
8	399	17	43	526	12
9	405	16	44	529	12
10	411	16	45	532	12
11	417	15	46	536	12
12	422	14	47	539	12
13	426	14	48	542	12
14	431	14	49	546	13
15	435	13	50	550	13
16	439	13	51	553	13
17	443	13	52	557	13
18	447	13	53	561	13
19	451	12	54	566	14
20	454	12	55	570	14
21	458	12	56	575	15
22	461	12	57	580	15
23	464	12	58	585	15
24	468	12	59	591	16
25	471	12	60	598	17
26	474	12	61	**605**	18
27	477	12	62	612	19
28	480	12	63	622	21
29	483	11	64	632	23
30	**486**	11	65	646	26
31	489	11	66	665	31
32	492	11	67	696	44
33	495	11	68	740	72
34	498	11			

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 484, 517, 599.

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Table 7.5.3.6
2009 Spring AIMS Raw Score to Scale Score Table
Mathematics CRT Grade 8

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	300	45	34	512	13
1	300	45	35	515	13
2	327	35	36	519	13
3	348	29	37	522	13
4	363	25	38	526	13
5	375	23	39	529	13
6	385	21	40	533	13
7	394	20	41	536	13
8	402	19	42	**540**	13
9	409	18	43	544	13
10	415	17	44	547	14
11	421	17	45	551	14
12	426	16	46	555	14
13	432	16	47	559	14
14	437	15	48	564	14
15	441	15	49	568	15
16	446	15	50	572	15
17	450	14	51	577	15
18	454	14	52	582	15
19	458	14	53	587	16
20	462	14	54	592	16
21	466	14	55	598	17
22	470	13	56	604	17
23	474	13	57	611	18
24	477	13	58	618	19
25	481	13	59	**626**	20
26	485	13	60	635	21
27	488	13	61	645	23
28	491	13	62	657	26
29	495	13	63	672	29
30	498	13	64	694	35
31	502	13	65	728	49
32	**505**	13	66	800	100
33	509	13			

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 505, 537, 623.

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Table 7.5.3.7
2009 Spring AIMS Raw Score to Scale Score Table
Mathematics CRT High School

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	500	36	43	671	8
1	503	35	44	673	8
2	527	25	45	675	8
3	542	21	46	677	8
4	553	18	47	679	8
5	561	16	48	681	8
6	569	15	49	**683**	8
7	575	14	50	685	8
8	580	13	51	686	8
9	585	13	52	688	8
10	590	12	53	690	8
11	594	12	54	692	8
12	598	11	55	695	8
13	601	11	56	697	8
14	605	11	57	699	9
15	608	10	58	701	9
16	611	10	59	703	9
17	614	10	60	705	9
18	617	10	61	707	9
19	619	10	62	710	9
20	622	9	63	712	9
21	625	9	64	715	9
22	627	9	65	717	9
23	630	9	66	720	10
24	632	9	67	722	10
25	634	9	68	725	10
26	637	9	69	728	10
27	639	9	70	731	10
28	641	9	71	734	11
29	643	9	72	738	11
30	645	9	73	741	11
31	647	8	74	745	12
32	649	8	75	749	12
33	651	8	76	**753**	13
34	653	8	77	758	13
35	655	8	78	764	14
36	657	8	79	770	15
37	659	8	80	777	16
38	661	8	81	785	18
39	663	8	82	796	21
40	665	8	83	811	25
41	667	8	84	835	35
42	**669**	8	85	900	87

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 668, 683, 750.

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Table 7.5.3.8
2009 Spring AIMS Raw Score to Scale Score Table
Reading CRT Grade 3

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	200	60	28	417	12
1	231	42	29	420	12
2	261	30	30	424	12
3	279	25	31	428	12
4	293	22	32	**431**	12
5	304	20	33	435	12
6	313	19	34	439	13
7	321	18	35	443	13
8	329	17	36	447	13
9	335	16	37	451	13
10	341	15	38	455	13
11	347	15	39	459	13
12	352	15	40	464	14
13	357	14	41	468	14
14	362	14	42	473	14
15	366	14	43	478	15
16	371	13	44	484	15
17	375	13	45	490	16
18	**379**	13	46	496	17
19	383	13	47	503	17
20	387	13	48	511	19
21	391	12	49	**520**	20
22	395	12	50	531	22
23	398	12	51	544	25
24	402	12	52	562	30
25	406	12	53	592	42
26	409	12	54	640	73
27	413	12			

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 379, 431, 516.

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Table 7.5.3.9
2009 Spring AIMS Raw Score to Scale Score Table
Reading CRT Grade 4

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	220	67	28	427	11
1	264	38	29	431	11
2	291	27	30	434	11
3	307	23	31	437	11
4	319	20	32	440	11
5	329	18	33	444	11
6	337	17	34	447	11
7	344	16	35	**451**	11
8	350	15	36	454	12
9	356	14	37	458	12
10	361	14	38	461	12
11	366	13	39	465	12
12	371	13	40	469	12
13	375	13	41	473	13
14	379	12	42	478	13
15	383	12	43	482	13
16	387	12	44	487	14
17	391	12	45	492	14
18	394	12	46	498	15
19	398	11	47	504	16
20	401	11	48	511	17
21	**405**	11	49	520	18
22	408	11	50	529	20
23	411	11	51	**541**	23
24	415	11	52	558	28
25	418	11	53	585	38
26	421	11	54	660	101
27	424	11			

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 402, 450, 536.

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Table 7.5.3.10
2009 Spring AIMS Raw Score to Scale Score Table
Reading CRT Grade 5

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	240	62	28	451	12
1	275	41	29	454	12
2	304	29	30	458	12
3	322	24	31	461	12
4	335	21	32	465	12
5	345	19	33	**468**	12
6	354	18	34	472	12
7	362	17	35	475	12
8	368	16	36	479	12
9	374	15	37	483	12
10	380	15	38	487	13
11	385	14	39	491	13
12	390	14	40	495	13
13	395	14	41	499	13
14	399	13	42	504	14
15	404	13	43	509	14
16	408	13	44	514	15
17	412	13	45	519	15
18	416	12	46	525	16
19	419	12	47	532	17
20	423	12	48	539	18
21	**427**	12	49	548	19
22	430	12	50	**558**	21
23	434	12	51	571	24
24	437	12	52	588	29
25	441	12	53	617	41
26	444	12	54	675	82
27	447	12			

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 424, 468, 556.

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Table 7.5.3.11
2009 Spring AIMS Raw Score to Scale Score Table
Reading CRT Grade 6

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	250	57	28	458	12
1	277	41	29	461	12
2	307	30	30	465	12
3	325	25	31	469	12
4	338	22	32	472	12
5	349	20	33	476	12
6	358	18	34	**480**	12
7	365	17	35	483	12
8	372	16	36	487	13
9	379	16	37	491	13
10	385	15	38	495	13
11	390	15	39	499	13
12	395	14	40	504	13
13	400	14	41	508	14
14	404	14	42	513	14
15	409	13	43	518	14
16	413	13	44	523	15
17	417	13	45	529	16
18	421	13	46	535	16
19	425	13	47	542	17
20	429	12	48	550	18
21	**433**	12	49	559	20
22	436	12	50	569	22
23	440	12	51	**582**	25
24	444	12	52	600	30
25	447	12	53	629	41
26	451	12	54	690	85
27	454	12			

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 433, 478, 571.

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Table 7.5.3.12
2009 Spring AIMS Raw Score to Scale Score Table
Reading CRT Grade 7

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	260	60	28	475	13
1	288	44	29	478	13
2	319	32	30	482	13
3	338	26	31	485	13
4	352	23	32	**489**	13
5	363	21	33	493	13
6	372	19	34	497	13
7	380	18	35	501	13
8	388	17	36	505	13
9	394	16	37	509	13
10	400	16	38	513	14
11	406	15	39	517	14
12	411	15	40	522	14
13	416	14	41	526	14
14	420	14	42	531	15
15	425	14	43	537	15
16	429	14	44	542	16
17	433	13	45	548	16
18	437	13	46	555	17
19	441	13	47	562	18
20	**445**	13	48	570	19
21	449	13	49	580	21
22	453	13	50	**591**	23
23	456	13	51	605	26
24	460	13	52	624	32
25	464	13	53	655	44
26	467	13	54	720	91
27	471	13			

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 443, 489, 587.

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Table 7.5.3.13
2009 Spring AIMS Raw Score to Scale Score Table
Reading CRT Grade 8

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	270	50	28	480	14
1	270	50	29	484	14
2	305	36	30	488	14
3	326	30	31	492	14
4	342	26	32	496	14
5	354	24	33	**501**	14
6	365	22	34	505	15
7	374	21	35	509	15
8	382	19	36	514	15
9	389	19	37	518	15
10	396	18	38	523	15
11	402	17	39	528	16
12	408	17	40	533	16
13	414	16	41	538	16
14	419	16	42	544	17
15	424	16	43	550	17
16	429	15	44	556	18
17	434	15	45	562	19
18	438	15	46	570	19
19	443	15	47	578	21
20	447	15	48	587	22
21	451	14	49	597	24
22	**456**	14	50	**610**	26
23	460	14	51	625	30
24	464	14	52	647	36
25	468	14	53	682	50
26	472	14	54	800	161
27	476	14			

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 452, 499, 602.

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Table 7.5.3.14
2009 Spring AIMS Raw Score to Scale Score Table
Reading CRT High School

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	500	34	28	665	12
1	500	34	29	669	13
2	506	32	30	672	13
3	525	26	31	**676**	13
4	539	23	32	680	13
5	551	21	33	684	13
6	560	20	34	687	13
7	569	18	35	691	13
8	576	17	36	695	13
9	583	17	37	699	13
10	589	16	38	703	13
11	595	15	39	708	14
12	600	15	40	712	14
13	605	15	41	717	14
14	610	14	42	722	15
15	614	14	43	727	15
16	619	14	44	733	16
17	623	13	45	739	16
18	**627**	13	46	745	17
19	631	13	47	752	18
20	635	13	48	760	19
21	639	13	49	769	21
22	643	13	50	**780**	23
23	647	13	51	794	26
24	650	13	52	813	31
25	654	13	53	844	44
26	658	13	54	900	82
27	661	12			

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 627, 674, 773.

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Table 7.5.3.15
2009 Spring AIMS Raw Score to Scale Score Table
Writing CRT Grade 3

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	200	216	19	445	15
1	200	216	20	457	15
2	200	216	21	468	15
3	200	216	22	480	15
4	200	216	23	492	16
5	200	216	24	505	15
6	200	216	25	517	14
7	309	17	26	529	13
8	323	15	27	536	13
9	**337**	14	28	544	12
10	344	14	29	552	12
11	355	14	30	**560**	12
12	366	14	31	568	13
13	376	14	32	577	14
14	386	14	33	588	15
15	397	14	34	602	19
16	408	15	35	634	37
17	**424**	16	36	650	54
18	433	16			

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 337, 424, 529.

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Table 7.4.3.16
2009 Spring AIMS Raw Score to Scale Score Table
Writing CRT Grade 4

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	230	253	19	481	15
1	230	253	20	493	14
2	230	253	21	503	14
3	230	253	22	514	15
4	230	253	23	526	16
5	230	253	24	540	16
6	230	253	25	553	15
7	332	20	26	565	14
8	349	16	27	**575**	14
9	**366**	15	28	585	13
10	373	15	29	594	13
11	386	16	30	603	13
12	399	16	31	613	13
13	413	16	32	622	14
14	425	15	33	633	14
15	436	14	34	644	16
16	446	14	35	661	21
17	**461**	15	36	700	51
18	470	15			

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 366, 461, 572.

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Table 7.5.3.17
2009 Spring AIMS Raw Score to Scale Score Table
Writing CRT Grade 5

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	255	126	19	511	16
1	255	126	20	523	16
2	255	126	21	535	16
3	255	126	22	548	16
4	255	126	23	561	17
5	255	126	24	575	16
6	255	126	25	586	15
7	355	18	26	597	15
8	369	16	27	607	14
9	382	16	28	**617**	14
10	**396**	17	29	627	14
11	410	17	30	637	14
12	424	17	31	647	15
13	437	16	32	658	16
14	449	16	33	672	18
15	461	16	34	692	24
16	473	16	35	740	68
17	486	16	36	740	68
18	**499**	16			

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 394, 497, 615.

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Table 7.5.3.18
2009 Spring AIMS Raw Score to Scale Score Table
Writing CRT Grade 6

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	275	117	19	517	17
1	275	117	20	530	17
2	275	117	21	543	16
3	275	117	22	555	16
4	275	117	23	568	17
5	275	117	24	582	18
6	275	117	25	598	18
7	327	36	26	613	17
8	359	20	27	**630**	15
9	375	17	28	637	15
10	389	17	29	647	15
11	**402**	17	30	658	15
12	418	19	31	668	15
13	435	19	32	679	15
14	451	17	33	690	15
15	464	16	34	701	16
16	477	16	35	715	19
17	489	16	36	760	43
18	**504**	17			

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 400, 504, 630.

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Table 7.5.3.19
2009 Spring AIMS Raw Score to Scale Score Table
Writing CRT Grade 7

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	290	105	19	521	18
1	290	105	20	538	18
2	290	105	21	553	16
3	290	105	22	565	15
4	290	105	23	577	15
5	290	105	24	589	15
6	290	105	25	601	16
7	290	105	26	613	15
8	347	28	27	624	14
9	371	19	28	633	13
10	386	16	29	**645**	12
11	399	16	30	649	12
12	**413**	17	31	656	12
13	431	20	32	663	12
14	450	19	33	671	12
15	467	17	34	679	13
16	480	16	35	689	15
17	493	16	36	770	85
18	**510**	17			

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 407, 510, 645.

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Table 7.5.3.20
2009 Spring AIMS Raw Score to Scale Score Table
Writing CRT Grade 8

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	300	50	19	538	16
1	300	50	20	550	16
2	300	50	21	563	17
3	300	50	22	578	18
4	300	50	23	594	18
5	300	50	24	608	16
6	300	50	25	620	15
7	364	17	26	630	14
8	377	16	27	638	13
9	390	17	28	647	13
10	404	17	29	655	13
11	**419**	17	30	**663**	13
12	433	17	31	672	14
13	446	16	32	683	15
14	458	16	33	696	18
15	471	17	34	719	28
16	488	19	35	800	182
17	507	20	36	800	182
18	**524**	18			

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 413, 517, 660.

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Table 7.5.3.21
2009 Spring AIMS Raw Score to Scale Score Table
Writing CRT High School Prompt A

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0.0	500	31	18.5	660	10
0.5	500	31	19.0	666	9
1.0	500	31	19.5	671	9
1.5	500	31	20.0	**678**	9
2.0	500	31	20.5	681	9
2.5	500	31	21.0	685	9
3.0	500	31	21.5	690	9
3.5	500	31	22.0	695	9
4.0	500	31	22.5	701	10
4.5	500	31	23.0	707	10
5.0	500	31	23.5	714	10
5.5	500	31	24.0	720	10
6.0	500	31	24.5	727	10
6.5	520	18	25.0	733	9
7.0	539	11	25.5	738	9
7.5	546	10	26.0	743	9
8.0	552	9	26.5	748	8
8.5	557	9	27.0	752	8
9.0	562	9	27.5	**754**	8
9.5	567	9	28.0	760	8
10.0	572	9	28.5	764	8
10.5	577	9	29.0	768	8
11.0	582	9	29.5	773	8
11.5	588	9	30.0	777	8
12.0	593	9	30.5	781	8
12.5	598	9	31.0	785	8
13.0	603	9	31.5	790	8
13.5	**610**	9	32.0	794	8
14.0	613	9	32.5	799	8
14.5	618	9	33.0	803	9
15.0	622	9	33.5	808	9
15.5	627	9	34.0	813	10
16.0	631	9	34.5	822	12
16.5	637	9	35.0	830	14
17.0	642	10	35.5	865	38
17.5	648	10	36.0	900	111
18.0	654	10			

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 610, 678, 754.

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Table 7.5.3.22
2009 Spring AIMS Raw Score to Scale Score Table
Writing CRT High School Prompt T

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0.00	500	31	18.50	655	10
0.50	500	31	19.00	662	9
1.00	500	31	19.50	668	9
1.50	500	31	20.00	673	9
2.00	500	31	20.50	**678**	9
2.50	500	31	21.00	683	9
3.00	500	31	21.50	688	9
3.50	500	31	22.00	693	9
4.00	500	31	22.50	699	9
4.50	500	31	23.00	705	10
5.00	500	31	23.50	712	10
5.50	500	31	24.00	720	10
6.00	501	30	24.50	728	10
6.50	513	21	25.00	735	9
7.00	526	15	25.50	741	9
7.50	534	13	26.00	747	8
8.00	540	11	26.50	752	8
8.50	546	10	27.00	**754**	8
9.00	551	9	27.50	760	8
9.50	556	9	28.00	765	8
10.00	561	9	28.50	769	8
10.50	566	9	29.00	773	8
11.00	571	9	29.50	777	8
11.50	577	9	30.00	781	8
12.00	583	9	30.50	786	8
12.50	589	9	31.00	790	8
13.00	595	9	31.50	794	8
13.50	600	9	32.00	798	8
14.00	605	9	32.50	803	9
14.50	**610**	9	33.00	807	9
15.00	615	9	33.50	812	10
15.50	620	9	34.00	817	11
16.00	625	9	34.50	823	12
16.50	630	9	35.00	831	14
17.00	636	9	35.50	844	20
17.50	642	10	36.00	900	111
18.00	649	10			

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 610, 678, 754.

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Table 7.5.3.23
2009 Spring AIMS Raw Score to Scale Score Table
Science CRT Grade 4

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	200	74	28	470	15
1	240	50	29	475	15
2	277	36	30	480	15
3	299	31	31	484	15
4	316	27	32	489	15
5	330	25	33	493	15
6	341	23	34	498	15
7	351	21	35	**503**	15
8	360	20	36	508	16
9	368	20	37	513	16
10	376	19	38	518	16
11	383	18	39	523	16
12	389	18	40	529	17
13	396	17	41	534	17
14	401	17	42	540	17
15	407	17	43	**547**	18
16	413	16	44	553	18
17	418	16	45	560	19
18	423	16	46	568	20
19	428	16	47	576	21
20	433	15	48	586	22
21	438	15	49	596	24
22	443	15	50	609	26
23	448	15	51	625	30
24	452	15	52	646	36
25	457	15	53	682	50
26	461	15	54	800	161
27	**466**	15			

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 462, 500, 547.

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Table 7.5.3.24
2009 Spring AIMS Raw Score to Scale Score Table
Science CRT Grade 8

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	200	86	30	**475**	14
1	256	49	31	478	14
2	291	35	32	482	14
3	313	29	33	486	14
4	328	26	34	490	14
5	341	23	35	494	14
6	351	22	36	498	14
7	361	20	37	**502**	14
8	369	19	38	507	14
9	376	19	39	511	14
10	383	18	40	515	15
11	389	17	41	520	15
12	395	17	42	524	15
13	401	16	43	529	15
14	406	16	44	**534**	16
15	411	16	45	539	16
16	416	15	46	545	17
17	421	15	47	551	17
18	426	15	48	557	18
19	430	15	49	564	18
20	434	14	50	571	19
21	439	14	51	579	20
22	443	14	52	588	22
23	447	14	53	599	23
24	451	14	54	611	26
25	455	14	55	627	29
26	459	14	56	648	35
27	463	14	57	684	49
28	467	14	58	800	159
29	471	14			

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 473, 500, 532.

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Table 7.5.3.25
2009 Spring AIMS Raw Score to Scale Score Table
Science CRT High School

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	200	67	33	465	14
1	226	53	34	469	14
2	264	38	35	473	14
3	287	31	36	**476**	14
4	303	28	37	480	14
5	316	25	38	484	14
6	328	23	39	488	14
7	337	22	40	492	14
8	346	21	41	496	14
9	354	20	42	**500**	14
10	361	19	43	504	15
11	367	18	44	508	15
12	374	18	45	512	15
13	379	17	46	516	15
14	385	17	47	521	15
15	390	16	48	525	16
16	395	16	49	530	16
17	400	16	50	535	16
18	405	15	51	**540**	17
19	409	15	52	545	17
20	414	15	53	551	17
21	418	15	54	557	18
22	422	15	55	563	19
23	426	15	56	570	19
24	431	14	57	578	20
25	435	14	58	586	21
26	438	14	59	596	23
27	442	14	60	607	25
28	446	14	61	620	27
29	450	14	62	636	31
30	454	14	63	658	38
31	458	14	64	696	53
32	461	14	65	800	141

Note. SEM is the standard error of measurement for the scale score.
Note. Cut scores for Approach the Standard, Meets the Standard, and Exceeds the Standard are 475, 500, 537.

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Table 7.5.3.26
2009 Spring AIMS NRT SEM Table
Grade 3

	Reading		Language		Mathematics	
Raw Score	Scale Score	IRT SEM	Scale Score	IRT SEM	Scale Score	IRT SEM
0	427	150	455	128	385	148
1	427	150	455	128	385	148
2	427	150	455	128	385	148
3	427	150	455	128	385	148
4	427	150	455	128	385	148
5	427	150	552	31	385	148
6	516	61	568	18	481	52
7	545	33	578	14	506	31
8	561	25	586	12	521	24
9	572	21	592	12	532	20
10	582	18	599	11	542	17
11	590	16	605	11	550	16
12	597	15	612	12	557	15
13	603	14	619	12	564	14
14	610	13	627	13	571	14
15	615	12	634	13	578	14
16	621	12	643	13	585	14
17	627	12	652	14	592	14
18	633	12	663	16	600	15
19	640	13	681	22	607	15
20	647	13	730	63	616	15
21	655	14			625	15
22	665	16			635	16
23	678	19			648	18
24	699	28			667	24
25	750	69			740	87

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Table 7.5.3.27
2009 Spring AIMS NRT SEM Table
Grade 4

	Reading		Language		Mathematics	
Raw Score	Scale Score	IRT SEM	Scale Score	IRT SEM	Scale Score	IRT SEM
0	433	142	465	130	403	161
1	433	142	465	130	403	161
2	433	142	465	130	403	161
3	433	142	465	130	403	161
4	433	142	490	105	403	161
5	465	110	561	34	403	161
6	544	34	579	22	508	56
7	564	25	590	18	536	34
8	576	21	599	16	552	25
9	586	18	608	15	564	21
10	593	15	615	14	574	18
11	600	14	622	14	582	17
12	606	12	629	13	589	16
13	611	12	636	13	596	15
14	616	11	644	14	603	14
15	621	10	652	14	610	14
16	626	10	661	15	616	14
17	630	10	672	17	623	14
18	635	10	686	20	629	13
19	641	11	709	29	636	14
20	647	11	757	66	644	14
21	653	12			653	15
22	662	14			663	17
23	673	17			678	22
24	692	25			704	34
25	780	102			770	90

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Table 7.5.3.28
2009 Spring AIMS NRT SEM Table
Grade 5

	Reading		Language		Mathematics	
Raw Score	Scale Score	IRT SEM	Scale Score	IRT SEM	Scale Score	IRT SEM
0	475	138	480	150	430	155
1	475	138	480	150	430	155
2	475	138	480	150	430	155
3	475	138	480	150	430	155
4	475	138	480	150	430	155
5	510	103	589	41	430	155
6	571	42	608	24	529	56
7	589	26	619	18	561	31
8	600	19	627	15	577	24
9	609	16	634	13	589	20
10	616	14	640	12	598	17
11	622	13	646	11	605	15
12	628	12	651	11	612	14
13	634	12	656	11	619	13
14	639	11	662	11	625	12
15	644	11	668	11	631	12
16	650	11	674	12	637	12
17	655	12	682	13	643	12
18	661	12	692	15	649	12
19	668	13	707	20	655	12
20	675	14	782	87	662	12
21	684	15			670	13
22	695	18			679	15
23	709	21			693	19
24	734	31			718	32
25	790	76			797	105

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Table 7.5.3.29
2009 Spring AIMS NRT SEM Table
Grade 6

	Reading		Language		Mathematics	
Raw Score	Scale Score	IRT SEM	Scale Score	IRT SEM	Scale Score	IRT SEM
0	486	120	495	135	477	143
1	486	120	495	135	477	143
2	486	120	495	135	477	143
3	486	120	495	135	477	143
4	486	120	495	135	477	143
5	486	120	590	40	477	143
6	562	44	608	22	544	76
7	582	27	619	16	583	39
8	595	20	626	13	600	28
9	604	17	633	12	613	22
10	613	15	639	11	622	19
11	620	15	644	11	630	17
12	627	14	650	11	637	15
13	633	14	656	11	644	14
14	639	14	662	12	650	13
15	646	14	669	12	655	12
16	652	13	677	13	661	12
17	658	13	686	15	667	12
18	665	13	697	17	673	12
19	672	14	715	23	679	13
20	679	14	808	106	686	13
21	688	16			694	15
22	699	18			704	17
23	713	22			718	20
24	737	31			740	29
25	800	82			820	98

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Table 7.5.3.30
2009 Spring AIMS NRT SEM Table
Grade 7

	Reading		Language		Mathematics	
Raw Score	Scale Score	IRT SEM	Scale Score	IRT SEM	Scale Score	IRT SEM
0	498	130	502	128	487	146
1	498	130	502	128	487	146
2	498	130	502	128	487	146
3	498	130	502	128	487	146
4	498	130	512	118	487	146
5	498	130	595	35	487	146
6	557	71	611	22	584	49
7	595	34	621	17	608	30
8	612	24	630	14	623	24
9	624	20	637	13	635	21
10	633	17	643	12	644	18
11	640	16	649	12	652	17
12	647	14	655	12	659	15
13	653	13	661	12	666	14
14	659	12	668	13	672	13
15	664	11	675	13	678	13
16	669	11	683	14	684	13
17	674	11	692	16	690	12
18	680	11	705	18	696	12
19	686	11	724	25	702	13
20	692	12	814	103	709	13
21	699	13			717	14
22	708	14			726	16
23	719	17			739	19
24	737	23			758	26
25	810	86			850	107

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Table 7.5.3.31
2009 Spring AIMS NRT SEM Table
Grade 8

	Reading		Language		Mathematics	
Raw Score	Scale Score	IRT SEM	Scale Score	IRT SEM	Scale Score	IRT SEM
0	507	111	523	115	502	140
1	507	111	523	115	502	140
2	507	111	523	115	502	140
3	507	111	523	115	502	140
4	507	111	523	115	502	140
5	507	111	591	47	502	140
6	541	77	615	25	576	66
7	581	38	628	18	607	37
8	599	27	638	15	624	27
9	612	21	645	13	637	23
10	622	18	653	13	648	21
11	630	16	659	12	658	19
12	638	15	666	13	666	18
13	645	14	673	13	674	17
14	652	14	681	13	682	17
15	659	14	688	13	690	16
16	665	14	696	13	697	15
17	672	14	704	13	704	15
18	679	14	714	14	712	15
19	687	14	729	19	720	15
20	695	15	819	100	728	16
21	704	16			737	16
22	714	17			748	18
23	729	21			763	22
24	753	31			788	32
25	820	89			872	107

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Part 8: Test Results

8.1 Data

Part 8 of this technical report contains information about the results of the 2009 Spring administration of AIMS DPA and AIMS High School. The first section provides information on the CRT scores from the AIMS assessments. The second section provides information on the NRT scores from AIMS DPA. The AERA/APA/NCME standards addressed in Part 8 include: 1.5, 4.3, 4.5, 4.6, 4.7, 6.35, 7.1, 7.10, 13.15, and 13.19. Please note that the corresponding information for the 2008 Fall AIMS administration can be found in Appendix A.

Results presented below are based on population data contained within the final electronic data files. The results presented in this part of the technical report may differ slightly from final testing results presented on the Arizona Department of Education website due to slight differences in the application of exclusion rules. Official final results typically use more detailed school-level information than is used to conduct research analyses. The results in the following tables are presented as evidence of reliability and validity of the AIMS assessments and should not be used for state accountability purposes.

8.1.1 AIMS CRT State Test Results

The AIMS CRT test results for Mathematics, Reading, and Writing are each on a vertical scale for grades 3-8. Development of the vertical scale is described in section 7.2.1 of the 2005 AIMS Technical Report. The AIMS CRT grades 3-8 vertical scale runs from a lowest obtainable scale score (LOSS) of 200 to a highest obtainable scale score (HOSS) of 800. The AIMS high school assessments for Mathematics, Reading, and Writing are each on a separate scale where the LOSS is 500 and the HOSS is 900. The LOSS and HOSS values for each grade/subject can be found in Table 8.1.1.1.

The test results for AIMS Science grade 4, 8, and high school are not on a vertical scale so that scale scores across grades can not be compared. For each grade, the lowest obtainable scale score (LOSS) is 200, and the highest obtainable scale score (HOSS) is 800. The LOSS and HOSS values for each grade can be found in Table 8.1.1.1.

Test results for each grade level and content area CRT test follow in Tables 8.1.1.2 through 8.1.1.9. For each grade, scale score means and standard deviations as well as the percentages of students in each performance level are presented for the state as a whole and disaggregated into various demographic groups. Disaggregated results were produced for the various groups by using demographic data on student answer documents.

In addition to the descriptive statistics presented in Tables 8.1.1.2 through 8.1.1.9, scale score frequency distributions are also presented in Tables 8.1.1.10 through 8.1.1.36. Each grade and content area is presented in a separate table. These tables show the scale score, frequency (Freq), cumulative frequency (Cum Freq), percentage (%), and cumulative percentage (Cum %).

Results for AIMS high school assessments are reported by graduating cohort. Cohort 11 is defined as the group of students that expect to graduate in 2011 and typically includes 10th grade students. Cohort 10 is defined as the group of students that expect to graduate in 2010 and typically includes 11th grade students. Cohort 09 is defined as the group of students that expect to graduate in 2009 and is typically comprised of seniors.

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Table 8.1.1.1
2009 Spring AIMS LOSS and HOSS Table

Content	Grade	Loss	Hoss
Reading	3	200	640
	4	220	660
	5	240	675
	6	250	690
	7	260	720
	8	270	800
	HS*	500	900
Mathematics	3	200	650
	4	230	675
	5	255	700
	6	270	725
	7	290	740
	8	300	800
	HS*	500	900
Writing	3	200	650
	4	230	700
	5	255	740
	6	275	760
	7	290	770
	8	300	800
	HS*	500	900
Science	4	200	800
	8	200	800
	HS**	200	800

*HS Tests are not on the same scale as G3-8 tests. Scale Scores are therefore not comparable between the HS and G3-8 tests. **Science scale scores are not comparable between grades.

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Table 8.1.1.2
2009 Spring AIMS State Test Results
Mathematics CRT Grades 3-8

		Scale Score		% at Performance Level			
	N	M	SD	FFBS	AS	MS	ES
Grade 3							
Total	82967	451.59	49.8	9	19	53	20
Ethnic Background							
White	35740	468.44	49.55	5	11	53	31
Black	4894	434.83	46.94	15	24	49	12
Hispanic	35489	438.23	44.6	11	24	53	11
American Indian	4215	426.17	41.45	16	30	48	6
Asian	2499	476.66	53.03	5	9	48	38
Speecial Program Membership							
Title1	11631	436.51	44.32	12	26	52	11
English Learner Program	11621	417.64	38.47	20	35	42	3
Special Education	9057	419.14	50.65	28	28	35	9
Grade 4							
Total	82333	487.57	57.43	10	16	46	28
Ethnic Background							
White	35415	506.16	55.81	5	10	45	40
Black	4802	468.24	54.73	17	20	46	17
Hispanic	35084	472.81	52.89	13	20	48	19
American Indian	4413	458.89	50.36	19	26	43	12
Asian	2520	519.99	60.54	5	8	37	50
Speecial Program Membership							
Title1	10806	471.13	51.86	13	22	48	17
English Learner Program	10480	443.55	43.42	25	32	38	5
Special Education	9508	444	55.43	34	26	30	10
Grade 5							
Total	81055	508.88	54.85	10	18	49	23
Ethnic Background							
White	35465	526.44	55.17	6	11	49	34
Black	4870	489.96	49.72	17	23	47	13
Hispanic	33961	494.35	48.3	13	23	50	14
American Indian	4237	481.19	46.73	21	28	42	9
Asian	2427	542.53	61.69	6	7	40	47
Speecial Program Membership							
Title1	10375	494.22	49.68	14	23	49	14
English Learner Program	7740	461.79	36.92	32	35	30	2
Special Education	9551	464.32	48.03	38	27	28	7

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, and students attending state hospital schools are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes.

(table continues)

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Table 8.1.1.2 (continued)
2009 Spring AIMS State Test Results
Mathematics CRT Grades 3-8

		Scale Score		% at Performance Level			
	N	M	SD	FFBS	AS	MS	ES
Grade 6							
Total	80828	525.79	61.04	16	16	47	21
Ethnic Background							
White	35676	544.85	61.5	9	11	48	31
Black	4747	505.93	55.79	25	19	45	12
Hispanic	33743	509.59	54.06	21	20	47	12
American Indian	4135	495.89	50.37	29	24	40	7
Asian	2432	561.95	68.69	8	8	41	43
Speecial Program Membership							
Title1	9485	507.36	54.39	23	21	45	11
English Learner Program	6178	470.41	41.07	49	26	24	2
Special Education	9138	468.87	50.61	55	20	21	4
Grade 7							
Total	81167	553.44	55.99	11	15	54	19
Ethnic Background							
White	36715	570.11	55.82	7	10	55	28
Black	4738	534.4	50.57	17	20	54	9
Hispanic	32889	538.65	50.13	15	20	54	11
American Indian	4289	525.83	48.04	21	24	49	7
Asian	2411	589.02	62.58	5	6	46	42
Speecial Program Membership							
Title1	8447	536.06	50.79	16	22	52	10
English Learner Program	5943	498.7	38.13	39	32	28	1
Special Education	8666	496.55	46.39	47	25	25	3
Grade 8							
Total	79642	560.51	60.39	18	19	48	15
Ethnic Background							
White	36345	579.3	59.63	10	14	53	23
Black	4717	539.05	55.5	27	24	41	7
Hispanic	31898	542.74	53.55	24	24	44	8
American Indian	4111	532.87	50.01	30	28	37	5
Asian	2483	601.15	70.52	8	10	46	36
Speecial Program Membership							
Title1	8301	538.9	53.42	27	25	41	7
English Learner Program	5457	501.17	41.14	57	25	16	1
Special Education	8600	500.11	47.33	60	21	17	2

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, and students attending state hospital schools are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes.

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Table 8.1.1.3
2009 Spring AIMS State Test Results
Mathematics CRT High School

Group	N	Scale Score M	Scale Score SD	% at Performance Level FFBS	AS	MS	ES
Cohort 11							
Total	75078	707.36	45.74	21	10	53	17
Ethnic Background							
White	35217	722.14	45.74	12	7	56	25
Black	4557	691.18	40.59	31	12	48	8
Hispanic	28520	693	39.14	28	13	51	8
American Indian	4400	682.74	36.05	38	15	43	4
Asian	2329	738.77	53.36	9	5	46	40
Speecial Program Membership							
Title1	3142	677.29	33.18	43	17	39	2
English Learner Program	3646	661.97	27.45	63	16	20	1
Special Education	6775	658.93	30.14	70	11	18	1
Cohert 10							
Total	18862	674.45	33.65	47	19	29	4
Ethnic Background							
White	5799	684.26	39.83	38	17	36	8
Black	1555	668.4	29.03	54	19	25	2
Hispanic	9234	670.03	28.86	51	21	27	2
American Indian	1872	666.31	26.08	56	20	23	1
Asian	359	699.26	44.81	28	14	41	16
Speecial Program Membership							
Title1	1396	666.2	25.33	55	21	24	1
English Learner Program	1934	658.78	22.2	68	17	14	0
Special Education	3849	652.3	22.12	78	13	9	0
Cohort 9							
Total	8512	664.24	25.2	58	21	21	1
Ethnic Background							
White	2234	665.67	28.27	57	20	23	1
Black	799	660.06	24.25	64	20	16	0
Hispanic	4228	664.1	24.01	58	21	20	0
American Indian	1086	663.55	21.08	58	23	19	0
Asian	135	676.55	36.37	46	14	36	4
Speecial Program Membership							
Title1	736	666.82	25.75	54	22	23	1
English Learner Program	1007	658.92	21.84	68	18	13	0
Special Education	2358	648.7	19.14	84	11	5	0

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes. High school results are not on the same scale as grade 3-8 results.

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Table 8.1.1.4
2009 Spring AIMS State Test Results
Reading CRT Grades 3-8

Group	N	Scale Score M	Scale Score SD	% at Performance Level FFBS	AS	MS	ES
Grade 3							
Total	83003	459.5	52.41	6	22	58	14
Ethnic Background							
White	35755	477.75	51.12	3	13	61	22
Black	4897	448.01	50.24	9	27	55	9
Hispanic	35509	444.18	47.93	9	29	55	7
American Indian	4215	434.37	45.05	11	35	50	4
Asian	2497	481.61	52.78	4	12	59	25
Speecial Program Membership							
Title1	11644	441.62	47.34	9	32	53	6
English Learner Program	11631	417.74	40.8	17	45	36	1
Special Education	9063	417.16	53.44	27	36	31	5
Grade 4							
Total	82366	477.47	51.15	8	20	60	12
Ethnic Background							
White	35433	496	49.15	4	11	66	18
Black	4803	464.2	49.37	13	24	56	7
Hispanic	35096	462.21	47.07	12	27	56	6
American Indian	4416	452.93	43.71	13	33	50	3
Asian	2519	498.32	52.01	5	10	64	21
Speecial Program Membership							
Title1	10810	460.86	46.79	12	28	55	5
English Learner Program	10481	431.94	36.43	23	45	32	0
Special Education	9520	434.25	51.93	34	30	32	4
Greade 5							
Total	81068	496.32	48.63	8	18	63	11
Ethnic Background							
White	35470	513.34	46.92	4	11	67	18
Black	4869	483.43	46.18	12	23	60	6
Hispanic	33966	482.01	44.69	12	24	59	5
American Indian	4240	472.39	43.04	14	31	51	4
Asian	2428	516.05	49.28	5	9	66	20
Speecial Program Membership							
Title1	10381	481.67	45.68	12	25	58	5
English Learner Program	7741	445.77	34.84	30	43	27	0
Special Education	9557	450.67	47.15	36	32	30	3

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, and students attending state hospital schools are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes.

(table continues)

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Table 8.1.1.4 (continued)
2009 Spring AIMS State Test Results
Reading CRT Grades 3-8

Group	N	Scale Score M	Scale Score SD	% at Performance Level FFBS	AS	MS	ES
Grade 6							
Total	80840	501.4	48.34	9	21	65	5
Ethnic Background							
White	35678	518.99	46.08	4	13	74	9
Black	4747	488.63	45.42	12	26	60	2
Hispanic	33746	486.03	44.27	12	29	57	2
American Indian	4141	477.99	42.35	14	35	49	1
Asian	2433	522.44	51.5	6	12	70	12
Speecial Program Membership							
Title1	9490	484.5	44.88	13	31	54	2
English Learner Program	6180	444.92	33.99	38	44	17	0
Special Education	9139	453.5	45.78	38	34	27	1
Grade 7							
Total	81186	517.25	49.55	8	20	65	8
Ethnic Background							
White	36719	533.15	47.71	4	12	71	12
Black	4736	505.97	47.23	10	24	61	4
Hispanic	32899	502.49	45.91	11	26	59	3
American Indian	4294	494.57	43.94	14	31	54	2
Asian	2412	539.82	52.46	5	10	68	17
Speecial Program Membership							
Title1	8439	501.3	46.39	12	27	58	4
English Learner Program	5950	459.63	32.76	33	47	19	0
Special Education	8683	465.55	43.53	36	36	26	1
Grade 8							
Total	79667	527.42	57.23	10	21	60	9
Ethnic Background							
White	36361	546.23	56.21	5	13	68	14
Black	4715	513.22	53.19	14	25	57	4
Hispanic	31916	509.47	51.42	15	28	54	4
American Indian	4105	500.58	48.05	17	34	46	3
Asian	2482	554.61	62.42	6	11	63	19
Speecial Program Membership							
Title1	8301	508.82	52.52	15	28	52	4
English Learner Program	5461	462.34	35.68	44	40	15	0
Special Education	8595	468.37	44.8	43	34	22	1

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, and students attending state hospital schools are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes.

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Table 8.1.1.5
2009 Spring AIMS State Test Results
Reading CRT High School

		Scale Score		% at Performance Level			
	N	M	SD	FFBS	AS	MS	ES
Cohort 11							
Total	75524	706.49	50.47	6	20	66	8
Ethnic Background							
White	35373	724.95	47.99	3	11	73	13
Black	4555	691.16	46.76	9	26	62	3
Hispanic	28783	688.9	45.14	8	29	60	3
American Indian	4409	677.22	42.8	11	37	50	2
Asian	2319	729.98	54.54	4	12	64	20
Speecial Program Membership							
Title1	3087	675.15	42.62	13	37	48	2
English Learner Program	3519	643.36	32	31	53	17	0
Special Education	6803	651.53	39.91	28	46	26	1
Cohort 10							
Total	16789	683	55.61	13	38	41	7
Ethnic Background							
White	5516	711.75	61.14	9	23	52	16
Black	1145	667.92	49.4	19	42	35	4
Hispanic	8004	667.43	44.8	15	47	35	2
American Indian	1502	659.41	39.23	17	54	27	1
Asian	573	717.38	55.65	5	21	58	16
Speecial Program Membership							
Title1	1134	658.49	37.41	19	50	30	1
English Learner Program	2060	644.64	30.02	27	58	15	0
Special Education	3227	641.66	32.7	32	52	15	0
Cohort 9							
Total	5948	655.11	38.37	21	53	25	1
Ethnic Background							
White	1286	663.04	48.75	22	43	33	2
Black	501	649.68	37.5	28	49	22	0
Hispanic	3226	653.23	33.98	20	56	23	0
American Indian	778	651.36	31.93	20	59	21	0
Asian	130	667.88	46.39	18	45	33	3
Speecial Program Membership							
Title1	532	662.36	35.09	14	53	33	0
English Learner Program	1044	646.73	29.78	24	61	16	0
Special Education	1851	635.55	29.87	38	53	9	0

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes. High school results are not on the same scale as grade 3-8 results.

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Table 8.1.1.6
2009 Spring AIMS State Test Results
Writing CRT Grades 3-8

Group	N	Scale Score M	Scale Score SD	% at Performance Level FFBS	AS	MS	ES
Grade 3							
Total	82848	444.13	67.3	4	17	73	6
Ethnic Background							
White	35688	456.17	62.68	3	13	76	8
Black	4873	433.28	74.15	6	20	70	4
Hispanic	35483	434.57	67.49	5	20	71	3
American Indian	4184	424.33	72.63	7	25	66	2
Asian	2491	463.23	70.3	4	9	74	13
Speecial Program Membership							
Title1	11635	430.78	69.27	5	22	69	3
English Learner Program	11608	411.21	72.29	8	31	60	1
Special Education	9029	390.53	86.21	14	39	46	1
Grade 4							
Total	82344	484.05	54.23	2	15	80	3
Ethnic Background							
White	35413	494.63	51.71	1	11	83	5
Black	4804	474.65	58.01	3	19	76	2
Hispanic	35101	474.87	53.47	2	18	78	1
American Indian	4410	472.16	55.57	3	20	76	2
Asian	2518	502.91	55.79	2	8	82	9
Speecial Program Membership							
Title1	10811	472.71	54.1	2	20	76	1
English Learner Program	10487	454.5	58.2	4	30	65	0
Special Education	9508	438.32	71.38	8	40	51	1
Greade 5							
Total	81031	523.74	64.14	3	17	76	3
Ethnic Background							
White	35450	537.19	59.47	2	12	81	5
Black	4867	513.38	69.88	5	21	72	2
Hispanic	33962	512.46	63.37	4	22	73	2
American Indian	4233	500.68	70.36	6	27	66	1
Asian	2425	546.74	68.91	3	9	79	9
Speecial Program Membership							
Title1	10382	509.99	64.15	4	23	71	2
English Learner Program	7738	471.91	72.5	11	39	50	0
Special Education	9528	461.38	81.4	16	41	42	1

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, and students attending state hospital schools are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes.

(table continues)

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Table 8.1.1.6 (continued)
2009 Spring AIMS State Test Results
Writing CRT Grades 3-8

Group	N	Scale Score M	Scale Score SD	% at Performance Level FFBS	AS	MS	ES
Greade 6							
Total	80821	537.75	59.72	2	12	79	7
Ethnic Background							
White	35671	549.75	56.9	1	9	80	11
Black	4740	529.54	62.91	3	15	77	5
Hispanic	33760	527.28	58.32	3	15	78	4
American Indian	4133	518.55	62.58	4	17	76	3
Asian	2424	557.16	66.53	3	6	76	15
Speecial Program Membership							
Title1	9501	524.06	60.04	3	17	76	4
English Learner Program	6182	484.55	67.75	8	35	56	1
Special Education	9128	477.92	71.46	11	38	50	1
Grade 7							
Total	81252	541.43	64.34	3	14	80	3
Ethnic Background							
White	36732	555.65	59.95	2	10	83	5
Black	4740	532.38	67.17	4	17	78	2
Hispanic	32933	527.96	63.87	4	19	76	1
American Indian	4316	518.92	64.41	4	22	73	1
Asian	2408	568.16	71.12	3	6	79	11
Speecial Program Membership							
Title1	8457	527.03	65.03	4	19	76	1
English Learner Program	5942	476.31	72.32	12	39	49	0
Special Education	8668	472.44	77.05	14	40	45	0
Greade 8							
Total	79750	563.75	62.71	2	12	83	3
Ethnic Background							
White	36391	578.52	57.38	1	8	87	5
Black	4723	553.25	66.39	3	14	81	2
Hispanic	31945	549.05	63.13	3	16	80	1
American Indian	4122	544.3	62.29	3	17	79	1
Asian	2479	589.58	65.5	2	6	82	10
Speecial Program Membership							
Title1	8325	546.96	65.29	3	17	79	1
English Learner Program	5449	495.57	71.83	11	37	53	0
Special Education	8593	494.97	73.01	12	37	51	0

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Table 8.1.1.7
2009 Spring AIMS State Test Results
Writing CRT High School

Group	N	Scale Score M	Scale Score SD	% at Performance Level FFBS	AS	MS	ES
Cohort 11							
Total	75392	695.98	45.31	3	25	64	7
Ethnic Background							
White	35354	708.15	41.09	2	17	71	10
Black	4555	687.75	48.1	5	30	61	5
Hispanic	28702	684.28	44.43	5	34	58	4
American Indian	4376	673.07	45.39	7	42	49	2
Asian	2321	715.83	50.35	3	13	67	17
Speecial Program Membership							
Title1	3073	670.63	45.57	7	43	48	2
English Learner Program	3492	635.66	49.92	21	60	18	0
Special Education	6740	644.38	47.79	18	58	24	1
Cohort 10							
Total	17569	674.13	51.02	8	44	42	5
Ethnic Background							
White	6417	693.19	51.35	5	31	54	10
Black	1154	664.03	50.54	10	48	39	3
Hispanic	7974	662.5	45.61	9	54	35	2
American Indian	1500	654.34	46.24	13	56	30	1
Asian	479	700.86	54.61	4	24	58	13
Speecial Program Membership							
Title1	1050	653.43	43.45	11	60	28	1
English Learner Program	1937	635.85	44.49	19	65	16	0
Special Education	3376	636.61	43.76	21	64	15	0
Cohort 9							
Total	5514	649.43	45.05	13	61	25	1
Ethnic Background							
White	1431	656.84	48.85	12	56	30	2
Black	411	643	49.23	20	57	22	1
Hispanic	2877	647.3	41.59	13	65	22	0
American Indian	656	645.04	43.92	15	63	22	0
Asian	114	658.42	55.72	15	45	39	2
Speecial Program Membership							
Title1	427	654.67	45.11	11	59	29	1
English Learner Program	925	634.82	43.4	19	68	14	0
Special Education	1804	630.31	41.97	23	67	10	0

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Table 8.1.1.8
2009 Spring AIMS State Test Results
Science CRT Grades 4 and 8

		Scale Score		% at Performance Level			
	N	M	SD	FFBS	AS	MS	ES
Grade 4							
Total	81724	508.19	50.47	17	26	36	21
Ethnic Background							
White	35125	529.07	47.49	8	17	42	33
Black	4757	493.39	48.32	24	32	32	12
Hispanic	34808	490.82	45.26	25	33	32	9
American Indian	4370	482.39	42.93	30	36	28	6
Asian	2508	531.16	52.54	9	16	39	36
Grade 8							
Total	78703	506.43	49.97	26	19	23	32
Ethnic Background							
White	35919	525.47	47.66	14	15	25	47
Black	4661	491.28	46.75	35	23	22	20
Hispanic	31432	488.53	44.62	37	23	23	17
American Indian	4017	479.74	41.16	44	26	19	11
Asian	2471	531.3	50.2	13	11	22	54

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes. High school results are not on the same scale as grade 3-8 results.

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Table 8.1.1.9
2009 Spring AIMS State Test Results
Science CRT High School

					Scale Score		% at Performance Level			
Cohort	Content	Grade	Group	N	M	SD	FFBS	AS	MS	ES
			Cohort 11							
11	SC	HS	Total	51195	475.75	49.65	50	18	22	11
			Ethnic Background							
11	SC	HS	White	21328	494.83	50.33	33	19	30	19
11	SC	HS	Black	3460	462.56	46.02	61	18	16	6
11	SC	HS	Hispanic	21399	461.15	43.21	62	18	16	4
11	SC	HS	American Indian	3506	454.84	39.46	70	17	11	2
11	SC	HS	Asian	1422	494.19	54.86	35	17	28	20
			Cohort 12							
12	SC	HS	Total	18998	507.16	52.76	27	16	30	27
			Ethnic Background							
12	SC	HS	White	11895	517.53	50.07	18	15	33	33
12	SC	HS	Black	768	489.26	48.46	38	19	27	16
12	SC	HS	Hispanic	4765	482.45	48.84	44	19	24	13
12	SC	HS	American Indian	590	474.39	45.48	55	18	19	8
12	SC	HS	Asian	879	536.6	53.05	12	11	30	47

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes. High school results are not on the same scale as grade 3-8 results.

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Table 8.1.1.10
2009 Spring AIMS Frequency Distribution
Mathematics CRT Grade 3

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	200	0	0.00	0	0.00	37	399	1094	1.32	13177	15.88
1	200	0	0.00	0	0.00	38	402	1127	1.36	14304	17.24
2	225	0	0.00	0	0.00	39	405	1204	1.45	15508	18.69
3	244	0	0.00	0	0.00	40	408	1294	1.56	16802	20.25
4	258	0	0.00	0	0.00	41	411	1377	1.66	18179	21.91
5	269	1	0.00	1	0.00	42	413	1370	1.65	19549	23.56
6	279	0	0.00	1	0.00	43	416	1497	1.80	21046	25.37
7	287	0	0.00	1	0.00	44	419	1522	1.83	22568	27.20
8	294	0	0.00	1	0.00	**45**	**422**	**1750**	**2.11**	**24318**	**29.31**
9	301	3	0.00	4	0.00	46	425	1690	2.04	26008	31.35
10	306	2	0.00	6	0.01	47	428	1799	2.17	27807	33.52
11	312	4	0.00	10	0.01	48	431	1809	2.18	29616	35.70
12	317	8	0.01	18	0.02	49	434	1891	2.28	31507	37.98
13	322	20	0.02	38	0.05	50	437	2040	2.46	33547	40.43
14	326	35	0.04	73	0.09	51	440	2033	2.45	35580	42.88
15	330	66	0.08	139	0.17	52	443	2146	2.59	37726	45.47
16	334	85	0.10	224	0.27	53	447	2376	2.86	40102	48.33
17	338	129	0.16	353	0.43	54	450	2305	2.78	42407	51.11
18	342	167	0.20	520	0.63	55	454	2312	2.79	44719	53.90
19	346	194	0.23	714	0.86	56	457	2461	2.97	47180	56.87
20	349	237	0.29	951	1.15	57	461	2491	3.00	49671	59.87
21	353	352	0.42	1303	1.57	58	465	2582	3.11	52253	62.98
22	356	364	0.44	1667	2.01	59	469	2716	3.27	54969	66.25
23	359	435	0.52	2102	2.53	60	474	2723	3.28	57692	69.54
24	362	473	0.57	2575	3.10	61	478	2922	3.52	60614	73.06
25	365	573	0.69	3148	3.79	62	483	2753	3.32	63367	76.38
26	368	566	0.68	3714	4.48	63	489	2795	3.37	66162	79.74
27	371	637	0.77	4351	5.24	**64**	**495**	**2828**	**3.41**	**68990**	**83.15**
28	374	584	0.70	4935	5.95	65	501	2671	3.22	71661	86.37
29	377	717	0.86	5652	6.81	66	509	2558	3.08	74219	89.46
30	380	732	0.88	6384	7.69	67	517	2404	2.90	76623	92.35
31	383	833	1.00	7217	8.70	68	527	2145	2.59	78768	94.94
32	**386**	**905**	**1.09**	**8122**	**9.79**	69	540	1735	2.09	80503	97.03
33	388	923	1.11	9045	10.90	70	558	1369	1.65	81872	98.68
34	391	969	1.17	10014	12.07	71	588	806	0.97	82678	99.65
35	394	1010	1.22	11024	13.29	72	650	289	0.35	82967	100.00
36	397	1059	1.28	12083	14.56						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.11
2009 Spring AIMS Frequency Distribution
Mathematics CRT Grade 4

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	230	0	0.00	0	0.00	36	423	963	1.17	11792	14.32
1	230	0	0.00	0	0.00	37	426	1005	1.22	12797	15.54
2	248	0	0.00	0	0.00	38	429	989	1.20	13786	16.74
3	267	0	0.00	0	0.00	39	432	1130	1.37	14916	18.12
4	281	0	0.00	0	0.00	40	435	1091	1.33	16007	19.44
5	292	0	0.00	0	0.00	41	438	1213	1.47	17220	20.92
6	302	1	0.00	1	0.00	42	441	1309	1.59	18529	22.50
7	310	0	0.00	1	0.00	43	444	1284	1.56	19813	24.06
8	317	0	0.00	1	0.00	44	447	1390	1.69	21203	25.75
9	323	4	0.00	5	0.01	**45**	**450**	**1537**	**1.87**	**22740**	**27.62**
10	329	5	0.01	10	0.01	46	454	1483	1.80	24223	29.42
11	335	7	0.01	17	0.02	47	457	1577	1.92	25800	31.34
12	340	15	0.02	32	0.04	48	460	1726	2.10	27526	33.43
13	345	35	0.04	67	0.08	49	464	1713	2.08	29239	35.51
14	349	55	0.07	122	0.15	50	467	1813	2.20	31052	37.72
15	353	78	0.09	200	0.24	51	471	2013	2.44	33065	40.16
16	358	121	0.15	321	0.39	52	475	2097	2.55	35162	42.71
17	362	158	0.19	479	0.58	53	478	2235	2.71	37397	45.42
18	365	206	0.25	685	0.83	54	482	2308	2.80	39705	48.22
19	369	285	0.35	970	1.18	55	487	2423	2.94	42128	51.17
20	373	327	0.40	1297	1.58	56	491	2613	3.17	44741	54.34
21	376	360	0.44	1657	2.01	57	496	2583	3.14	47324	57.48
22	**380**	**418**	**0.51**	**2075**	**2.52**	58	500	2742	3.33	50066	60.81
23	383	483	0.59	2558	3.11	59	505	2750	3.34	52816	64.15
24	386	482	0.59	3040	3.69	60	511	2962	3.60	55778	67.75
25	390	545	0.66	3585	4.35	61	517	3200	3.89	58978	71.63
26	393	586	0.71	4171	5.07	**62**	**523**	**3400**	**4.13**	**62378**	**75.76**
27	396	593	0.72	4764	5.79	63	531	3351	4.07	65729	79.83
28	399	640	0.78	5404	6.56	64	539	3330	4.04	69059	83.88
29	402	677	0.82	6081	7.39	65	548	3348	4.07	72407	87.94
30	405	744	0.90	6825	8.29	66	559	3111	3.78	75518	91.72
31	408	744	0.90	7569	9.19	67	573	2797	3.40	78315	95.12
32	411	769	0.93	8338	10.13	68	593	2122	2.58	80437	97.70
33	414	789	0.96	9127	11.09	69	625	1334	1.62	81771	99.32
34	417	820	1.00	9947	12.08	70	675	562	0.68	82333	100.00
35	420	882	1.07	10829	13.15						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.12
2008 Spring AIMS Frequency Distribution
Mathematics CRT Grade 5

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	255	0		0	0.00	35	462	1272	1.57	17259	21.29
1	274	0	0.00	0	0.00	36	465	1261	1.56	18520	22.85
2	303	0	0.00	0	0.00	37	468	1409	1.74	19929	24.59
3	321	0	0.00	0	0.00	38	470	1371	1.69	21300	26.28
4	334	0	0.00	0	0.00	39	473	1426	1.76	22726	28.04
5	344	0	0.00	0	0.00	**40**	**476**	**1532**	**1.89**	**24258**	**29.93**
6	353	0	0.00	0	0.00	41	479	1488	1.84	25746	31.76
7	360	1	0.00	1	0.00	42	482	1606	1.98	27352	33.74
8	367	5	0.01	6	0.01	43	484	1635	2.02	28987	35.76
9	373	8	0.01	14	0.02	44	487	1656	2.04	30643	37.81
10	378	17	0.02	31	0.04	45	490	1773	2.19	32416	39.99
11	383	33	0.04	64	0.08	46	493	1795	2.21	34211	42.21
12	388	81	0.10	145	0.18	47	496	1851	2.28	36062	44.49
13	392	92	0.11	237	0.29	48	500	1944	2.40	38006	46.89
14	397	159	0.20	396	0.49	49	503	2082	2.57	40088	49.46
15	401	241	0.30	637	0.79	50	506	2005	2.47	42093	51.93
16	404	288	0.36	925	1.14	51	510	2015	2.49	44108	54.42
17	408	383	0.47	1308	1.61	52	513	2149	2.65	46257	57.07
18	412	413	0.51	1721	2.12	53	517	2200	2.71	48457	59.78
19	415	540	0.67	2261	2.79	54	521	2177	2.69	50634	62.47
20	418	590	0.73	2851	3.52	55	525	2218	2.74	52852	65.21
21	422	665	0.82	3516	4.34	56	529	2268	2.80	55120	68.00
22	425	688	0.85	4204	5.19	57	534	2319	2.86	57439	70.86
23	428	732	0.90	4936	6.09	58	539	2457	3.03	59896	73.90
24	431	849	1.05	5785	7.14	59	544	2419	2.98	62315	76.88
25	434	880	1.09	6665	8.22	**60**	**550**	**2456**	**3.03**	**64771**	**79.91**
26	437	894	1.10	7559	9.33	61	556	2436	3.01	67207	82.92
27	440	916	1.13	8475	10.46	62	563	2536	3.13	69743	86.04
28	**443**	**929**	**1.15**	**9404**	**11.60**	63	572	2495	3.08	72238	89.12
29	445	1014	1.25	10418	12.85	64	582	2366	2.92	74604	92.04
30	448	1038	1.28	11456	14.13	65	594	2346	2.89	76950	94.94
31	451	1071	1.32	12527	15.45	66	612	1955	2.41	78905	97.35
32	454	1125	1.39	13652	16.84	67	641	1439	1.78	80344	99.12
33	457	1150	1.42	14802	18.26	68	700	711	0.88	81055	100.00
34	459	1185	1.46	15987	19.72						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.13
2009 Spring AIMS Frequency Distribution
Mathematics CRT Grade 6

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	270	0	0.00	0	0.00	35	471	1138	1.41	16343	20.22
1	270	1	0.00	1	0.00	36	474	1295	1.60	17638	21.82
2	295	0	0.00	1	0.00	37	477	1232	1.52	18870	23.35
3	315	0	0.00	1	0.00	38	480	1374	1.70	20244	25.05
4	329	1	0.00	2	0.00	39	484	1363	1.69	21607	26.73
5	341	0	0.00	2	0.00	40	487	1399	1.73	23006	28.46
6	350	0	0.00	2	0.00	41	490	1433	1.77	24439	30.24
7	359	3	0.00	5	0.01	42	493	1430	1.77	25869	32.00
8	366	6	0.01	11	0.01	**43**	**496**	**1501**	**1.86**	**27370**	**33.86**
9	373	10	0.01	21	0.03	44	499	1597	1.98	28967	35.84
10	379	21	0.03	42	0.05	45	503	1661	2.05	30628	37.89
11	384	46	0.06	88	0.11	46	506	1658	2.05	32286	39.94
12	390	71	0.09	159	0.20	47	509	1788	2.21	34074	42.16
13	394	107	0.13	266	0.33	48	513	1874	2.32	35948	44.47
14	399	149	0.18	415	0.51	49	516	1937	2.40	37885	46.87
15	404	206	0.25	621	0.77	50	520	1897	2.35	39782	49.22
16	408	275	0.34	896	1.11	51	524	2139	2.65	41921	51.86
17	412	336	0.42	1232	1.52	52	528	2060	2.55	43981	54.41
18	416	432	0.53	1664	2.06	53	532	2203	2.73	46184	57.14
19	420	514	0.64	2178	2.69	54	536	2298	2.84	48482	59.98
20	423	595	0.74	2773	3.43	55	541	2313	2.86	50795	62.84
21	427	604	0.75	3377	4.18	56	546	2483	3.07	53278	65.92
22	430	676	0.84	4053	5.01	57	551	2494	3.09	55772	69.00
23	434	732	0.91	4785	5.92	58	556	2536	3.14	58308	72.14
24	437	743	0.92	5528	6.84	59	562	2670	3.30	60978	75.44
25	440	803	0.99	6331	7.83	60	569	2716	3.36	63694	78.80
26	444	895	1.11	7226	8.94	**61**	**576**	**2609**	**3.23**	**66303**	**82.03**
27	447	920	1.14	8146	10.08	62	584	2720	3.37	69023	85.39
28	450	940	1.16	9086	11.24	63	593	2639	3.26	71662	88.66
29	453	928	1.15	10014	12.39	64	604	2553	3.16	74215	91.82
30	456	947	1.17	10961	13.56	65	618	2262	2.80	76477	94.62
31	459	1059	1.31	12020	14.87	66	638	2023	2.50	78500	97.12
32	462	1040	1.29	13060	16.16	67	670	1504	1.86	80004	98.98
33	**465**	**1052**	**1.30**	**14112**	**17.46**	68	725	824	1.02	80828	100.00
34	468	1093	1.35	15205	18.81						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.14
2009 Spring AIMS Frequency Distribution
Mathematics CRT Grade 7

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	290	0	0.00	0	0.00	35	501	1082	1.33	15254	18.79
1	300	0	0.00	0	0.00	36	504	1131	1.39	16385	20.19
2	331	0	0.00	0	0.00	37	507	1267	1.56	17652	21.75
3	350	0	0.00	0	0.00	38	510	1318	1.62	18970	23.37
4	364	0	0.00	0	0.00	39	513	1363	1.68	20333	25.05
5	375	0	0.00	0	0.00	40	516	1437	1.77	21770	26.82
6	384	0	0.00	0	0.00	**41**	**519**	**1487**	**1.83**	**23257**	**28.65**
7	392	0	0.00	0	0.00	42	523	1594	1.96	24851	30.62
8	399	1	0.00	1	0.00	43	526	1642	2.02	26493	32.64
9	405	8	0.01	9	0.01	44	529	1764	2.17	28257	34.81
10	411	23	0.03	32	0.04	45	532	1804	2.22	30061	37.04
11	417	60	0.07	92	0.11	46	536	1886	2.32	31947	39.36
12	422	69	0.09	161	0.20	47	539	2011	2.48	33958	41.84
13	426	99	0.12	260	0.32	48	542	1934	2.38	35892	44.22
14	431	178	0.22	438	0.54	49	546	2109	2.60	38001	46.82
15	435	234	0.29	672	0.83	50	550	2089	2.57	40090	49.39
16	439	291	0.36	963	1.19	51	553	2250	2.77	42340	52.16
17	443	387	0.48	1350	1.66	52	557	2321	2.86	44661	55.02
18	447	406	0.50	1756	2.16	53	561	2412	2.97	47073	58.00
19	451	504	0.62	2260	2.78	54	566	2487	3.06	49560	61.06
20	454	531	0.65	2791	3.44	55	570	2544	3.13	52104	64.19
21	458	580	0.71	3371	4.15	56	575	2595	3.20	54699	67.39
22	461	597	0.74	3968	4.89	57	580	2695	3.32	57394	70.71
23	464	667	0.82	4635	5.71	58	585	2792	3.44	60186	74.15
24	468	646	0.80	5281	6.51	59	591	2683	3.31	62869	77.46
25	471	676	0.83	5957	7.34	60	598	2752	3.39	65621	80.85
26	474	787	0.97	6744	8.31	**61**	**605**	**2677**	**3.30**	**68298**	**84.15**
27	477	775	0.95	7519	9.26	62	612	2715	3.34	71013	87.49
28	480	845	1.04	8364	10.30	63	622	2546	3.14	73559	90.63
29	483	861	1.06	9225	11.37	64	632	2401	2.96	75960	93.58
30	**486**	**949**	**1.17**	**10174**	**12.53**	65	646	2082	2.57	78042	96.15
31	489	910	1.12	11084	13.66	66	665	1603	1.97	79645	98.12
32	492	985	1.21	12069	14.87	67	696	1042	1.28	80687	99.41
33	495	1053	1.30	13122	16.17	68	740	480	0.59	81167	100.00
34	498	1050	1.29	14172	17.46						

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Table 8.1.1.15
2009 Spring AIMS Frequency Distribution
Mathematics CRT Grade 8

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	300	1	0.00	1	0.00	34	512	1357	1.70	18169	22.81
1	300	0	0.00	1	0.00	35	515	1350	1.70	19519	24.51
2	327	0	0.00	1	0.00	36	519	1487	1.87	21006	26.38
3	348	0	0.00	1	0.00	37	522	1588	1.99	22594	28.37
4	363	0	0.00	1	0.00	38	526	1639	2.06	24233	30.43
5	375	0	0.00	1	0.00	39	529	1727	2.17	25960	32.60
6	385	1	0.00	2	0.00	40	533	1776	2.23	27736	34.83
7	394	3	0.00	5	0.01	41	536	1849	2.32	29585	37.15
8	402	5	0.01	10	0.01	**42**	**540**	**1967**	**2.47**	**31552**	**39.62**
9	409	20	0.03	30	0.04	43	544	1897	2.38	33449	42.00
10	415	45	0.06	75	0.09	44	547	1948	2.45	35397	44.45
11	421	64	0.08	139	0.17	45	551	1988	2.50	37385	46.94
12	426	97	0.12	236	0.30	46	555	2128	2.67	39513	49.61
13	432	170	0.21	406	0.51	47	559	2225	2.79	41738	52.41
14	437	217	0.27	623	0.78	48	564	2137	2.68	43875	55.09
15	441	307	0.39	930	1.17	49	568	2301	2.89	46176	57.98
16	446	374	0.47	1304	1.64	50	572	2350	2.95	48526	60.93
17	450	444	0.56	1748	2.19	51	577	2310	2.90	50836	63.83
18	454	526	0.66	2274	2.86	52	582	2341	2.94	53177	66.77
19	458	596	0.75	2870	3.60	53	587	2405	3.02	55582	69.79
20	462	702	0.88	3572	4.49	54	592	2390	3.00	57972	72.79
21	466	690	0.87	4262	5.35	55	598	2367	2.97	60339	75.76
22	470	785	0.99	5047	6.34	56	604	2375	2.98	62714	78.74
23	474	845	1.06	5892	7.40	57	611	2407	3.02	65121	81.77
24	477	886	1.11	6778	8.51	58	618	2452	3.08	67573	84.85
25	481	900	1.13	7678	9.64	**59**	**626**	**2359**	**2.96**	**69932**	**87.81**
26	485	968	1.22	8646	10.86	60	635	2145	2.69	72077	90.50
27	488	971	1.22	9617	12.08	61	645	2094	2.63	74171	93.13
28	491	1026	1.29	10643	13.36	62	657	1821	2.29	75992	95.42
29	495	1172	1.47	11815	14.84	63	672	1459	1.83	77451	97.25
30	498	1107	1.39	12922	16.23	64	694	1152	1.45	78603	98.70
31	502	1211	1.52	14133	17.75	65	728	721	0.91	79324	99.60
32	**505**	**1315**	**1.65**	**15448**	**19.40**	66	800	318	0.40	79642	100.00
33	509	1364	1.71	16812	21.11						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.16
2009 Spring AIMS Frequency Distribution
Mathematics CRT High School Cohort 11 (Grade 10)

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	500	0	0.00	0	0.00	43	671	1018	1.36	17676	23.54
1	503	0	0.00	0	0.00	44	673	1038	1.38	18714	24.93
2	527	0	0.00	0	0.00	45	675	1065	1.42	19779	26.34
3	542	0	0.00	0	0.00	46	677	1069	1.42	20848	27.77
4	553	0	0.00	0	0.00	47	679	1092	1.45	21940	29.22
5	561	0	0.00	0	0.00	48	681	1139	1.52	23079	30.74
6	569	0	0.00	0	0.00	**49**	**683**	**1114**	**1.48**	**24193**	**32.22**
7	575	1	0.00	1	0.00	50	685	1121	1.49	25314	33.72
8	580	0	0.00	1	0.00	51	686	1182	1.57	26496	35.29
9	585	0	0.00	1	0.00	52	688	1240	1.65	27736	36.94
10	590	2	0.00	3	0.00	53	690	1260	1.68	28996	38.62
11	594	6	0.01	9	0.01	54	692	1342	1.79	30338	40.41
12	598	5	0.01	14	0.02	55	695	1365	1.82	31703	42.23
13	601	9	0.01	23	0.03	56	697	1312	1.75	33015	43.97
14	605	15	0.02	38	0.05	57	699	1390	1.85	34405	45.83
15	608	41	0.05	79	0.11	58	701	1382	1.84	35787	47.67
16	611	65	0.09	144	0.19	59	703	1449	1.93	37236	49.60
17	614	93	0.12	237	0.32	60	705	1466	1.95	38702	51.55
18	617	149	0.20	386	0.51	61	707	1426	1.90	40128	53.45
19	619	160	0.21	546	0.73	62	710	1559	2.08	41687	55.52
20	622	242	0.32	788	1.05	63	712	1476	1.97	43163	57.49
21	625	294	0.39	1082	1.44	64	715	1481	1.97	44644	59.46
22	627	336	0.45	1418	1.89	65	717	1599	2.13	46243	61.59
23	630	411	0.55	1829	2.44	66	720	1654	2.20	47897	63.80
24	632	507	0.68	2336	3.11	67	722	1604	2.14	49501	65.93
25	634	526	0.70	2862	3.81	68	725	1574	2.10	51075	68.03
26	637	595	0.79	3457	4.60	69	728	1659	2.21	52734	70.24
27	639	647	0.86	4104	5.47	70	731	1680	2.24	54414	72.48
28	641	667	0.89	4771	6.35	71	734	1622	2.16	56036	74.64
29	643	717	0.96	5488	7.31	72	738	1665	2.22	57701	76.85
30	645	701	0.93	6189	8.24	73	741	1585	2.11	59286	78.97
31	647	763	1.02	6952	9.26	74	745	1663	2.22	60949	81.18
32	649	737	0.98	7689	10.24	75	749	1634	2.18	62583	83.36
33	651	809	1.08	8498	11.32	**76**	**753**	**1688**	**2.25**	**64271**	**85.61**
34	653	805	1.07	9303	12.39	77	758	1619	2.16	65890	87.76
35	655	822	1.09	10125	13.49	78	764	1649	2.20	67539	89.96
36	657	861	1.15	10986	14.63	79	770	1541	2.05	69080	92.01
37	659	940	1.25	11926	15.88	80	777	1546	2.06	70626	94.07
38	661	928	1.24	12854	17.12	81	785	1430	1.90	72056	95.97
39	663	855	1.14	13709	18.26	82	796	1161	1.55	73217	97.52
40	665	955	1.27	14664	19.53	83	811	943	1.26	74160	98.78
41	667	982	1.31	15646	20.84	84	835	609	0.81	74769	99.59
42	**669**	**1012**	**1.35**	**16658**	**22.19**	85	900	309	0.41	75078	100.00

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.17
2009 Spring AIMS Frequency Distribution
Mathematics CRT High School Cohort 10 (Grade 11)

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	500	0	0.00	0	0.00	43	671	523	2.77	10051	53.29
1	503	0	0.00	0	0.00	44	673	506	2.68	10557	55.97
2	527	0	0.00	0	0.00	45	675	511	2.71	11068	58.68
3	542	0	0.00	0	0.00	46	677	532	2.82	11600	61.50
4	553	0	0.00	0	0.00	47	679	524	2.78	12124	64.28
5	561	1	0.01	1	0.01	48	681	473	2.51	12597	66.79
6	569	0	0.00	1	0.01	**49**	**683**	**470**	**2.49**	**13067**	**69.28**
7	575	0	0.00	1	0.01	50	685	451	2.39	13518	71.67
8	580	0	0.00	1	0.01	51	686	412	2.18	13930	73.85
9	585	0	0.00	1	0.01	52	688	380	2.01	14310	75.87
10	590	1	0.01	2	0.01	53	690	320	1.70	14630	77.56
11	594	1	0.01	3	0.02	54	692	326	1.73	14956	79.29
12	598	1	0.01	4	0.02	55	695	289	1.53	15245	80.82
13	601	9	0.05	13	0.07	56	697	237	1.26	15482	82.08
14	605	11	0.06	24	0.13	57	699	224	1.19	15706	83.27
15	608	21	0.11	45	0.24	58	701	204	1.08	15910	84.35
16	611	34	0.18	79	0.42	59	703	166	0.88	16076	85.23
17	614	45	0.24	124	0.66	60	705	154	0.82	16230	86.05
18	617	74	0.39	198	1.05	61	707	149	0.79	16379	86.84
19	619	99	0.52	297	1.57	62	710	135	0.72	16514	87.55
20	622	132	0.70	429	2.27	63	712	112	0.59	16626	88.15
21	625	155	0.82	584	3.10	64	715	111	0.59	16737	88.73
22	627	232	1.23	816	4.33	65	717	95	0.50	16832	89.24
23	630	229	1.21	1045	5.54	66	720	129	0.68	16961	89.92
24	632	274	1.45	1319	6.99	67	722	129	0.68	17090	90.61
25	634	303	1.61	1622	8.60	68	725	116	0.61	17206	91.22
26	637	336	1.78	1958	10.38	69	728	112	0.59	17318	91.81
27	639	359	1.90	2317	12.28	70	731	106	0.56	17424	92.38
28	641	362	1.92	2679	14.20	71	734	117	0.62	17541	93.00
29	643	384	2.04	3063	16.24	72	738	141	0.75	17682	93.74
30	645	421	2.23	3484	18.47	73	741	145	0.77	17827	94.51
31	647	430	2.28	3914	20.75	74	745	131	0.69	17958	95.21
32	649	456	2.42	4370	23.17	75	749	158	0.84	18116	96.04
33	651	449	2.38	4819	25.55	**76**	**753**	**141**	**0.75**	**18257**	**96.79**
34	653	489	2.59	5308	28.14	77	758	123	0.65	18380	97.44
35	655	496	2.63	5804	30.77	78	764	134	0.71	18514	98.16
36	657	495	2.62	6299	33.40	79	770	104	0.55	18618	98.71
37	659	518	2.75	6817	36.14	80	777	109	0.58	18727	99.28
38	661	489	2.59	7306	38.73	81	785	58	0.31	18785	99.59
39	663	560	2.97	7866	41.70	82	796	50	0.27	18835	99.86
40	665	539	2.86	8405	44.56	83	811	20	0.11	18855	99.96
41	667	541	2.87	8946	47.43	84	835	5	0.03	18860	99.99
42	**669**	**582**	**3.09**	**9528**	**50.51**	85	900	2	0.01	18862	100.00

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.18
2009 Spring AIMS Frequency Distribution
Mathematics CRT High School Cohort 9 (Grade 12)

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	500	0	0.00	0	0.00	43	671	274	3.22	5510	64.73
1	503	0	0.00	0	0.00	44	673	247	2.90	5757	67.63
2	527	0	0.00	0	0.00	45	675	240	2.82	5997	70.45
3	542	0	0.00	0	0.00	46	677	235	2.76	6232	73.21
4	553	0	0.00	0	0.00	47	679	250	2.94	6482	76.15
5	561	0	0.00	0	0.00	48	681	229	2.69	6711	78.84
6	569	0	0.00	0	0.00	**49**	**683**	**184**	**2.16**	**6895**	**81.00**
7	575	0	0.00	0	0.00	50	685	191	2.24	7086	83.25
8	580	0	0.00	0	0.00	51	686	170	2.00	7256	85.24
9	585	0	0.00	0	0.00	52	688	149	1.75	7405	86.99
10	590	0	0.00	0	0.00	53	690	124	1.46	7529	88.45
11	594	1	0.01	1	0.01	54	692	114	1.34	7643	89.79
12	598	1	0.01	2	0.02	55	695	110	1.29	7753	91.08
13	601	1	0.01	3	0.04	56	697	85	1.00	7838	92.08
14	605	10	0.12	13	0.15	57	699	81	0.95	7919	93.03
15	608	14	0.16	27	0.32	58	701	61	0.72	7980	93.75
16	611	18	0.21	45	0.53	59	703	56	0.66	8036	94.41
17	614	42	0.49	87	1.02	60	705	67	0.79	8103	95.20
18	617	45	0.53	132	1.55	61	707	45	0.53	8148	95.72
19	619	54	0.63	186	2.19	62	710	37	0.43	8185	96.16
20	622	93	1.09	279	3.28	63	712	36	0.42	8221	96.58
21	625	98	1.15	377	4.43	64	715	31	0.36	8252	96.95
22	627	123	1.45	500	5.87	65	717	28	0.33	8280	97.27
23	630	159	1.87	659	7.74	66	720	18	0.21	8298	97.49
24	632	160	1.88	819	9.62	67	722	17	0.20	8315	97.69
25	634	167	1.96	986	11.58	68	725	27	0.32	8342	98.00
26	637	189	2.22	1175	13.80	69	728	11	0.13	8353	98.13
27	639	212	2.49	1387	16.29	70	731	18	0.21	8371	98.34
28	641	213	2.50	1600	18.80	71	734	19	0.22	8390	98.57
29	643	225	2.64	1825	21.44	72	738	20	0.23	8410	98.80
30	645	234	2.75	2059	24.19	73	741	23	0.27	8433	99.07
31	647	237	2.78	2296	26.97	74	745	15	0.18	8448	99.25
32	649	236	2.77	2532	29.75	75	749	12	0.14	8460	99.39
33	651	243	2.85	2775	32.60	**76**	**753**	**12**	**0.14**	**8472**	**99.53**
34	653	260	3.05	3035	35.66	77	758	9	0.11	8481	99.64
35	655	250	2.94	3285	38.59	78	764	10	0.12	8491	99.75
36	657	260	3.05	3545	41.65	79	770	7	0.08	8498	99.84
37	659	260	3.05	3805	44.70	80	777	4	0.05	8502	99.88
38	661	307	3.61	4112	48.31	81	785	4	0.05	8506	99.93
39	663	306	3.59	4418	51.90	82	796	2	0.02	8508	99.95
40	665	273	3.21	4691	55.11	83	811	3	0.04	8511	99.99
41	667	256	3.01	4947	58.12	84	835	1	0.01	8512	100.00
42	**669**	**289**	**3.40**	**5236**	**61.51**	85	900	0	0.00	8512	100.00

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.19
2009 Spring AIMS Frequency Distribution
Reading CRT Grade 3

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	200	0	0.00	0	0.00	28	417	1524	1.84	18547	22.34
1	231	0	0.00	0	0.00	29	420	1605	1.93	20152	24.28
2	261	0	0.00	0	0.00	30	424	1732	2.09	21884	26.37
3	279	1	0.00	1	0.00	31	428	1763	2.12	23647	28.49
4	293	0	0.00	1	0.00	**32**	**431**	**1922**	**2.32**	**25569**	**30.80**
5	304	6	0.01	7	0.01	33	435	1978	2.38	27547	33.19
6	313	15	0.02	22	0.03	34	439	2171	2.62	29718	35.80
7	321	42	0.05	64	0.08	35	443	2250	2.71	31968	38.51
8	329	76	0.09	140	0.17	36	447	2359	2.84	34327	41.36
9	335	156	0.19	296	0.36	37	451	2496	3.01	36823	44.36
10	341	249	0.30	545	0.66	38	455	2584	3.11	39407	47.48
11	347	391	0.47	936	1.13	39	459	2699	3.25	42106	50.73
12	352	482	0.58	1418	1.71	40	464	2749	3.31	44855	54.04
13	357	608	0.73	2026	2.44	41	468	3019	3.64	47874	57.68
14	362	765	0.92	2791	3.36	42	473	3152	3.80	51026	61.47
15	366	786	0.95	3577	4.31	43	478	3231	3.89	54257	65.37
16	371	892	1.07	4469	5.38	44	484	3378	4.07	57635	69.44
17	375	885	1.07	5354	6.45	45	490	3359	4.05	60994	73.48
18	**379**	**949**	**1.14**	**6303**	**7.59**	46	496	3582	4.32	64576	77.80
19	383	1031	1.24	7334	8.84	47	503	3480	4.19	68056	81.99
20	387	1026	1.24	8360	10.07	48	511	3557	4.29	71613	86.28
21	391	1054	1.27	9414	11.34	**49**	**520**	**3205**	**3.86**	**74818**	**90.14**
22	395	1118	1.35	10532	12.69	50	531	2857	3.44	77675	93.58
23	398	1173	1.41	11705	14.10	51	544	2386	2.87	80061	96.46
24	402	1221	1.47	12926	15.57	52	562	1743	2.10	81804	98.56
25	406	1293	1.56	14219	17.13	53	592	898	1.08	82702	99.64
26	409	1337	1.61	15556	18.74	54	640	301	0.36	83003	100.00
27	413	1467	1.77	17023	20.51						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.20
2009 Spring AIMS Frequency Distribution
Reading CRT Grade 4

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	220	0	0.00	0	0.00	28	427	1074	1.30	14448	17.54
1	264	1	0.00	1	0.00	29	431	1223	1.48	15672	19.03
2	291	0	0.00	1	0.00	30	434	1291	1.57	16963	20.59
3	307	0	0.00	1	0.00	31	437	1387	1.68	18350	22.28
4	319	2	0.00	3	0.00	32	440	1477	1.79	19827	24.07
5	329	6	0.01	9	0.01	33	444	1544	1.87	21371	25.95
6	337	13	0.02	22	0.03	34	447	1696	2.06	23067	28.01
7	344	30	0.04	52	0.06	**35**	**451**	**1721**	**2.09**	**24789**	**30.10**
8	350	99	0.12	151	0.18	36	454	1963	2.38	26753	32.48
9	356	146	0.18	297	0.36	37	458	2150	2.61	28903	35.09
10	361	259	0.31	556	0.68	38	461	2133	2.59	31036	37.68
11	366	324	0.39	880	1.07	39	465	2324	2.82	33361	40.50
12	371	428	0.52	1308	1.59	40	469	2634	3.20	35995	43.70
13	375	537	0.65	1846	2.24	41	473	2737	3.32	38732	47.02
14	379	599	0.73	2445	2.97	42	478	2904	3.53	41636	50.55
15	383	688	0.84	3133	3.80	43	482	3085	3.75	44721	54.30
16	387	788	0.96	3921	4.76	44	487	3376	4.10	48097	58.39
17	391	746	0.91	4667	5.67	45	492	3623	4.40	51720	62.79
18	394	773	0.94	5440	6.60	46	498	3924	4.76	55644	67.56
19	398	752	0.91	6192	7.52	47	504	4168	5.06	59812	72.62
20	401	804	0.98	6996	8.49	48	511	4339	5.27	64151	77.89
21	**405**	**794**	**0.96**	**7790**	**9.46**	49	520	4470	5.43	68621	83.31
22	408	854	1.04	8644	10.49	50	529	4257	5.17	72878	88.48
23	411	833	1.01	9477	11.51	**51**	**541**	**3921**	**4.76**	**76799**	**93.24**
24	415	888	1.08	10365	12.58	52	558	3034	3.68	79833	96.92
25	418	959	1.16	11324	13.75	53	585	1875	2.28	81708	99.20
26	421	979	1.19	12303	14.94	54	660	658	0.80	82366	100.00
27	424	1071	1.30	13374	16.24						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.21
2009 Spring AIMS Frequency Distribution
Reading CRT Grade 5

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	240			0	0.00	28	451	1271	1.57	15505	19.13
1	275			0	0.00	29	454	1390	1.71	16895	20.84
2	304			0	0.00	30	458	1397	1.72	18292	22.56
3	322	2	0.00	2	0.00	31	461	1571	1.94	19863	24.50
4	335	1	0.00	3	0.00	32	465	1674	2.06	21537	26.57
5	345	5	0.01	8	0.01	**33**	**468**	**1793**	**2.21**	**23330**	**28.78**
6	354	7	0.01	15	0.02	34	472	1881	2.32	25211	31.10
7	362	29	0.04	44	0.05	35	475	1978	2.44	27189	33.54
8	368	50	0.06	94	0.12	36	479	2091	2.58	29280	36.12
9	374	112	0.14	206	0.25	37	483	2259	2.79	31539	38.90
10	380	171	0.21	377	0.47	38	487	2485	3.07	34024	41.97
11	385	307	0.38	684	0.84	39	491	2702	3.33	36726	45.30
12	390	368	0.45	1052	1.30	40	495	2743	3.38	39469	48.69
13	395	464	0.57	1516	1.87	41	499	3029	3.74	42498	52.42
14	399	589	0.73	2105	2.60	42	504	3205	3.95	45703	56.38
15	404	648	0.80	2753	3.40	43	509	3450	4.26	49153	60.63
16	408	744	0.92	3497	4.31	44	514	3686	4.55	52839	65.18
17	412	742	0.92	4239	5.23	45	519	3755	4.63	56594	69.81
18	416	879	1.08	5118	6.31	46	525	3993	4.93	60587	74.74
19	419	816	1.01	5934	7.32	47	532	3965	4.89	64552	79.63
20	423	887	1.09	6821	8.41	48	539	3911	4.82	68463	84.45
21	**427**	**912**	**1.12**	**7733**	**9.54**	49	548	3745	4.62	72208	89.07
22	430	963	1.19	8696	10.73	**50**	**558**	**3218**	**3.97**	**75426**	**93.04**
23	434	1011	1.25	9707	11.97	51	571	2594	3.20	78020	96.24
24	437	1043	1.29	10750	13.26	52	588	1791	2.21	79811	98.45
25	441	1080	1.33	11830	14.59	53	617	961	1.19	80772	99.63
26	444	1184	1.46	13014	16.05	54	675	296	0.37	81068	100.00
27	447	1220	1.50	14234	17.56						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.22
2009 Spring AIMS Frequency Distribution
Reading CRT Grade 6

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	250	0	0.00	0	0.00	28	458	1334	1.65	15898	19.67
1	277	0	0.00	0	0.00	29	461	1367	1.69	17265	21.36
2	307	1	0.00	1	0.00	30	465	1599	1.98	18864	23.33
3	325	1	0.00	2	0.00	31	469	1654	2.05	20518	25.38
4	338	1	0.00	3	0.00	32	472	1752	2.17	22270	27.55
5	349	6	0.01	9	0.01	33	476	1901	2.35	24171	29.90
6	358	4	0.00	13	0.02	**34**	**480**	**2056**	**2.54**	**26227**	**32.44**
7	365	29	0.04	42	0.05	35	483	2235	2.76	28462	35.21
8	372	46	0.06	88	0.11	36	487	2373	2.94	30835	38.14
9	379	103	0.13	191	0.24	37	491	2516	3.11	33351	41.26
10	385	177	0.22	368	0.46	38	495	2631	3.25	35982	44.51
11	390	261	0.32	629	0.78	39	499	2945	3.64	38927	48.15
12	395	385	0.48	1014	1.25	40	504	3128	3.87	42055	52.02
13	400	537	0.66	1551	1.92	41	508	3223	3.99	45278	56.01
14	404	553	0.68	2104	2.60	42	513	3450	4.27	48728	60.28
15	409	706	0.87	2810	3.48	43	518	3606	4.46	52334	64.74
16	413	760	0.94	3570	4.42	44	523	3725	4.61	56059	69.35
17	417	744	0.92	4314	5.34	45	529	3822	4.73	59881	74.07
18	421	883	1.09	5197	6.43	46	535	3775	4.67	63656	78.74
19	425	850	1.05	6047	7.48	47	542	3625	4.48	67281	83.23
20	429	918	1.14	6965	8.62	48	550	3399	4.20	70680	87.43
21	**433**	**881**	**1.09**	**7846**	**9.71**	49	559	3114	3.85	73794	91.28
22	436	1012	1.25	8858	10.96	50	569	2704	3.34	76498	94.63
23	440	1039	1.29	9897	12.24	**51**	**582**	**2035**	**2.52**	**78533**	**97.15**
24	444	1087	1.34	10984	13.59	52	600	1367	1.69	79900	98.84
25	447	1073	1.33	12057	14.91	53	629	724	0.90	80624	99.73
26	451	1171	1.45	13228	16.36	54	690	216	0.27	80840	100.00
27	454	1336	1.65	14564	18.02						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.23
2009 Spring AIMS Frequency Distribution
Reading CRT Grade 7

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	260	0	0.00	0	0.00	28	475	1540	1.90	17281	21.29
1	288	0	0.00	0	0.00	29	478	1520	1.87	18801	23.16
2	319	1	0.00	1	0.00	30	482	1710	2.11	20511	25.26
3	338	0	0.00	1	0.00	31	485	1751	2.16	22262	27.42
4	352	1	0.00	2	0.00	**32**	**489**	**1862**	**2.29**	**24124**	**29.71**
5	363	3	0.00	5	0.01	33	493	1909	2.35	26033	32.07
6	372	16	0.02	21	0.03	34	497	2151	2.65	28184	34.72
7	380	25	0.03	46	0.06	35	501	2207	2.72	30391	37.43
8	388	56	0.07	102	0.13	36	505	2379	2.93	32770	40.36
9	394	97	0.12	199	0.25	37	509	2592	3.19	35362	43.56
10	400	176	0.22	375	0.46	38	513	2702	3.33	38064	46.88
11	406	278	0.34	653	0.80	39	517	2859	3.52	40923	50.41
12	411	392	0.48	1045	1.29	40	522	3068	3.78	43991	54.19
13	416	493	0.61	1538	1.89	41	526	3130	3.86	47121	58.04
14	420	639	0.79	2177	2.68	42	531	3312	4.08	50433	62.12
15	425	662	0.82	2839	3.50	43	537	3521	4.34	53954	66.46
16	429	825	1.02	3664	4.51	44	542	3613	4.45	57567	70.91
17	433	825	1.02	4489	5.53	45	548	3562	4.39	61129	75.30
18	437	906	1.12	5395	6.65	46	555	3739	4.61	64868	79.90
19	441	940	1.16	6335	7.80	47	562	3605	4.44	68473	84.34
20	**445**	**974**	**1.20**	**7309**	**9.00**	48	570	3391	4.18	71864	88.52
21	449	1055	1.30	8364	10.30	49	580	3044	3.75	74908	92.27
22	453	1131	1.39	9495	11.70	**50**	**591**	**2520**	**3.10**	**77428**	**95.37**
23	456	1095	1.35	10590	13.04	51	605	1865	2.30	79293	97.67
24	460	1125	1.39	11715	14.43	52	624	1229	1.51	80522	99.18
25	464	1250	1.54	12965	15.97	53	655	545	0.67	81067	99.85
26	467	1380	1.70	14345	17.67	54	720	119	0.15	81186	100.00
27	471	1396	1.72	15741	19.39						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.24
2009 Spring AIMS Frequency Distribution
Reading CRT Grade 8

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	270	0	0.00	0	0.00	28	480	1571	1.97	17430	21.88
1	270	1	0.00	1	0.00	29	484	1672	2.10	19102	23.98
2	305	0	0.00	1	0.00	30	488	1801	2.26	20903	26.24
3	326	0	0.00	1	0.00	31	492	1864	2.34	22767	28.58
4	342	1	0.00	2	0.00	32	496	1929	2.42	24696	31.00
5	354	3	0.00	5	0.01	**33**	**501**	**2117**	**2.66**	**26813**	**33.66**
6	365	7	0.01	12	0.02	33	503	1	0.00	26814	33.66
7	374	29	0.04	41	0.05	34	505	2274	2.85	29088	36.51
8	382	32	0.04	73	0.09	34	507	2	0.00	29090	36.51
9	389	74	0.09	147	0.18	35	509	2368	2.97	31458	39.49
10	396	134	0.17	281	0.35	36	514	2476	3.11	33934	42.59
10	397	1	0.00	282	0.35	36	517	1	0.00	33935	42.60
11	402	234	0.29	516	0.65	37	518	2555	3.21	36490	45.80
12	408	304	0.38	820	1.03	38	523	2571	3.23	39061	49.03
12	409	1	0.00	821	1.03	39	528	2765	3.47	41826	52.50
13	414	448	0.56	1269	1.59	40	533	2960	3.72	44786	56.22
14	419	566	0.71	1835	2.30	40	537	1	0.00	44787	56.22
15	424	614	0.77	2449	3.07	41	538	2898	3.64	47685	59.86
16	429	792	0.99	3241	4.07	42	544	3131	3.93	50816	63.79
17	434	912	1.14	4153	5.21	43	550	3106	3.90	53922	67.68
18	438	936	1.17	5089	6.39	44	556	3246	4.07	57168	71.76
18	439	1	0.00	5090	6.39	45	562	3216	4.04	60384	75.80
19	443	939	1.18	6029	7.57	46	570	3238	4.06	63622	79.86
20	447	1042	1.31	7071	8.88	47	578	3174	3.98	66796	83.84
21	451	1104	1.39	8175	10.26	48	587	3024	3.80	69820	87.64
22	**456**	**1164**	**1.46**	**9339**	**11.72**	49	597	2895	3.63	72715	91.27
23	460	1207	1.52	10546	13.24	**50**	**610**	**2549**	**3.20**	**75264**	**94.47**
24	464	1215	1.53	11761	14.76	51	625	1990	2.50	77254	96.97
24	465	1	0.00	11762	14.76	52	647	1416	1.78	78670	98.75
25	468	1271	1.60	13033	16.36	53	682	795	1.00	79465	99.75
26	472	1377	1.73	14410	18.09	54	800	202	0.25	79667	100.00
27	476	1449	1.82	15859	19.91						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.25
2009 Spring AIMS Frequency Distribution
Reading CRT High School Cohort 11 (Grade 10)

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	500	1	0.00	1	0.00	28	665	1471	1.95	16391	21.70
1	500	3	0.00	4	0.01	29	669	1595	2.11	17986	23.81
2	506	4	0.01	8	0.01	30	672	1641	2.17	19627	25.99
3	525	1	0.00	9	0.01	**31**	**676**	**1828**	**2.42**	**21455**	**28.41**
4	539	3	0.00	12	0.02	32	680	1858	2.46	23313	30.87
5	551	13	0.02	25	0.03	33	684	2071	2.74	25384	33.61
6	560	18	0.02	43	0.06	34	687	2104	2.79	27488	36.40
7	569	39	0.05	82	0.11	35	691	2298	3.04	29786	39.44
8	576	62	0.08	144	0.19	36	695	2298	3.04	32084	42.48
9	583	119	0.16	263	0.35	37	699	2395	3.17	34479	45.65
10	589	207	0.27	470	0.62	38	703	2509	3.32	36988	48.98
11	595	275	0.36	745	0.99	39	708	2718	3.60	39706	52.57
12	600	349	0.46	1094	1.45	40	712	2841	3.76	42547	56.34
13	605	480	0.64	1574	2.08	41	717	2767	3.66	45314	60.00
14	610	593	0.79	2167	2.87	42	722	3049	4.04	48363	64.04
15	614	653	0.86	2820	3.73	43	727	2839	3.76	51202	67.80
16	619	729	0.97	3549	4.70	44	733	3016	3.99	54218	71.79
17	623	741	0.98	4290	5.68	45	739	3135	4.15	57353	75.94
18	**627**	**818**	**1.08**	**5108**	**6.76**	46	745	3163	4.19	60516	80.13
19	631	850	1.13	5958	7.89	47	752	3055	4.05	63571	84.17
20	635	875	1.16	6833	9.05	48	760	2894	3.83	66465	88.01
21	639	1008	1.33	7841	10.38	49	769	2715	3.59	69180	91.60
22	643	1030	1.36	8871	11.75	**50**	**780**	**2430**	**3.22**	**71610**	**94.82**
23	647	1105	1.46	9976	13.21	51	794	1879	2.49	73489	97.31
24	650	1127	1.49	11103	14.70	52	813	1187	1.57	74676	98.88
25	654	1215	1.61	12318	16.31	53	844	661	0.88	75337	99.75
26	658	1291	1.71	13609	18.02	54	900	187	0.25	75524	100.00
27	661	1311	1.74	14920	19.76						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.26
2009 Spring AIMS Frequency Distribution
Reading CRT High School Cohort 10 (Grade 11)

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	500	1	0.01	1	0.01	28	665	532	3.17	7640	45.51
1	500	1	0.01	2	0.01	29	669	549	3.27	8189	48.78
2	506	2	0.01	4	0.02	30	672	500	2.98	8689	51.75
3	525	1	0.01	5	0.03	**31**	**676**	**539**	**3.21**	**9228**	**54.96**
4	539	3	0.02	8	0.05	32	680	432	2.57	9660	57.54
5	551	3	0.02	11	0.07	33	684	443	2.64	10103	60.18
6	560	5	0.03	16	0.10	34	687	391	2.33	10494	62.51
7	569	20	0.12	36	0.21	35	691	378	2.25	10872	64.76
8	576	50	0.30	86	0.51	36	695	340	2.03	11212	66.78
9	583	71	0.42	157	0.94	37	699	283	1.69	11495	68.47
10	589	94	0.56	251	1.50	38	703	264	1.57	11759	70.04
11	595	155	0.92	406	2.42	39	708	263	1.57	12022	71.61
12	600	202	1.20	608	3.62	40	712	217	1.29	12239	72.90
13	605	253	1.51	861	5.13	41	717	242	1.44	12481	74.34
14	610	290	1.73	1151	6.86	42	722	259	1.54	12740	75.88
15	614	333	1.98	1484	8.84	43	727	286	1.70	13026	77.59
16	619	357	2.13	1841	10.97	44	733	326	1.94	13352	79.53
17	623	388	2.31	2229	13.28	45	739	367	2.19	13719	81.71
18	**627**	**432**	**2.57**	**2661**	**15.85**	46	745	388	2.31	14107	84.03
19	631	443	2.64	3104	18.49	47	752	422	2.51	14529	86.54
20	635	447	2.66	3551	21.15	48	760	500	2.98	15029	89.52
21	639	489	2.91	4040	24.06	49	769	515	3.07	15544	92.58
22	643	495	2.95	4535	27.01	**50**	**780**	**502**	**2.99**	**16046**	**95.57**
23	647	503	3.00	5038	30.01	51	794	365	2.17	16411	97.75
24	650	528	3.14	5566	33.15	52	813	261	1.55	16672	99.30
25	654	510	3.04	6076	36.19	53	844	97	0.58	16769	99.88
26	658	497	2.96	6573	39.15	54	900	20	0.12	16789	100.00
27	661	535	3.19	7108	42.34						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.27
2009 Spring AIMS Frequency Distribution
Reading CRT High School Cohort 9 (Grade 12)

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	500	0	0.00	0	0.00	28	665	280	4.71	3952	66.44
1	500	3	0.05	3	0.05	29	669	231	3.88	4183	70.33
2	506	3	0.05	6	0.10	30	672	226	3.80	4409	74.13
3	525	1	0.02	7	0.12	**31**	**676**	**190**	**3.19**	**4599**	**77.32**
4	539	1	0.02	8	0.13	32	680	179	3.01	4778	80.33
5	551	2	0.03	10	0.17	33	684	146	2.45	4924	82.78
6	560	11	0.18	21	0.35	34	687	134	2.25	5058	85.04
7	569	9	0.15	30	0.50	35	691	114	1.92	5172	86.95
8	576	22	0.37	52	0.87	36	695	104	1.75	5276	88.70
9	583	43	0.72	95	1.60	37	699	93	1.56	5369	90.27
10	589	51	0.86	146	2.45	38	703	86	1.45	5455	91.71
11	595	82	1.38	228	3.83	39	708	54	0.91	5509	92.62
12	600	139	2.34	367	6.17	40	712	52	0.87	5561	93.49
13	605	153	2.57	520	8.74	41	717	42	0.71	5603	94.20
14	610	168	2.82	688	11.57	42	722	45	0.76	5648	94.96
15	614	180	3.03	868	14.59	43	727	37	0.62	5685	95.58
16	619	209	3.51	1077	18.11	44	733	39	0.66	5724	96.23
17	623	192	3.23	1269	21.33	45	739	37	0.62	5761	96.86
18	**627**	**218**	**3.67**	**1487**	**25.00**	46	745	40	0.67	5801	97.53
19	631	202	3.40	1689	28.40	47	752	45	0.76	5846	98.29
20	635	225	3.78	1914	32.18	48	760	36	0.61	5882	98.89
21	639	247	4.15	2161	36.33	49	769	22	0.37	5904	99.26
22	643	233	3.92	2394	40.25	**50**	**780**	**14**	**0.24**	**5918**	**99.50**
23	647	264	4.44	2658	44.69	51	794	17	0.29	5935	99.78
24	650	248	4.17	2906	48.86	52	813	7	0.12	5942	99.90
25	654	251	4.22	3157	53.08	53	844	3	0.05	5945	99.95
26	658	271	4.56	3428	57.63	54	900	3	0.05	5948	100.00
27	661	244	4.10	3672	61.74						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.28
2009 Spring AIMS Frequency Distribution
Writing CRT Grade 3

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	200	2587	3.12	3000	3.12	19	445	7422	8.96	42963	51.36
1	200	0	0.00	3000	3.12	20	457	4831	5.83	47794	57.19
2	200	0	0.00	3000	3.12	21	468	9411	11.36	57205	68.55
3	200	0	0.00	3000	3.12	22	480	4862	5.87	62067	74.42
4	200	0	0.00	3000	3.12	23	492	4143	5.00	66210	79.42
5	200	0	0.00	3000	3.12	24	505	10877	13.13	77087	92.55
6	200	639	0.77	3639	3.89	25	517	1557	1.88	78644	94.43
7	309	154	0.19	3793	4.08	**26**	**529**	**815**	**0.98**	**79459**	**95.41**
8	323	112	0.14	3905	4.21	27	536	2208	2.67	81667	98.08
9	**337**	**939**	**1.13**	**4844**	**5.35**	28	544	414	0.50	82081	98.58
10	344	351	0.42	5195	5.77	29	552	283	0.34	82364	98.92
11	355	353	0.43	5548	6.20	30	560	572	0.69	82936	99.61
12	366	2892	3.49	8440	9.69	31	568	75	0.09	83011	99.70
13	376	1362	1.64	9802	11.33	32	577	49	0.06	83060	99.76
14	386	1276	1.54	11078	12.87	33	588	145	0.18	83205	99.93
15	397	4325	5.22	15403	18.09	34	602	13	0.02	83218	99.95
16	408	2554	3.08	17957	21.18	35	634	11	0.01	83229	99.96
17	**424**	**2776**	**3.35**	**20733**	**24.53**	36	650	32	0.04	83261	100.00
18	433	14808	17.87	35541	42.40						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.29
2009 Spring AIMS Frequency Distribution
Writing CRT Grade 4

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	230	797	0.97	1059	0.97	19	481	4738	5.75	44101	53.24
1	230	0	0.00	1059	0.97	20	493	4168	5.06	48269	58.30
2	230	0	0.00	1059	0.97	21	503	11984	14.55	60253	72.85
3	230	0	0.00	1059	0.97	22	514	3021	3.67	63274	76.52
4	230	0	0.00	1059	0.97	23	526	3187	3.87	66461	80.39
5	230	0	0.00	1059	0.97	24	540	11553	14.03	78014	94.42
6	230	565	0.69	1624	1.65	25	553	1192	1.45	79206	95.87
7	332	90	0.11	1714	1.76	26	565	751	0.91	79957	96.78
8	349	95	0.12	1809	1.88	27	575	1584	1.92	81541	98.71
9	366	570	0.69	2379	2.57	28	585	274	0.33	81815	99.04
10	373	168	0.20	2547	2.77	29	594	190	0.23	82005	99.27
11	386	190	0.23	2737	3.01	30	603	365	0.44	82370	99.71
12	399	3146	3.82	5883	6.83	31	613	58	0.07	82428	99.78
13	413	1025	1.24	6908	8.07	32	622	54	0.07	82482	99.85
14	425	1056	1.28	7964	9.35	33	633	88	0.11	82570	99.96
15	436	4500	5.46	12464	14.82	34	644	9	0.01	82579	99.97
16	446	1658	2.01	14122	16.83	35	661	8	0.01	82587	99.98
17	461	2300	2.79	16422	19.62	36	700	19	0.02	82606	100.00
18	470	22941	27.86	39363	47.48						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.30
2009 Spring AIMS Frequency Distribution
Writing CRT Grade 5

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	255	879	1.08	1118	1.08	19	511	4725	5.83	34559	42.35
1	255	0	0.00	1118	1.08	20	523	3980	4.91	38539	47.27
2	255	0	0.00	1118	1.08	21	535	10710	13.22	49249	60.48
3	255	0	0.00	1118	1.08	22	548	3551	4.38	52800	64.87
4	255	0	0.00	1118	1.08	23	561	3977	4.91	56777	69.77
5	255	0	0.00	1118	1.08	24	575	16135	19.91	72912	89.69
6	255	536	0.66	1654	1.75	25	586	1803	2.23	74715	91.91
7	355	135	0.17	1789	1.91	26	597	1102	1.36	75817	93.27
8	369	135	0.17	1924	2.08	27	607	2829	3.49	78646	96.76
9	382	1032	1.27	2956	3.35	**28**	**617**	**557**	**0.69**	**79203**	**97.45**
10	**396**	**324**	**0.40**	**3280**	**3.75**	29	627	484	0.60	79687	98.05
11	410	309	0.38	3589	4.13	30	637	912	1.13	80599	99.17
12	424	2153	2.66	5742	6.79	31	647	148	0.18	80747	99.35
13	437	1154	1.42	6896	8.22	32	658	139	0.17	80886	99.53
14	449	1155	1.43	8051	9.64	33	672	261	0.32	81147	99.85
15	461	5072	6.26	13123	15.90	34	692	29	0.04	81176	99.88
16	473	1807	2.23	14930	18.13	35	740	25	0.03	81201	99.91
17	486	2096	2.59	17026	20.72	36	740	69	0.09	81270	100.00
18	**499**	**12808**	**15.81**	**29834**	**36.52**						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.31
2009 Spring AIMS Frequency Distribution
Writing CRT Grade 6

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	275	516	0.64	797	0.64	19	517	5739	7.10	31860	39.07
1	275	0	0.00	797	0.64	20	530	3320	4.11	35180	43.18
2	275	0	0.00	797	0.64	21	543	12673	15.68	47853	58.86
3	275	0	0.00	797	0.64	22	555	4092	5.06	51945	63.92
4	275	0	0.00	797	0.64	23	568	3339	4.13	55284	68.06
5	275	0	0.00	797	0.64	24	582	17330	21.44	72614	89.50
6	275	361	0.45	1158	1.09	25	598	1566	1.94	74180	91.44
7	327	86	0.11	1244	1.19	26	613	1090	1.35	75270	92.78
8	359	84	0.10	1328	1.30	**27**	**630**	**3422**	**4.23**	**78692**	**97.02**
9	375	466	0.58	1794	1.87	28	637	496	0.61	79188	97.63
10	389	175	0.22	1969	2.09	29	647	406	0.50	79594	98.13
11	**402**	**189**	**0.23**	**2158**	**2.32**	30	658	1010	1.25	80604	99.38
12	418	1662	2.06	3820	4.38	31	668	107	0.13	80711	99.52
13	435	908	1.12	4728	5.50	32	679	78	0.10	80789	99.61
14	451	710	0.88	5438	6.38	33	690	238	0.29	81027	99.91
15	464	3564	4.41	9002	10.79	34	701	18	0.02	81045	99.93
16	477	1379	1.71	10381	12.50	35	715	7	0.01	81052	99.94
17	489	1366	1.69	11747	14.19	36	760	50	0.06	81102	100.00
18	**504**	**14374**	**17.78**	**26121**	**31.97**						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.32
2009 Spring AIMS Frequency Distribution
Writing CRT Grade 7

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	290	484	0.60	770	0.60	19	521	3254	4.00	32337	39.45
1	290	0	0.00	770	0.60	20	538	2996	3.69	35333	43.13
2	290	0	0.00	770	0.60	21	553	13634	16.78	48967	59.91
3	290	0	0.00	770	0.60	22	565	2372	2.92	51339	62.83
4	290	0	0.00	770	0.60	23	577	2705	3.33	54044	66.16
5	290	0	0.00	770	0.60	24	589	18025	22.18	72069	88.35
6	290	585	0.72	1355	1.32	25	601	1359	1.67	73428	90.02
7	290	68	0.08	1423	1.40	26	613	1077	1.33	74505	91.34
8	347	51	0.06	1474	1.46	27	624	3979	4.90	78484	96.24
9	371	713	0.88	2187	2.34	28	633	405	0.50	78889	96.74
10	386	156	0.19	2343	2.53	**29**	**645**	**477**	**0.59**	**79366**	**97.33**
11	399	176	0.22	2519	2.75	30	649	1398	1.72	80764	99.05
12	**413**	**2571**	**3.16**	**5090**	**5.91**	31	656	79	0.10	80843	99.14
13	431	746	0.92	5836	6.83	32	663	123	0.15	80966	99.30
14	450	774	0.95	6610	7.78	33	671	430	0.53	81396	99.83
15	467	4596	5.66	11206	13.44	34	679	14	0.02	81410	99.84
16	480	1345	1.66	12551	15.10	35	689	19	0.02	81429	99.87
17	493	1718	2.11	14269	17.21	36	770	109	0.13	81538	100.00
18	**510**	**14814**	**18.23**	**29083**	**35.44**						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.33
2009 Spring AIMS Frequency Distribution
Writing CRT Grade 8

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	300	318	0.40	603	0.40	19	538	4337	5.44	27008	33.51
1	300	0	0.00	603	0.40	20	550	3690	4.63	30698	38.14
2	300	0	0.00	603	0.40	21	563	12291	15.41	42989	53.55
3	300	0	0.00	603	0.40	22	578	3294	4.13	46283	57.68
4	300	0	0.00	603	0.40	23	594	3686	4.62	49969	62.30
5	300	0	0.00	603	0.40	24	608	19286	24.18	69255	86.48
6	300	418	0.52	1021	0.92	25	620	1838	2.30	71093	88.79
7	364	86	0.11	1107	1.03	26	630	1145	1.44	72238	90.22
8	377	62	0.08	1169	1.11	27	638	4396	5.51	76634	95.74
9	390	609	0.76	1778	1.87	28	647	565	0.71	77199	96.44
10	404	208	0.26	1986	2.13	29	655	367	0.46	77566	96.90
11	**419**	**165**	**0.21**	**2151**	**2.34**	**30**	**663**	**1555**	**1.95**	**79121**	**98.85**
12	433	1723	2.16	3874	4.50	31	672	154	0.19	79275	99.05
13	446	841	1.05	4715	5.55	32	683	113	0.14	79388	99.19
14	458	700	0.88	5415	6.43	33	696	488	0.61	79876	99.80
15	471	3363	4.22	8778	10.65	34	719	19	0.02	79895	99.82
16	488	1102	1.38	9880	12.03	35	800	31	0.04	79926	99.86
17	507	1380	1.73	11260	13.76	36	800	109	0.14	80035	100.00
18	**524**	**11411**	**14.31**	**22671**	**28.07**						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.34
2009 Spring AIMS Frequency Distribution
Writing CRT High School Cohort 11 (Grade 10) Prompt A

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	500	281	0.38	281	0.38	18.5	660	1824	2.48	14899	20.29
0.5	500	.	.	281	0.38	19	666	1807	2.46	16706	22.75
1	500	.	.	281	0.38	19.5	671	4080	5.56	20786	28.31
1.5	500	.	.	281	0.38	20	678	1924	2.62	22710	30.93
2	500	.	.	281	0.38	20.5	681	2078	2.83	24788	33.76
2.5	500	.	.	281	0.38	21	685	4741	6.46	29529	40.22
3	500	.	.	281	0.38	21.5	690	2181	2.97	31710	43.19
3.5	500	.	.	281	0.38	22	695	2430	3.31	34140	46.50
4	500	.	.	281	0.38	22.5	701	6683	9.10	40823	55.60
4.5	500	.	.	281	0.38	23	707	2384	3.25	43207	58.85
5	500	.	.	281	0.38	23.5	714	2635	3.59	45842	62.44
5.5	500	.	.	281	0.38	24	720	10943	14.90	56785	77.34
6	500	177	0.24	458	0.62	24.5	727	1937	2.64	58722	79.98
6.5	520	32	0.04	490	0.67	25	733	1540	2.10	60262	82.08
7	539	24	0.03	514	0.70	25.5	738	4047	5.51	64309	87.59
7.5	546	88	0.12	602	0.82	26	743	1080	1.47	65389	89.06
8	552	38	0.05	640	0.87	26.5	748	880	1.20	66269	90.26
8.5	557	41	0.06	681	0.93	27	752	2092	2.85	68361	93.11
9	562	104	0.14	785	1.07	27.5	756	627	0.85	68988	93.96
9.5	567	59	0.08	844	1.15	28	760	537	0.73	69525	94.69
10	572	55	0.07	899	1.22	28.5	764	1198	1.63	70723	96.32
10.5	577	172	0.23	1071	1.46	29	768	335	0.46	71058	96.78
11	582	119	0.16	1190	1.62	29.5	773	275	0.37	71333	97.15
11.5	588	133	0.18	1323	1.80	30	777	738	1.01	72071	98.16
12	593	440	0.60	1763	2.40	30.5	781	193	0.26	72264	98.42
12.5	598	252	0.34	2015	2.74	31	785	139	0.19	72403	98.61
13	603	238	0.32	2253	3.07	31.5	790	357	0.49	72760	99.10
13.5	610	505	0.69	2758	3.76	32	794	93	0.13	72853	99.23
14	613	302	0.41	3060	4.17	32.5	799	90	0.12	72943	99.35
14.5	618	314	0.43	3374	4.60	33	803	207	0.28	73150	99.63
15	622	642	0.87	4016	5.47	33.5	808	47	0.06	73197	99.69
15.5	627	466	0.63	4482	6.10	34	813	49	0.07	73246	99.76
16	631	497	0.68	4979	6.78	34.5	822	99	0.13	73345	99.90
16.5	637	1268	1.73	6247	8.51	35	830	21	0.03	73366	99.92
17	642	822	1.12	7069	9.63	35.5	865	21	0.03	73387	99.95
17.5	648	1073	1.46	8142	11.09	36	900	35	0.05	73422	100.00
18	654	4933	6.72	13075	17.81						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.35
2009 Spring AIMS Frequency Distribution
Writing CRT High School Cohort 11 (Grade 10) Promt T

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	500	33	1.68	33	1.68	18.5	655	87	4.42	682	34.62
0.5	500	.	.	33	1.68	19	662	71	3.60	753	38.22
1	500	.	.	33	1.68	19.5	668	86	4.37	839	42.59
1.5	500	.	.	33	1.68	20	673	84	4.26	923	46.85
2	500	.	.	33	1.68	20.5	678	85	4.31	1008	51.17
2.5	500	.	.	33	1.68	21	683	81	4.11	1089	55.28
3	500	.	.	33	1.68	21.5	688	79	4.01	1168	59.29
3.5	500	.	.	33	1.68	22	693	66	3.35	1234	62.64
4	500	.	.	33	1.68	22.5	699	83	4.21	1317	66.85
4.5	500	.	.	33	1.68	23	705	61	3.10	1378	69.95
5	500	.	.	33	1.68	23.5	712	71	3.60	1449	73.55
5.5	500	.	.	33	1.68	24	720	86	4.37	1535	77.92
6	501	18	0.91	51	2.59	24.5	728	67	3.40	1602	81.32
6.5	513	2	0.10	53	2.69	25	735	50	2.54	1652	83.86
7	526	1	0.05	54	2.74	25.5	741	50	2.54	1702	86.40
7.5	534	10	0.51	64	3.25	26	747	35	1.78	1737	88.17
8	540	6	0.30	70	3.55	26.5	752	35	1.78	1772	89.95
8.5	546	3	0.15	73	3.71	27	756	38	1.93	1810	91.88
9	551	8	0.41	81	4.11	27.5	760	23	1.17	1833	93.05
9.5	556	10	0.51	91	4.62	28	765	22	1.12	1855	94.16
10	561	7	0.36	98	4.97	28.5	769	21	1.07	1876	95.23
10.5	566	12	0.61	110	5.58	29	773	18	0.91	1894	96.14
11	571	19	0.96	129	6.55	29.5	777	23	1.17	1917	97.31
11.5	577	11	0.56	140	7.11	30	781	10	0.51	1927	97.82
12	583	19	0.96	159	8.07	30.5	786	12	0.61	1939	98.43
12.5	589	20	1.02	179	9.09	31	790	3	0.15	1942	98.58
13	595	29	1.47	208	10.56	31.5	794	3	0.15	1945	98.73
13.5	600	25	1.27	233	11.83	32	798	5	0.25	1950	98.98
14	605	26	1.32	259	13.15	32.5	803	6	0.30	1956	99.29
14.5	610	22	1.12	281	14.26	33	807	3	0.15	1959	99.44
15	615	19	0.96	300	15.23	33.5	812	3	0.15	1962	99.59
15.5	620	36	1.83	336	17.06	34	817	2	0.10	1964	99.70
16	625	34	1.73	370	18.78	34.5	823	2	0.10	1966	99.80
16.5	630	51	2.59	421	21.37	35	831	3	0.15	1969	99.95
17	636	40	2.03	461	23.40	35.5	844	1	0.05	1970	100.00
17.5	642	61	3.10	522	26.50	36	900	.	.	1970	100.00
18	649	73	3.71	595	30.20						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.36
2009 Spring AIMS Frequency Distribution
Writing CRT High School Cohort 10 (Grade 11) Prompt A

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	500	110	0.67	110	0.67	18.5	660	646	3.92	6864	41.70
0.5	500	.	.	110	0.67	19	666	558	3.39	7422	45.09
1	500	.	.	110	0.67	19.5	671	1123	6.82	8545	51.91
1.5	500	.	.	110	0.67	20	678	494	3.00	9039	54.91
2	500	.	.	110	0.67	20.5	681	488	2.96	9527	57.88
2.5	500	.	.	110	0.67	21	685	887	5.39	10414	63.26
3	500	.	.	110	0.67	21.5	690	423	2.57	10837	65.83
3.5	500	.	.	110	0.67	22	695	399	2.42	11236	68.26
4	500	.	.	110	0.67	22.5	701	867	5.27	12103	73.53
4.5	500	.	.	110	0.67	23	707	325	1.97	12428	75.50
5	500	.	.	110	0.67	23.5	714	328	1.99	12756	77.49
5.5	500	.	.	110	0.67	24	720	1145	6.96	13901	84.45
6	500	83	0.50	193	1.17	24.5	727	244	1.48	14145	85.93
6.5	520	18	0.11	211	1.28	25	733	204	1.24	14349	87.17
7	539	18	0.11	229	1.39	25.5	738	576	3.50	14925	90.67
7.5	546	45	0.27	274	1.66	26	743	152	0.92	15077	91.59
8	552	19	0.12	293	1.78	26.5	748	174	1.06	15251	92.65
8.5	557	17	0.10	310	1.88	27	752	340	2.07	15591	94.71
9	562	76	0.46	386	2.34	27.5	756	95	0.58	15686	95.29
9.5	567	40	0.24	426	2.59	28	760	91	0.55	15777	95.84
10	572	39	0.24	465	2.82	28.5	764	222	1.35	15999	97.19
10.5	577	115	0.70	580	3.52	29	768	73	0.44	16072	97.64
11	582	62	0.38	642	3.90	29.5	773	56	0.34	16128	97.98
11.5	588	63	0.38	705	4.28	30	777	131	0.80	16259	98.77
12	593	266	1.62	971	5.90	30.5	781	38	0.23	16297	99.00
12.5	598	123	0.75	1094	6.65	31	785	23	0.14	16320	99.14
13	603	139	0.84	1233	7.49	31.5	790	61	0.37	16381	99.51
13.5	610	262	1.59	1495	9.08	32	794	11	0.07	16392	99.58
14	613	178	1.08	1673	10.16	32.5	799	18	0.11	16410	99.69
14.5	618	175	1.06	1848	11.23	33	803	29	0.18	16439	99.87
15	622	327	1.99	2175	13.21	33.5	808	6	0.04	16445	99.90
15.5	627	230	1.40	2405	14.61	34	813	2	0.01	16447	99.91
16	631	260	1.58	2665	16.19	34.5	822	9	0.05	16456	99.97
16.5	637	690	4.19	3355	20.38	35	830	.	.	16456	99.97
17	642	438	2.66	3793	23.04	35.5	865	2	0.01	16458	99.98
17.5	648	522	3.17	4315	26.21	36	900	3	0.02	16461	100.00
18	654	1903	11.56	6218	37.77						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.37
2009 Spring AIMS Frequency Distribution
Writing CRT High School Cohort 10 (Grade 11) Prompt T

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	500	20	1.81	20	1.81	18.5	655	56	5.05	490	44.22
0.5	500	.	.	20	1.81	19	662	54	4.87	544	49.10
1	500	.	.	20	1.81	19.5	668	66	5.96	610	55.05
1.5	500	.	.	20	1.81	20	673	43	3.88	653	58.94
2	500	.	.	20	1.81	20.5	678	62	5.60	715	64.53
2.5	500	.	.	20	1.81	21	683	53	4.78	768	69.31
3	500	.	.	20	1.81	21.5	688	41	3.70	809	73.01
3.5	500	.	.	20	1.81	22	693	40	3.61	849	76.62
4	500	.	.	20	1.81	22.5	699	37	3.34	886	79.96
4.5	500	.	.	20	1.81	23	705	34	3.07	920	83.03
5	500	.	.	20	1.81	23.5	712	41	3.70	961	86.73
5.5	500	.	.	20	1.81	24	720	31	2.80	992	89.53
6	501	3	0.27	23	2.08	24.5	728	13	1.17	1005	90.70
6.5	513	.	.	23	2.08	25	735	12	1.08	1017	91.79
7	526	2	0.18	25	2.26	25.5	741	16	1.44	1033	93.23
7.5	534	1	0.09	26	2.35	26	747	7	0.63	1040	93.86
8	540	3	0.27	29	2.62	26.5	752	8	0.72	1048	94.58
8.5	546	5	0.45	34	3.07	27	756	8	0.72	1056	95.31
9	551	4	0.36	38	3.43	27.5	760	11	0.99	1067	96.30
9.5	556	1	0.09	39	3.52	28	765	6	0.54	1073	96.84
10	561	4	0.36	43	3.88	28.5	769	4	0.36	1077	97.20
10.5	566	8	0.72	51	4.60	29	773	6	0.54	1083	97.74
11	571	4	0.36	55	4.96	29.5	777	4	0.36	1087	98.10
11.5	577	6	0.54	61	5.51	30	781	4	0.36	1091	98.47
12	583	10	0.90	71	6.41	30.5	786	4	0.36	1095	98.83
12.5	589	24	2.17	95	8.57	31	790	3	0.27	1098	99.10
13	595	22	1.99	117	10.56	31.5	794	2	0.18	1100	99.28
13.5	600	17	1.53	134	12.09	32	798	1	0.09	1101	99.37
14	605	19	1.71	153	13.81	32.5	803	2	0.18	1103	99.55
14.5	610	19	1.71	172	15.52	33	807	2	0.18	1105	99.73
15	615	22	1.99	194	17.51	33.5	812	2	0.18	1107	99.91
15.5	620	28	2.53	222	20.04	34	817	1	0.09	1108	100.00
16	625	28	2.53	250	22.56	34.5	823	.	.	1108	100.00
16.5	630	33	2.98	283	25.54	35	831	.	.	1108	100.00
17	636	46	4.15	329	29.69	35.5	844	.	.	1108	100.00
17.5	642	39	3.52	368	33.21	36	900	.	.	1108	100.00
18	649	66	5.96	434	39.17						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.38
2009 Spring AIMS Frequency Distribution
Writing CRT High School Cohort 09 (Grade 12) Prompt A

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	500	48	0.93	48	0.93	18.5	660	231	4.48	3249	62.94
0.5	500	.	.	48	0.93	19	666	214	4.15	3463	67.09
1	500	.	.	48	0.93	19.5	671	372	7.21	3835	74.29
1.5	500	.	.	48	0.93	20	678	171	3.31	4006	77.61
2	500	.	.	48	0.93	20.5	681	173	3.35	4179	80.96
2.5	500	.	.	48	0.93	21	685	232	4.49	4411	85.45
3	500	.	.	48	0.93	21.5	690	85	1.65	4496	87.10
3.5	500	.	.	48	0.93	22	695	85	1.65	4581	88.74
4	500	.	.	48	0.93	22.5	701	172	3.33	4753	92.08
4.5	500	.	.	48	0.93	23	707	56	1.08	4809	93.16
5	500	.	.	48	0.93	23.5	714	43	0.83	4852	93.99
5.5	500	.	.	48	0.93	24	720	124	2.40	4976	96.40
6	500	53	1.03	101	1.96	24.5	727	24	0.46	5000	96.86
6.5	520	14	0.27	115	2.23	25	733	28	0.54	5028	97.40
7	539	6	0.12	121	2.34	25.5	738	39	0.76	5067	98.16
7.5	546	36	0.70	157	3.04	26	743	15	0.29	5082	98.45
8	552	14	0.27	171	3.31	26.5	748	7	0.14	5089	98.59
8.5	557	10	0.19	181	3.51	27	752	23	0.45	5112	99.03
9	562	33	0.64	214	4.15	27.5	756	11	0.21	5123	99.24
9.5	567	20	0.39	234	4.53	28	760	5	0.10	5128	99.34
10	572	24	0.46	258	5.00	28.5	764	13	0.25	5141	99.59
10.5	577	54	1.05	312	6.04	29	768	1	0.02	5142	99.61
11	582	23	0.45	335	6.49	29.5	773	3	0.06	5145	99.67
11.5	588	31	0.60	366	7.09	30	777	8	0.15	5153	99.83
12	593	145	2.81	511	9.90	30.5	781	.	.	5153	99.83
12.5	598	80	1.55	591	11.45	31	785	.	.	5153	99.83
13	603	71	1.38	662	12.82	31.5	790	4	0.08	5157	99.90
13.5	610	169	3.27	831	16.10	32	794	.	.	5157	99.90
14	613	103	2.00	934	18.09	32.5	799	.	.	5157	99.90
14.5	618	103	2.00	1037	20.09	33	803	2	0.04	5159	99.94
15	622	198	3.84	1235	23.92	33.5	808	1	0.02	5160	99.96
15.5	627	140	2.71	1375	26.64	34	813	.	.	5160	99.96
16	631	158	3.06	1533	29.70	34.5	822	.	.	5160	99.96
16.5	637	313	6.06	1846	35.76	35	830	1	0.02	5161	99.98
17	642	202	3.91	2048	39.67	35.5	865	.	.	5161	99.98
17.5	648	215	4.17	2263	43.84	36	900	1	0.02	5162	100.00
18	654	755	14.63	3018	58.47						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.39
2009 Spring AIMS Frequency Distribution
Writing CRT High School Cohort 09 (Grade 12) Prompt T

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	500	5	1.42	5	1.42	18.5	655	20	5.68	214	60.80
0.5	500	.	.	5	1.42	19	662	19	5.40	233	66.19
1	500	.	.	5	1.42	19.5	668	15	4.26	248	70.45
1.5	500	.	.	5	1.42	20	673	14	3.98	262	74.43
2	500	.	.	5	1.42	20.5	678	14	3.98	276	78.41
2.5	500	.	.	5	1.42	21	683	17	4.83	293	83.24
3	500	.	.	5	1.42	21.5	688	14	3.98	307	87.22
3.5	500	.	.	5	1.42	22	693	3	0.85	310	88.07
4	500	.	.	5	1.42	22.5	699	12	3.41	322	91.48
4.5	500	.	.	5	1.42	23	705	6	1.70	328	93.18
5	500	.	.	5	1.42	23.5	712	4	1.14	332	94.32
5.5	500	.	.	5	1.42	24	720	4	1.14	336	95.45
6	501	.	.	5	1.42	24.5	728	3	0.85	339	96.31
6.5	513	1	0.28	6	1.70	25	735	3	0.85	342	97.16
7	526	.	.	6	1.70	25.5	741	2	0.57	344	97.73
7.5	534	.	.	6	1.70	26	747	3	0.85	347	98.58
8	540	1	0.28	7	1.99	26.5	752	.	.	347	98.58
8.5	546	.	.	7	1.99	27	756	.	.	347	98.58
9	551	4	1.14	11	3.13	27.5	760	.	.	347	98.58
9.5	556	3	0.85	14	3.98	28	765	1	0.28	348	98.86
10	561	1	0.28	15	4.26	28.5	769	1	0.28	349	99.15
10.5	566	9	2.56	24	6.82	29	773	1	0.28	350	99.43
11	571	3	0.85	27	7.67	29.5	777	.	.	350	99.43
11.5	577	2	0.57	29	8.24	30	781	1	0.28	351	99.72
12	583	8	2.27	37	10.51	30.5	786	1	0.28	352	100.00
12.5	589	11	3.13	48	13.64	31	790	.	.	352	100.00
13	595	3	0.85	51	14.49	31.5	794	.	.	352	100.00
13.5	600	9	2.56	60	17.05	32	798	.	.	352	100.00
14	605	11	3.13	71	20.17	32.5	803	.	.	352	100.00
14.5	610	5	1.42	76	21.59	33	807	.	.	352	100.00
15	615	11	3.13	87	24.72	33.5	812	.	.	352	100.00
15.5	620	12	3.41	99	28.13	34	817	.	.	352	100.00
16	625	17	4.83	116	32.95	34.5	823	.	.	352	100.00
16.5	630	12	3.41	128	36.36	35	831	.	.	352	100.00
17	636	24	6.82	152	43.18	35.5	844	.	.	352	100.00
17.5	642	12	3.41	164	46.59	36	900	.	.	352	100.00
18	649	30	8.52	194	55.11						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.40
2009 Spring AIMS Frequency Distribution
Science CRT Grade 4

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	200	0	0.00	0	0.00	28	471	2111	2.58	20066	24.55
1	240	0	0.00	0	0.00	29	475	2176	2.66	22242	27.22
2	278	1	0.00	1	0.00	30	480	2277	2.79	24519	30.00
3	300	1	0.00	2	0.00	31	484	2415	2.96	26934	32.96
4	317	1	0.00	3	0.00	32	489	2636	3.23	29570	36.18
5	330	2	0.00	5	0.01	33	493	2747	3.36	32317	39.54
6	342	2	0.00	7	0.01	34	498	2921	3.57	35238	43.12
7	352	7	0.01	14	0.02	**35**	**503**	**2923**	**3.58**	**38161**	**46.69**
8	361	20	0.02	34	0.04	36	508	3203	3.92	41364	50.61
9	369	62	0.08	96	0.12	37	513	3293	4.03	44657	54.64
10	376	104	0.13	200	0.24	38	518	3291	4.03	47948	58.67
11	383	185	0.23	385	0.47	39	523	3514	4.30	51462	62.97
12	390	250	0.31	635	0.78	40	528	3467	4.24	54929	67.21
13	396	368	0.45	1003	1.23	41	534	3406	4.17	58335	71.38
14	402	494	0.60	1497	1.83	42	540	3428	4.19	61763	75.58
15	408	593	0.73	2090	2.56	43	546	3162	3.87	64925	79.44
16	413	683	0.84	2773	3.39	**44**	**553**	**3211**	**3.93**	**68136**	**83.37**
17	418	806	0.99	3579	4.38	45	560	2851	3.49	70987	86.86
18	424	979	1.20	4558	5.58	46	567	2667	3.26	73654	90.13
19	429	1015	1.24	5573	6.82	47	575	2340	2.86	75994	92.99
20	434	1117	1.37	6690	8.19	48	585	1873	2.29	77867	95.28
21	438	1305	1.60	7995	9.78	49	595	1482	1.81	79349	97.09
22	443	1389	1.70	9384	11.48	50	608	1065	1.30	80414	98.40
23	448	1478	1.81	10862	13.29	51	624	733	0.90	81147	99.29
24	452	1642	2.01	12504	15.30	52	645	373	0.46	81520	99.75
25	457	1716	2.10	14220	17.40	53	681	167	0.20	81687	99.95
26	**462**	**1850**	**2.26**	**16070**	**19.66**	54	800	37	0.05	81724	100.00
27	466	1885	2.31	17955	21.97						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.41
2009 Spring AIMS Frequency Distribution
Science CRT Grade 8

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	200	0	0.00	0	0.00	**30**	**475**	**1871**	**2.38**	**22155**	**28.15**
1	256	0	0.00	0	0.00	31	478	2003	2.55	24158	30.70
2	291	0	0.00	0	0.00	32	482	2103	2.67	26261	33.37
3	313	1	0.00	1	0.00	33	486	2144	2.72	28405	36.09
4	329	3	0.00	4	0.01	34	490	2268	2.88	30673	38.97
5	341	4	0.01	8	0.01	35	494	2287	2.91	32960	41.88
6	352	5	0.01	13	0.02	36	498	2397	3.05	35357	44.92
7	361	22	0.03	35	0.04	**37**	**502**	**2476**	**3.15**	**37833**	**48.07**
8	369	43	0.05	78	0.10	38	506	2544	3.23	40377	51.30
9	377	60	0.08	138	0.18	39	511	2602	3.31	42979	54.61
10	384	127	0.16	265	0.34	40	515	2611	3.32	45590	57.93
11	390	219	0.28	484	0.61	41	519	2651	3.37	48241	61.29
12	396	309	0.39	793	1.01	42	524	2646	3.36	50887	64.66
13	401	386	0.49	1179	1.50	43	529	2821	3.58	53708	68.24
14	407	500	0.64	1679	2.13	**44**	**534**	**2777**	**3.53**	**56485**	**71.77**
15	412	632	0.80	2311	2.94	45	539	2791	3.55	59276	75.32
16	417	801	1.02	3112	3.95	46	545	2729	3.47	62005	78.78
17	421	854	1.09	3966	5.04	47	550	2694	3.42	64699	82.21
18	426	926	1.18	4892	6.22	48	557	2611	3.32	67310	85.52
19	430	982	1.25	5874	7.46	49	563	2410	3.06	69720	88.59
20	435	1060	1.35	6934	8.81	50	571	2273	2.89	71993	91.47
21	439	1136	1.44	8070	10.25	51	579	1948	2.48	73941	93.95
22	443	1242	1.58	9312	11.83	52	588	1667	2.12	75608	96.07
23	447	1332	1.69	10644	13.52	53	598	1324	1.68	76932	97.75
24	451	1461	1.86	12105	15.38	54	610	939	1.19	77871	98.94
25	455	1454	1.85	13559	17.23	55	626	500	0.64	78371	99.58
26	459	1600	2.03	15159	19.26	56	647	239	0.30	78610	99.88
27	463	1587	2.02	16746	21.28	57	683	80	0.10	78690	99.98
28	467	1710	2.17	18456	23.45	58	800	13	0.02	78703	100.00
29	471	1828	2.32	20284	25.77						

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.42
2009 Spring AIMS Frequency Distribution
Science CRT High School Cohort 11 (Grade 10)

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	200	0	0.00	0	0.00	33	466	1409	2.75	22547	44.04
1	226	3	0.01	3	0.01	34	469	1493	2.92	24040	46.96
2	264	2	0.00	5	0.01	35	473	1466	2.86	25506	49.82
3	287	3	0.01	8	0.02	**36**	**477**	**1527**	**2.98**	**27033**	**52.80**
4	304	2	0.00	10	0.02	37	481	1584	3.09	28617	55.90
5	317	5	0.01	15	0.03	38	484	1559	3.05	30176	58.94
6	328	6	0.01	21	0.04	39	488	1605	3.14	31781	62.08
7	338	8	0.02	29	0.06	40	492	1475	2.88	33256	64.96
8	346	16	0.03	45	0.09	41	496	1506	2.94	34762	67.90
9	354	33	0.06	78	0.15	**42**	**500**	**1503**	**2.94**	**36265**	**70.84**
10	361	62	0.12	140	0.27	43	504	1426	2.79	37691	73.62
11	368	123	0.24	263	0.51	44	508	1344	2.63	39035	76.25
12	374	205	0.40	468	0.91	45	512	1270	2.48	40305	78.73
13	380	318	0.62	786	1.54	46	517	1177	2.30	41482	81.03
14	385	476	0.93	1262	2.47	47	521	1209	2.36	42691	83.39
15	391	568	1.11	1830	3.57	48	526	1068	2.09	43759	85.48
16	396	737	1.44	2567	5.01	49	531	1025	2.00	44784	87.48
17	401	872	1.70	3439	6.72	50	535	1004	1.96	45788	89.44
18	405	924	1.80	4363	8.52	**51**	**541**	**827**	**1.62**	**46615**	**91.05**
19	410	961	1.88	5324	10.40	52	546	791	1.55	47406	92.60
20	414	1028	2.01	6352	12.41	53	552	711	1.39	48117	93.99
21	419	1075	2.10	7427	14.51	54	558	631	1.23	48748	95.22
22	423	1086	2.12	8513	16.63	55	564	570	1.11	49318	96.33
23	427	1132	2.21	9645	18.84	56	571	488	0.95	49806	97.29
24	431	1169	2.28	10814	21.12	57	578	375	0.73	50181	98.02
25	435	1171	2.29	11985	23.41	58	587	301	0.59	50482	98.61
26	439	1221	2.38	13206	25.80	59	596	243	0.47	50725	99.08
27	443	1268	2.48	14474	28.27	60	607	194	0.38	50919	99.46
28	447	1315	2.57	15789	30.84	61	620	134	0.26	51053	99.72
29	450	1293	2.53	17082	33.37	62	636	74	0.14	51127	99.87
30	454	1293	2.53	18375	35.89	63	659	45	0.09	51172	99.96
31	458	1370	2.68	19745	38.57	64	696	18	0.04	51190	99.99
32	462	1393	2.72	21138	41.29	65	800	5	0.01	51195	100.00

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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Table 8.1.1.43
2009 Spring AIMS Frequency Distribution
Science CRT High School Cohort 12 (Grade 9)

Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %	Raw Score	Scale Score	Freq	%	Cum. Freq.	Cum. %
0	200	.	.	0	0.00	33	466	371	1.95	4212	22.17
1	228	.	.	0	0.00	34	469	429	2.26	4641	24.43
2	265	.	.	0	0.00	35	473	405	2.13	5046	26.56
3	287	1	0.01	1	0.01	36	477	497	2.62	5543	29.18
4	305	.	.	1	0.01	37	481	451	2.37	5994	31.55
5	318	.	.	1	0.01	38	484	507	2.67	6501	34.22
6	329	.	.	1	0.01	39	488	508	2.67	7009	36.89
7	339	.	.	1	0.01	40	492	520	2.74	7529	39.63
8	346	2	0.01	3	0.02	41	496	613	3.23	8142	42.86
9	354	3	0.02	6	0.03	42	500	596	3.14	8738	45.99
10	361	9	0.05	15	0.08	43	504	613	3.23	9351	49.22
11	368	13	0.07	28	0.15	44	508	615	3.24	9966	52.46
12	374	27	0.14	55	0.29	45	512	649	3.42	10615	55.87
13	380	39	0.21	94	0.49	46	517	614	3.23	11229	59.11
14	385	46	0.24	140	0.74	47	521	657	3.46	11886	62.56
15	391	69	0.36	209	1.10	48	526	635	3.34	12521	65.91
16	396	79	0.42	288	1.52	49	531	641	3.37	13162	69.28
17	401	115	0.61	403	2.12	50	535	670	3.53	13832	72.81
18	405	121	0.64	524	2.76	51	541	635	3.34	14467	76.15
19	410	157	0.83	681	3.58	52	546	614	3.23	15081	79.38
20	414	180	0.95	861	4.53	53	552	610	3.21	15691	82.59
21	419	161	0.85	1022	5.38	54	558	524	2.76	16215	85.35
22	423	188	0.99	1210	6.37	55	564	499	2.63	16714	87.98
23	427	177	0.93	1387	7.30	56	571	469	2.47	17183	90.45
24	431	213	1.12	1600	8.42	57	578	428	2.25	17611	92.70
25	435	228	1.20	1828	9.62	58	587	400	2.11	18011	94.80
26	439	230	1.21	2058	10.83	59	596	300	1.58	18311	96.38
27	443	257	1.35	2315	12.19	60	607	260	1.37	18571	97.75
28	447	275	1.45	2590	13.63	61	620	178	0.94	18749	98.69
29	450	280	1.47	2870	15.11	62	636	131	0.69	18880	99.38
30	454	289	1.52	3159	16.63	63	659	64	0.34	18944	99.72
31	458	330	1.74	3489	18.37	64	696	40	0.21	18984	99.93
32	462	352	1.85	3841	20.22	65	800	14	0.07	18998	100.00

Note: Freq. = Frequency; Cum = Cumulative. Students with no valid attempt, invalidation or off-grade are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending hospital schools are not included in this summary.

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AIMS DPA NRT State Results

This section of the technical report provides information on the results of the norm-referenced scores provided by the AIMS DPA. Students in grades 3-8 were administered a number of *TerraNova* items embedded within the AIMS DPA to provide norm-referenced scores. Please see Parts 3 and 4 of this report for more details on the design of the AIMS DPA. The AIMS DPA provided scale scores on the *TerraNova* vertical scale. In addition to scale scores, Arizona students were also assigned norm-referenced scores based on their scale scores and the 2000 *TerraNova* norms. For more information regarding the development of *TerraNova* norms please see *TerraNova, The Second Edition: California Achievement Tests Technical Report* (CTB/McGraw-Hill, 2003) and *TerraNova, The Second Edition, Norms Boo*k (CTB, 2001).

Table 8.1.2.1 presents norm-referenced results from the 2009 Spring AIMS DPA. Included in the table for each grade and content are the mean (M), standard deviation (SD), and scales scores at the 25th, 50th, and 75th percentiles for both the Arizona students (AZ) and the *TerraNova* national standardization data.

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Table 8.1.2.1
2009 Spring AIMS NRT State Test Results

Test		N	M	SD	Percentile 25	50	75
Mathematics							
3	AZ	82967	612.1	45.3	585	612	637
	TN	1819	604.5	39.4	583	609	632
4	AZ	82333	638.2	47.8	614	638	661
	TN	1756	619.7	47.8	605	632	655
5	AZ	81055	650.2	50.2	622	649	674
	TN	1726	635.0	48.3	620	649	675
6	AZ	80828	672.9	55.5	646	677	702
	TN	1786	655.5	49.2	639	666	692
7	AZ	81167	676.7	50.7	653	680	706
	TN	1784	657.7	47.8	644	675	702
8	AZ	79642	695.0	53.2	667	698	727
	TN	1646	674.2	51.3	658	689	718
Reading							
3	AZ	83003	623.4	45.8	600	627	650
	TN	1886	624.1	41.7	606	631	655
4	AZ	82366	642.9	48.9	622	643	664
	TN	1882	631.4	47.6	616	644	668
5	AZ	81068	660.2	42.8	640	662	683
	TN	1596	648.5	46.8	631	657	681
6	AZ	80840	668.1	43.6	645	669	692
	TN	1773	650.6	46.7	633	660	686
7	AZ	81186	670.9	50.8	648	677	699
	TN	1852	648.2	54.4	639	667	693
8	AZ	79667	684.1	47.3	656	683	710
	TN	1666	662.8	50.5	646	676	704

Note. AZ=Arizona NRT; TN=TerraNova National Standardization Sample. Source for TN data *TerraNova, The Second Edition* Technical Report (2003) by CTB/McGraw-Hill. Students with no valid attempt, invalidation or off-grade are not included in the AZ NRT data summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, and students attending state hospital schools are not included in the AZ NRT summary. The AZ NRT results are not final results and are presented here for purposes of addressing reliability and validity. AZ NRT results should not be used for accountability purposes.

(table continues)

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Table 8.1.2.1
2009 Spring AIMS NRT State Test Results (continued)

Test		N	M	SD	Percentile 25	50	75
Language							
3	AZ	83003	621.2	37.7	602	623	642
	TN	1886	621.2	40.2	602	626	650
4	AZ	82366	642.9	43.8	622	645	666
	TN	1882	632.0	45.0	616	642	665
5	AZ	81068	657.3	50.6	637	659	681
	TN	1596	644.8	51.6	631	655	678
6	AZ	80840	658.7	50.9	640	660	683
	TN	1773	649.2	46.4	633	658	682
7	AZ	81186	671.6	46.5	648	671	693
	TN	1852	648.4	53.5	637	664	687
8	AZ	79667	676.8	42.3	657	677	697
	TN	1666	657.5	49.3	643	670	696

Note. AZ=Arizona NRT; TN=TerraNova National Standardization Sample. Source for TN data *TerraNova, The Second Edition* Technical Report (2003) by CTB/McGraw-Hill. Students with no valid attempt, invalidation or off-grade are not included in the AZ NRT data summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, and students attending state hospital schools are not included in the AZ NRT summary. The AZ NRT results are not final results and are presented here for purposes of addressing reliability and validity. AZ NRT results should not be used for accountability purposes.

8.2 Longitudinal Data

The Spring 2005 administration of the AIMS Reading, Mathematics, and Writing assessments represents the baseline year for the AIMS testing program. During the 2005 administration a new vertical scale was established for grades 3-8 assessments, new scales were established for the high school assessments, and new cut scores were assigned for each grade and content area. In this section, the Spring 2009 results are presented along with the 2005, 2006, 2007, and 2008 results to provide longitudinal information. Tables 8.2.1 - 8.2.8 include scale score descriptive statistics and performance level distributions for 2005, 2006, 2007, 2008, and 2009 AIMS administrations. Caution should be taken when interpreting year-to-year comparisons, as slight differences in exclusion rules, changes in the manner in which accommodations were identified, and changes in the manner in which high school results were separated may result in different student population characteristics reported in Tables 8.2.1-8.2.6. High school results are reported by grade in 2005 and changed to cohorts for 2006 and all sequential years.

The Spring 2008 administration represents the baseline year for the AIMS Science assessment. In this section, the Spring 2009 results are presented along with the 2008 results to provide longitudinal information. Table 8.2.7 includes scale score descriptive statistics and performance level distributions for 2008 and 2009 AIMS Science administrations.

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Table 8.2.1
Longitudinal Comparison of Scale Scores Mathematics CRT

		N	Scale Score		Percentiles				
Grade	Year		M	SD	P10	P25	P50	P75	P90
3	2005	77443	448.03	50.28	383	411	445	481	512
	2006	79060	447.37	48.15	387	414	447	477	505
	2007	80072	450.12	49.24	388	415	448	484	515
	2008	83299	450.99	50.65	385	413	450	482	512
	2009	82967	451.59	49.8	388	416	450	483	517
4	2005	76152	476.55	53.20	407	440	478	511	539
	2006	79384	482.45	53.93	411	444	481	517	554
	2007	79500	485.07	55.71	411	447	488	522	553
	2008	81568	484.41	54.39	413	446	484	518	549
	2009	82333	487.57	57.43	411	447	487	523	559
5	2005	76719	501.46	54.34	433	462	499	538	566
	2006	78460	504.49	54.43	438	466	501	542	570
	2007	79991	505.36	53.42	438	466	502	537	571
	2008	81303	506.94	55.18	435	466	505	543	582
	2009	81055	508.88	54.85	440	470	506	544	582
6	2005	75884	515.57	57.72	441	475	515	556	594
	2006	78455	517.75	58.26	445	476	514	553	596
	2007	78793	522.59	61.85	443	477	521	564	608
	2008	81577	523.28	58.73	447	480	523	559	596
	2009	80828	525.79	61.04	447	480	524	562	604
7	2005	77084	539.32	54.28	469	500	538	572	605
	2006	77414	543.49	56.18	470	502	543	578	614
	2007	78944	545.91	56.15	473	505	545	580	617
	2008	80807	548.92	55.27	476	509	548	583	619
	2009	81167	553.44	55.99	480	513	553	591	622
8	2005	75599	552.01	58.62	477	508	552	590	623
	2006	77311	554.40	59.18	478	510	553	593	626
	2007	77527	556.83	60.66	479	514	553	594	636
	2008	80506	557.79	59.48	484	515	554	596	638
	2009	79642	560.51	60.39	485	519	559	598	635
HS	2005 (Grade 10)	66788	704.70	46.06	648	672	702	734	766
	2006 (Cohort 08)	70193	701.62	42.44	648	670	699	729	755
	2007 (Cohort 09)	71315	703.61	42.50	651	672	701	731	758
	2008 (Cohort 10)	73940	704.83	42.82	651	674	703	734	762
	2009 (Cohort 11)	75078	707.36	45.74	649	675	705	738	770
HS	2005 (Grade 11)	27209	685.99	32.40	642	664	687	709	725
	2006 (Cohort 07)	13761	667.95	25.50	637	650	668	683	697
	2007 (Cohort 08)	14743	668.47	24.44	638	653	668	683	697
	2008 (Cohort 09)	15589	667.91	23.95	638	651	668	683	697
	2009 (Cohort 10)	18862	674.45	33.65	637	651	669	688	722
HS	2005 (Grade 12)	10191	664.70	29.73	629	642	662	685	704
	2006 (Cohort 06)	7421	668.33	27.39	637	650	666	683	699
	2007 (Cohort 07)	6975	665.68	24.33	635	648	664	680	695
	2008 (Cohort 08)	7667	666.25	23.65	636	649	666	681	695
	2009 (Cohort 09)	8512	664.24	25.2	634	647	663	679	695

Note. Students without a valid attempt, invalidation, off-grade, a non-standard accommodation (not in 2008), home-schooled students, attending Bureau of Indian Affairs schools, attending juvenile corrections centers (not in 2005), attending state hospital schools (not in 2005), and who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. Caution should be used when interpreting results across years, as exclusion rules differ slightly and high school identification of grade versus cohort may result in different student population characteristics.

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Table 8.2.2
Longitudinal Comparison of Performance Level DistributionMathematics CRT

Grade	Year	N	% at Performance Level			
			FFBS	AS	MS	ES
3	2005	77443	10	19	51	20
	2006	79060	10	18	54	18
	2007	80072	10	18	53	19
	2008	83299	10	18	49	22
	2009	82967	9	19	53	20
4	2005	76152	13	17	49	20
	2006	79384	10	17	49	24
	2007	79500	11	16	46	27
	2008	81568	11	15	49	25
	2009	82333	10	16	46	28
5	2005	76719	13	20	48	19
	2006	78460	13	19	49	19
	2007	79991	12	19	51	18
	2008	81303	13	18	50	20
	2009	81055	10	18	49	23
6	2005	75884	18	20	46	16
	2006	78455	18	19	46	16
	2007	78793	18	17	46	19
	2008	81577	17	16	49	18
	2009	80828	16	16	47	21
7	2005	77084	16	20	52	13
	2006	77414	15	17	52	15
	2007	78944	14	17	51	18
	2008	80807	12	17	53	18
	2009	81167	11	15	54	19
8	2005	75599	22	19	48	12
	2006	77311	21	19	47	12
	2007	77527	21	18	47	14
	2008	80506	21	18	49	13
	2009	79642	18	19	48	15
HS	2005 (Grade 10)	66788	22	12	49	17
	2006 (Cohort 08)	70193	22	12	51	14
	2007 (Cohort 09)	71315	21	12	54	13
	2008 (Cohort 10)	73940	20	12	53	15
	2009 (Cohort 11)	75078	21	10	53	17
HS	2005 (Grade 11)	27209	28	16	53	3
	2006 (Cohort 07)	13761	49	26	24	1
	2007 (Cohort 08)	14743	49	25	25	1
	2008 (Cohort 09)	15589	49	25	25	1
	2009 (Cohort 10)	18862	47	19	29	4
HS	2005 (Grade 12)	10191	55	18	26	1
	2006 (Cohort 06)	7421	50	24	24	2
	2007 (Cohort 07)	6975	55	24	21	1
	2008 (Cohort 08)	7667	52	24	24	0
	2009 (Cohort 09)	8512	58	21	21	1

Note. Students without a valid attempt, invalidation, off-grade, a non-standard accommodation (not in 2008), home-schooled students, attending Bureau of Indian Affairs schools, attending juvenile corrections centers (not in 2005), attending state hospital schools (not in 2005), and who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. Caution should be used when interpreting results across years, as exclusion rules differ slightly and high school identification of grade versus cohort may result in different student population characteristics.

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Table 8.2.3
Longitudinal Comparison of Scale Scores Reading CRT

		N	Scale Score		Percentiles				
Grade	Year		M	SD	P10	P25	P50	P75	P90
3	2005	77047	448.29	51.03	379	413	451	486	516
	2006	78487	451.49	50.75	380	418	454	486	516
	2007	79774	455.24	50.92	387	420	455	489	520
	2008	83305	456.44	53.11	384	421	455	490	520
	2009	83003	459.5	52.41	387	424	459	496	520
4	2005	75685	468.70	53.56	398	431	469	506	531
	2006	78924	469.72	49.67	401	436	472	504	529
	2007	79270	470.71	52.12	397	433	472	504	529
	2008	81589	474.49	50.95	405	440	478	506	531
	2009	82366	477.47	51.15	408	444	478	511	541
5	2005	76379	486.68	48.19	421	451	489	517	545
	2006	78157	489.26	47.66	426	456	491	519	547
	2007	79821	489.76	45.39	428	459	490	522	550
	2008	81330	491.42	47.25	427	457	493	527	549
	2009	81068	496.32	48.63	430	465	499	532	558
6	2005	75940	494.22	49.30	427	460	493	526	561
	2006	78631	496.77	48.21	430	463	500	530	559
	2007	78842	498.99	48.38	433	466	499	533	562
	2008	81604	499.47	48.78	435	467	502	531	561
	2009	80840	501.4	48.34	436	469	504	535	559
7	2005	77541	509.05	51.42	439	472	510	545	576
	2006	77917	512.12	51.84	444	474	511	551	582
	2007	79246	514.17	53.23	444	477	514	549	580
	2008	80827	515.76	51.13	446	479	518	549	580
	2009	81186	517.25	49.55	449	482	517	548	580
8	2005	76356	515.56	52.76	448	478	517	553	582
	2006	78067	518.71	53.21	448	482	520	558	590
	2007	77849	520.67	56.86	448	481	520	558	589
	2008	80537	522.95	56.36	449	482	521	559	590
	2009	79667	527.42	57.23	451	488	528	562	597
HS	2005 (Grade 10)	68788	699.75	50.35	631	667	701	731	762
	2006 (Cohort 08)	72191	703.19	48.13	635	669	703	737	765
	2007 (Cohort 09)	74071	703.15	50.25	634	668	703	739	770
	2008 (Cohort 10)	75491	703.81	48.43	636	671	706	740	768
	2009 (Cohort 11)	75524	706.49	50.47	639	672	708	739	769
HS	2005 (Grade 11)	18204	669.18	43.55	615	638	667	693	720
	2006 (Cohort 07)	12232	661.20	36.04	619	635	658	680	708
	2007 (Cohort 08)	12096	657.88	36.15	613	634	657	679	699
	2008 (Cohort 09)	11779	657.39	34.71	614	632	656	678	698
	2009 (Cohort 10)	16789	683	55.61	619	643	672	722	769
HS	2005 (Grade 12)	8882	651.91	40.67	606	623	649	677	706
	2006 (Cohort 06)	6261	663.57	43.13	619	635	658	684	721
	2007 (Cohort 07)	5505	653.95	35.80	609	630	653	675	695
	2008 (Cohort 08)	5248	653.05	33.36	614	632	652	675	694
	2009 (Cohort 09)	5948	655.11	38.37	610	629	654	676	699

Note. Students without a valid attempt, invalidation, off-grade, a non-standard accommodation (not in 2008), home-schooled students, attending Bureau of Indian Affairs schools, attending juvenile corrections centers (not in 2005), attending state hospital schools (not in 2005), and who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. Caution should be used when interpreting results across years, as exclusion rules differ slightly and high school identification of grade versus cohort may result in different student population characteristics.

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Table 8.2.4
Longitudinal Comparison of Performance Level Distribution Reading CRT

		N	% at Performance Level			
Grade	Year		FFBS	AS	MS	ES
3	2005	77047	10	26	55	10
	2006	78487	9	24	56	11
	2007	79774	7	24	57	12
	2008	83305	8	24	56	13
	2009	83003	6	22	58	14
4	2005	75685	12	24	54	9
	2006	78924	11	24	57	8
	2007	79270	11	24	55	10
	2008	81589	9	21	60	9
	2009	82366	8	20	60	12
5	2005	76379	10	24	58	9
	2006	78157	9	24	58	9
	2007	79821	8	23	63	7
	2008	81330	10	22	60	8
	2009	81068	8	18	63	11
6	2005	75940	12	25	57	7
	2006	78631	10	25	60	4
	2007	78842	9	24	59	7
	2008	81604	10	22	61	8
	2009	80840	9	21	65	5
7	2005	77541	10	25	58	7
	2006	77917	10	25	58	7
	2007	79246	9	24	58	9
	2008	80827	9	21	62	8
	2009	81186	8	20	65	8
8	2005	76356	11	26	57	6
	2006	78067	11	27	58	5
	2007	77849	11	26	56	7
	2008	80537	11	22	60	7
	2009	79667	10	21	60	9
HS	2005 (Grade 10)	68788	8	21	63	8
	2006 (Cohort 08)	72191	6	23	64	8
	2007 (Cohort 09)	74071	8	20	65	7
	2008 (Cohort 10)	75491	6	21	66	7
	2009 (Corhort 11)	75524	6	20	66	8
HS	2005 (Grade 11)	18204	15	39	43	3
	2006 (Cohort 07)	12232	15	53	31	1
	2007 (Cohort 08)	12096	21	48	31	1
	2008 (Cohort 09)	11779	17	52	30	1
	2009 (Corhort 10)	16789	13	38	41	7
HS	2005 (Grade 12)	8882	28	44	28	1
	2006 (Cohort 06)	6261	17	50	30	3
	2007 (Cohort 07)	5505	24	49	26	1
	2008 (Cohort 08)	5248	20	55	25	0
	2009 (Corhort 09)	5948	21	53	25	1

Note. Students without a valid attempt, invalidation, off-grade, a non-standard accommodation (not in 2008), home-schooled students, attending Bureau of Indian Affairs schools, attending juvenile corrections centers (not in 2005), attending state hospital schools (not in 2005), and who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. Caution should be used when interpreting results across years, as exclusion rules differ slightly and high school identification of grade versus cohort may result in different student population characteristics.

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Table 8.2.5
Longitudinal Comparison of Scale Scores Writing CRT

		N	Scale Score		Percentiles				
Grade	Year		M	SD	P10	P25	P50	P75	P90
3	2005	77058	444.76	75.47	358	411	460	496	520
	2006	79024	423.07	67.32	357	388	436	459	495
	2007	80027	462.51	78.05	382	428	474	500	532
	2008	83184	444.69	73.44	359	426	461	498	530
	2009	82848	444.13	67.3	376	433	445	492	505
4	2005	76049	470.86	76.49	385	435	481	514	553
	2006	79612	475.48	59.45	414	458	482	515	541
	2007	79541	494.23	77.85	413	470	503	540	575
	2008	81540	475.15	60.08	401	447	471	504	541
	2009	82344	484.05	54.23	436	470	481	514	540
5	2005	76681	502.76	70.74	422	471	509	546	572
	2006	78769	496.06	67.08	418	467	505	542	568
	2007	80024	524.19	69.62	446	495	531	571	594
	2008	81317	520.01	61.11	454	491	528	567	567
	2009	81031	523.74	64.14	461	499	535	575	586
6	2005	76125	525.89	65.43	445	497	538	563	593
	2006	79145	563.78	67.33	500	541	579	610	635
	2007	78909	537.51	70.41	461	513	540	578	609
	2008	81529	518.85	67.80	426	482	509	561	590
	2009	80821	537.75	59.72	464	504	543	582	598
7	2005	77537	543.12	61.26	472	512	545	582	606
	2006	78537	566.06	61.11	497	544	581	605	617
	2007	79374	564.13	71.95	481	540	578	614	634
	2008	80856	539.79	64.81	469	508	555	591	603
	2009	81252	541.43	64.34	467	510	553	589	601
8	2005	76227	548.41	66.65	466	517	558	588	615
	2006	78641	554.52	59.01	493	529	568	599	612
	2007	77969	549.73	69.28	455	501	560	590	627
	2008	80569	554.86	64.99	467	519	559	589	627
	2009	79750	563.75	62.71	471	524	563	608	630
HS	2005 (Grade 10)	68272	693.41	48.63	630	668	698	723	749
	2006 (Cohort 08)	71958	684.74	49.39	630	664	689	712	742
	2007 (Cohort 09)	73812	699.51	47.57	642	676	707	726	752
	2008 (Cohort 10)	75256	696.39	46.28	638	671	702	721	752
	2009 (Cohort 11)	75392	695.98	45.31	642	671	701	720	748
HS	2005 (Grade 11)	15977	665.69	51.55	600	636	668	698	730
	2006 (Cohort 07)	12085	649.32	49.81	591	626	658	680	700
	2007 (Cohort 08)	11087	657.81	49.33	598	631	666	690	713
	2008 (Cohort 09)	10213	651.94	46.34	594	627	655	681	702
	2009 (Cohort 10)	17569	674.13	51.02	613	648	671	707	738
HS	2005 (Grade 12)	7609	649.49	52.88	579	619	657	683	710
	2006 (Cohort 06)	6133	652.39	55.68	586	626	658	684	718
	2007 (Cohort 07)	4647	647.27	49.06	587	622	654	680	701
	2008 (Cohort 08)	4385	645.69	47.14	589	622	655	671	702
	2009 (Cohort 09)	5514	649.43	45.05	593	627	654	678	701

Note. Students without a valid attempt, invalidation, off-grade, a non-standard accommodation (not in 2008), home-schooled students, attending Bureau of Indian Affairs schools, attending juvenile corrections centers (not in 2005), attending state hospital schools (not in 2005), and who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. Caution should be used when interpreting results across years, as exclusion rules differ slightly and high school identification of grade versus cohort may result in different student population characteristics.

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Table 8.2.6
Longitudinal Comparison of Performance Level Distribution Writing CRT

		N	% at Performance Level			
Grade	Year		FFBS	AS	MS	ES
3	2005	77058	6	21	63	10
	2006	79024	7	41	49	3
	2007	80027	6	14	65	16
	2008	83184	6	18	66	10
	2009	82848	4	17	73	6
4	2005	76049	7	31	56	6
	2006	79612	4	30	64	2
	2007	79541	6	15	67	12
	2008	81540	4	26	67	3
	2009	82344	2	15	80	3
5	2005	76681	6	29	63	2
	2006	78769	7	37	56	1
	2007	80024	4	28	63	4
	2008	81317	3	32	63	2
	2009	81031	3	17	76	3
6	2005	76125	4	26	66	3
	2006	79145	3	10	76	11
	2007	78909	5	17	74	5
	2008	81529	5	23	67	5
	2009	80821	2	12	79	7
7	2005	77537	3	18	77	2
	2006	78537	3	8	88	1
	2007	79374	4	14	76	6
	2008	80856	3	32	63	2
	2009	81252	3	14	80	3
8	2005	76227	4	18	77	2
	2006	78641	3	19	78	0
	2007	77969	3	24	71	2
	2008	80569	2	21	74	2
	2009	79750	2	12	83	3
HS	2005 (Grade 10)	68272	5	24	62	9
	2006 (Cohort 08)	71958	6	30	59	6
	2007 (Cohort 09)	73812	4	23	64	9
	2008 (Cohort 10)	75256	4	27	61	7
	2009 (Cohort 11)	75392	3	25	64	7
HS	2005 (Grade 11)	15977	12	43	41	4
	2006 (Cohort 07)	12085	15	57	27	1
	2007 (Cohort 08)	11087	14	51	33	1
	2008 (Cohort 09)	10213	17	57	25	1
	2009 (Cohort 10)	17569	8	44	42	5
HS	2005 (Grade 12)	7609	18	50	30	2
	2006 (Cohort 06)	6133	17	52	28	3
	2007 (Cohort 07)	4647	20	55	24	1
	2008 (Cohort 08)	4385	20	58	21	1
	2009 (Cohort 09)	5514	13	61	25	1

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students without a valid attempt, invalidation, off-grade, a non-standard accommodation (not in 2008), home-schooled students, attending Bureau of Indian Affairs schools, attending juvenile corrections centers (not in 2005), attending state hospital schools (not in 2005), and who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. Caution should be used when interpreting results across years, as exclusion rules differ slightly and high school identification of grade versus cohort may result in different student population characteristics.

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Table 8.2.7
Longitudinal Comparison of Scale Scores
Science CRT

Grade	Year	N	Scale Score M	Scale Score SD	Percentiles P10	P25	P50	P75	P90
4	2008	80296	501.78	50.21	436	466	503	536	567
	2009	81724	508.19	50.47	443	475	508	540	567
8	2008	79482	500.6	50.03	435	463	498	534	568
	2009	78703	506.43	49.97	439	471	506	539	571
HS	2008 (Cohort 10)	45286	477.31	50.05	414	440	475	510	543
	2009 (Cohort 11)	51195	475.75	49.65	410	439	477	508	541

Note. Students without a valid attempt, invalidation, off-grade, a non-standard accommodation (not in 2008), home-schooled students, attending Bureau of Indian Affairs schools, attending juvenile corrections centers (not in 2005), attending state hospital schools (not in 2005), and who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. Caution should be used when interpreting results across years, as exclusion rules differ slightly and high school identification of grade versus cohort may result in different student population characteristics.

Table 8.2.8
Longitudinal Comparison of Performance Level Distribution
Science CRT

Grade	Year	N	% at Performance Level FFBS	AS	MS	ES
4	2008	80296	22	25	35	18
	2009	81724	17	26	36	21
8	2008	79482	31	20	22	28
	2009	78703	26	19	23	32
HS	2008 (Cohort 10)	45286	49	19	20	12
	2009 (Cohort 11)	51195	50	18	22	11

Note. Students without a valid attempt, invalidation, off-grade, a non-standard accommodation (not in 2008), home-schooled students, attending Bureau of Indian Affairs schools, attending juvenile corrections centers (not in 2005), attending state hospital schools (not in 2005), and who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. Caution should be used when interpreting results across years, as exclusion rules differ slightly and high school identification of grade versus cohort may result in different student population characteristics.

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Part 9: Validity Evidence

Part 9 of the technical report provides evidence supporting the reliability and validity of the 2009 AIMS DPA and high school assessments. All data presented in this section were computed using population test data available in the final electronic data files. The following AERA/APA/ NCME standards are addressed: 1.5, 1.7, 2.1, 2.4, 2.10, 2.13, 3.16, 4.15, 6.5, 7.1, 7.3, and 7.10.

9.1 Reliability

AERA/APA/NCME standards for Educational and Psychological Testing refer to reliability as the "consistency of [a measure] when the testing procedure is repeated on a population of individuals or groups." A reliable test produces stable scores; that is, very similar score distributions would result if the test were administered repeatedly under similar conditions to the same students without memory or fatigue affecting the scores. Reliability of the 2009 Spring AIMS assessments was estimated in two ways: internal consistency for all multiple-choice tests and reliability of hand scoring for all Writing tests.

9.1.1 Measures of Internal Consistency

For tests consisting of constructed response and/or multiple choice items, Cronbach's alpha is a frequently used measure of internal consistency. Cronbach's alpha is computed as (Crocker & Algina, 1986)

$$\hat{\alpha} = \frac{k}{k-1}\left(1 - \frac{\sum \sigma_i^2}{\sigma_X^2}\right),$$

where k = number of items, σ_X^2 = the total score variance, and σ_i^2 = the variance of item i.

Although Cronbach's alpha could be used as the measure of internal consistency for the 2009 Spring AIMS CRT Writing tests, this measure would likely overestimate the coefficient because the trait scores were based on the same response; that is, the student response was scored repeatedly for each of the six traits. Furthermore, split-half reliability for a single prompt test may not be a valid estimate of reliability. Therefore, measures of internal consistency for the AIMS Writing tests were not reported.

Reliability estimates for the multiple choice tests administered as part of the 2009 Spring AIMS assessment are presented in Table 9.1.1.1 and Table 9.1.1.2. Note that a high degree of internal consistency is evident for all CRT tests. The reliability for the NRT assessment tends to be slightly lower than the corresponding CRT assessment due to the fewer number of items on each test.

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Table 9.1.1.1
2009 Spring AIMS Internal Consistency

		CRT				NRT					
		Reading		**Math**		**Reading**		**Language**		**Math**	
Subgroup	Value	N	Alpha	N	Alpha	N	Alpha	N	Alpha	N	Alpha
Grade 3											
Ethnicity	White	35755	0.92	35740	0.93	35755	0.82	35755	0.78	35740	0.79
Ethnicity	Black	4897	0.92	4894	0.93	4897	0.82	4897	0.78	4894	0.81
Ethnicity	Hispanic	35509	0.92	35489	0.92	35509	0.80	35509	0.74	35489	0.79
Ethnicity	Am Indian	4215	0.91	4215	0.92	4215	0.77	4215	0.70	4215	0.77
Ethnicity	Asian	2497	0.92	2499	0.94	2497	0.83	2497	0.80	2499	0.83
Gender	Female	40675	0.92	40656	0.93	40675	0.83	40675	0.78	40656	0.79
Gender	Male	42200	0.93	42183	0.94	42200	0.83	42200	0.79	42183	0.82
ELL	Yes	11631	0.89	11621	0.91	11631	0.71	11631	0.66	11621	0.76
SPED	Yes	9063	0.93	9057	0.94	9063	0.83	9063	0.78	9057	0.83
Title1	Yes	11644	0.92	11631	0.92	11644	0.79	11644	0.74	11631	0.79
TOTAL		83003	0.93	82967	0.93	83003	0.83	83003	0.79	82967	0.81
Grade 4											
Ethnicity	White	35433	0.92	35415	0.93	35433	0.84	35433	0.77	35415	0.81
Ethnicity	Black	4803	0.93	4802	0.94	4803	0.86	4803	0.78	4802	0.83
Ethnicity	Hispanic	35096	0.93	35084	0.93	35096	0.84	35096	0.76	35084	0.81
Ethnicity	Am Indian	4416	0.92	4413	0.93	4416	0.83	4416	0.73	4413	0.80
Ethnicity	Asian	2519	0.93	2520	0.94	2519	0.86	2519	0.79	2520	0.83
Gender	Female	40202	0.93	40192	0.93	40202	0.85	40202	0.77	40192	0.82
Gender	Male	42034	0.94	42011	0.94	42034	0.86	42034	0.79	42011	0.84
ELL	Yes	10481	0.89	10480	0.91	10481	0.78	10481	0.68	10480	0.78
SPED	Yes	9520	0.94	9508	0.94	9520	0.87	9520	0.79	9508	0.84
Title1	Yes	10810	0.92	10806	0.93	10810	0.84	10810	0.75	10806	0.81
TOTAL		82366	0.93	82333	0.94	82366	0.86	82366	0.79	82333	0.83
Grade 5											
Ethnicity	White	35470	0.91	35465	0.94	35470	0.81	35470	0.83	35465	0.84
Ethnicity	Black	4869	0.92	4870	0.94	4869	0.81	4869	0.82	4870	0.84
Ethnicity	Hispanic	33966	0.91	33961	0.93	33966	0.80	33966	0.80	33961	0.83
Ethnicity	Am Indian	4240	0.91	4237	0.93	4240	0.79	4240	0.78	4237	0.82
Ethnicity	Asian	2428	0.92	2427	0.95	2428	0.81	2428	0.85	2427	0.86
Gender	Female	39606	0.91	39596	0.94	39606	0.81	39606	0.83	39596	0.84
Gender	Male	41358	0.93	41355	0.95	41358	0.83	41358	0.84	41355	0.86
ELL	Yes	7741	0.87	7740	0.90	7741	0.70	7741	0.65	7740	0.75
SPED	Yes	9557	0.92	9551	0.93	9557	0.83	9557	0.79	9551	0.83
Title1	Yes	10381	0.92	10375	0.93	10381	0.80	10381	0.80	10375	0.83
TOTAL		81068	0.92	81055	0.94	81068	0.82	81068	0.83	81055	0.85
Grade 6											
Ethnicity	White	35678	0.91	35676	0.94	35678	0.80	35678	0.82	35676	0.85
Ethnicity	Black	4747	0.91	4747	0.94	4747	0.82	4747	0.81	4747	0.86
Ethnicity	Hispanic	33746	0.91	33743	0.93	33746	0.81	33746	0.79	33743	0.85
Ethnicity	Am Indian	4141	0.90	4135	0.93	4141	0.79	4141	0.76	4135	0.84
Ethnicity	Asian	2433	0.92	2432	0.95	2433	0.82	2433	0.83	2432	0.87
Gender	Female	39272	0.91	39268	0.94	39272	0.81	39272	0.81	39268	0.86
Gender	Male	41453	0.92	41443	0.95	41453	0.83	41453	0.83	41443	0.87
ELL	Yes	6180	0.85	6178	0.90	6180	0.73	6180	0.66	6178	0.79
SPED	Yes	9139	0.91	9138	0.93	9139	0.82	9139	0.77	9138	0.84
Title1	Yes	9490	0.91	9485	0.93	9490	0.81	9490	0.79	9485	0.85
TOTAL		80840	0.92	80828	0.94	80840	0.82	80840	0.82	80828	0.86

(table continues)

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Table 9.1.1.1 (continued)
2009 Spring AIMS Internal Consistency

		CRT				NRT					
		Reading		**Math**		**Reading**		**Language**		**Math**	
Subgroup	Value	N	Alpha	N	Alpha	N	Alpha	N	Alpha	N	Alpha
Grade 7											
Ethnicity	White	36719	0.90	36715	0.94	36719	0.85	36719	0.79	36715	0.84
Ethnicity	Black	4736	0.91	4738	0.93	4736	0.85	4736	0.79	4738	0.83
Ethnicity	Hispanic	32899	0.91	32889	0.93	32899	0.84	32899	0.77	32889	0.82
Ethnicity	Am Indian	4294	0.90	4289	0.93	4294	0.82	4294	0.76	4289	0.80
Ethnicity	Asian	2412	0.92	2411	0.94	2412	0.87	2412	0.81	2411	0.86
Gender	Female	39767	0.91	39757	0.93	39767	0.85	39767	0.79	39757	0.84
Gender	Male	41268	0.92	41259	0.94	41268	0.86	41268	0.81	41259	0.85
ELL	Yes	5950	0.83	5943	0.89	5950	0.67	5950	0.61	5943	0.68
SPED	Yes	8683	0.90	8666	0.92	8683	0.80	8683	0.75	8666	0.78
Title1	Yes	8439	0.91	8447	0.93	8439	0.84	8439	0.77	8447	0.82
TOTAL		81186	0.92	81167	0.94	81186	0.86	81186	0.81	81167	0.85
Grade 8											
Ethnicity	White	36361	0.90	36345	0.93	36361	0.81	36361	0.79	36345	0.82
Ethnicity	Black	4715	0.91	4717	0.93	4715	0.82	4715	0.77	4717	0.81
Ethnicity	Hispanic	31916	0.90	31898	0.92	31916	0.81	31916	0.74	31898	0.80
Ethnicity	Am Indian	4105	0.89	4111	0.91	4105	0.79	4105	0.71	4111	0.79
Ethnicity	Asian	2482	0.92	2483	0.94	2482	0.84	2482	0.82	2483	0.85
Gender	Female	38887	0.91	38867	0.93	38887	0.82	38887	0.78	38867	0.82
Gender	Male	40657	0.92	40652	0.94	40657	0.83	40657	0.80	40652	0.84
ELL	Yes	5461	0.82	5457	0.88	5461	0.67	5461	0.57	5457	0.71
SPED	Yes	8595	0.88	8600	0.91	8595	0.78	8595	0.69	8600	0.75
Title1	Yes	8301	0.90	8301	0.92	8301	0.81	8301	0.76	8301	0.80
TOTAL		79667	0.91	79642	0.93	79667	0.83	79667	0.79	79642	0.83
HS											
Ethnicity	White	35373	0.90	35217	0.95	.	.	.	.	.	.
Ethnicity	Black	4555	0.91	4557	0.95	.	.	.	.	.	.
Ethnicity	Hispanic	28783	0.90	28520	0.94	.	.	.	.	.	.
Ethnicity	Am Indian	4409	0.90	4400	0.94	.	.	.	.	.	.
Ethnicity	Asian	2319	0.92	2329	0.96	.	.	.	.	.	.
Gender	Female	37173	0.91	36954	0.95	.	.	.	.	.	.
Gender	Male	38249	0.92	38060	0.96	.	.	.	.	.	.
ELL	Yes	3519	0.82	3646	0.90	.	.	.	.	.	.
SPED	Yes	6803	0.88	6775	0.91	.	.	.	.	.	.
Title1	Yes	3087	0.89	3142	0.93	.	.	.	.	.	.
TOTAL		75524	0.92	75078	0.95	.	.	.	.	.	.

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Table 9.1.1.2
2009 Spring AIMS Internal Consistency for Science

Grade	Subgroup	Value	N	Alpha
4	Gender	Female	39820	0.89
		Male	41641	0.90
	Ethnicity	White	35125	0.88
		Black	4757	0.89
		Hispanic	34808	0.87
		Am Indian	4370	0.86
		Asian	2508	0.89
	TOTAL		**81724**	**0.09**
8	Gender	Female	38351	0.90
		Male	40054	0.92
	Ethnicity	White	35919	0.90
		Black	4661	0.90
		Hispanic	31432	0.89
		Am Indian	4017	0.87
		Asian	2471	0.91
	TOTAL		**78703**	**0.91**
HS	Gender	Female	34884	0.91
		Male	35240	0.92
	Ethnicity	White	33350	0.91
		Black	4246	0.90
		Hispanic	26229	0.89
		Am Indian	4104	0.87
		Asian	2308	0.93
	TOTAL		**70568**	**0.92**

9.1.2 Reliability of Constructed-Response Scoring

For constructed response items, the consistency with which two raters assign scores to student responses is typically determined by inter-rater agreement. During the scoring process, six traits were grouped into two rater-item blocks. Traits 1, 2, and 6 were grouped into one block and traits 3, 4, and 5 were grouped into another block. Traits grouped in the same rater-item block are considered to be measuring similar writing attributes and grouping these traits together facilitates training and the rater qualification process. Raters were assigned to score either the first or the second rater-item block. Since different raters scored different trait sets, the inter-rater statistics computed here do not measure the degrees of agreement or disagreements between the same two raters across trait sets. Therefore, it is more accurate to describe the inter-rater agreement reported in this section as inter-rater position reliability.

For the grades 3-8 Writing tests, ten percent of the student responses were randomly selected and scored by a second rater to reduce rater drift and allow measures of rater agreement to be estimated. The statistics provided in Table 9.1.2.1 were calculated using the scores from both raters on each trait for the ten percent of the responses that were scored twice. For the high school writing prompts, each student paper was scored by two independent raters for all students. The statistics for Prompt A and Prompt T are presented in Table 9.1.2.2 and were calculated using the scores from both raters on

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a given trait. The two trait scores for each trait were used in the analyses to calculate rater agreement.

The raw score means, raw score standard deviations, and percentage of agreement between the first and second rater were computed. Perfect agreement is defined as trait scores that are exactly the same between the first and second rating. Adjacent agreement is defined as trait scores differing by one point between the first and second rating. Discrepant cases include records in which scores from the first and the second rating differed by more than one point. In addition, Cohen's kappa and intraclass correlation are provided as indices of agreement between the first and second rating.

Cohen's kappa (Cohen, 1960) is commonly used to summarize the agreement between raters and is computed as (Brennan & Prediger, 1981)

$$\kappa = \frac{\sum P_{ii} - \sum P_{i\cdot} P_{\cdot i}}{1 - \sum P_{i\cdot} P_{\cdot i}},$$

where $\sum P_{ii}$ is the observed proportion of agreement and $\sum P_{i\cdot} P_{\cdot i}$ is the chance proportion of agreement.

Intraclass correlation is defined by Shrout and Fleiss (1979) as "the correlation between one measurement on a target and another measurement obtained on that target." In the context of the 2009 Spring AIMS Writing tests, the "target" is the trait, and each measurement was obtained by a randomly assigned rater to that trait. Therefore, ICC(1,1) was used to estimate intraclass correlation. ICC(1,1) is estimated as (Shrout & Fleiss, 1979)

$$ICC(1,1) = \frac{BMS - WMS}{BMS + (k-1)WMS},$$

where *BMS* = between-targets mean square, *WMS* = within-targets mean square, and *k*=the number of raters rating each target.

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Table 9.1.2.1
2009 Spring AIMS Inter-Rater Position Consistency
Grades 3-8

	Trait	N	MAX Points	Rater 1 M	Rater 1 SD	Rater 2 M	Rater 2 SD	% Agreeement Perfect	% Agreeement Adjacent	% Agreeement Discrepant	Wgt Kappa	Interclass Correlation
Grade 3												
	1 Ideas and Content	8107	6	3.18	0.93	3.17	0.93	65.88	31.37	2.75	0.58	0.70
	2 Organization	8107	6	3.22	0.94	3.22	0.93	62.70	34.39	2.91	0.55	0.68
	3 Voice	8107	6	3.29	1.01	3.29	1.01	52.90	42.64	4.45	0.49	0.67
	4 Word Choice	8107	6	3.14	0.96	3.13	0.96	58.53	38.49	2.99	0.53	0.70
	Sentence Fluency	8107	6	3.12	0.98	3.11	0.97	57.38	39.05	3.56	0.53	0.69
	6 Conventions	8107	6	3.19	0.94	3.19	0.93	62.25	34.83	2.91	0.55	0.68
Grade 4	1 Ideas and Content	8261	6	3.31	0.83	3.31	0.83	64.44	34.31	1.26	0.55	0.70
	2 Organization	8261	6	3.27	0.81	3.28	0.81	65.72	33.14	1.14	0.56	0.70
	3 Voice	8261	6	3.19	0.79	3.21	0.79	61.37	37.04	1.59	0.49	0.64
	4 Word Choice	8261	6	3.15	0.78	3.16	0.78	62.12	36.30	1.57	0.49	0.64
	Sentence Fluency	8261	6	3.14	0.77	3.14	0.77	62.45	36.07	1.48	0.49	0.64
	6 Conventions	8261	6	3.25	0.8	3.26	0.81	64.77	34.00	1.22	0.54	0.69
Grade 5	1 Ideas and Content	8107	6	3.43	0.84	3.44	0.84	64.49	33.88	1.63	0.56	0.71
	2 Organization	8107	6	3.42	0.84	3.44	0.84	65.08	33.46	1.46	0.57	0.72
	3 Voice	8107	6	3.32	0.98	3.33	0.99	57.96	39.32	2.71	0.57	0.74
	4 Word Choice	8107	6	3.26	0.95	3.26	0.96	58.68	39.00	2.32	0.56	0.73
	Sentence Fluency	8107	6	3.23	0.96	3.24	0.97	59.28	38.37	2.34	0.57	0.74
	6 Conventions	8107	6	3.48	0.82	3.49	0.82	64.65	33.96	1.39	0.54	0.70
Grade 6	1 Ideas and Content	8070	6	3.46	0.79	3.46	0.78	63.53	35.13	1.34	0.52	0.67
	2 Organization	8070	6	3.44	0.78	3.45	0.78	64.08	34.68	1.24	0.53	0.67
	3 Voice	8070	6	3.42	0.86	3.42	0.86	56.74	40.51	2.75	0.48	0.65
	4 Word Choice	8070	6	3.4	0.86	3.41	0.86	56.46	41.04	2.50	0.47	0.65
	Sentence Fluency	8070	6	3.39	0.86	3.4	0.87	56.36	40.88	2.76	0.48	0.65
	6 Conventions	8070	6	3.52	0.77	3.51	0.77	62.97	35.90	1.13	0.50	0.66
Grade 7	1 Ideas and Content	8145	6	3.49	0.86	3.49	0.86	59.96	37.68	2.36	0.52	0.68
	2 Organization	8145	6	3.49	0.85	3.49	0.85	62.17	35.86	1.96	0.54	0.69
	3 Voice	8145	6	3.4	0.9	3.39	0.89	58.12	39.50	2.38	0.52	0.69
	4 Word Choice	8145	6	3.38	0.89	3.38	0.88	58.86	38.82	2.32	0.52	0.69
	Sentence Fluency	8145	6	3.38	0.9	3.37	0.89	58.67	38.96	2.37	0.53	0.69
	6 Conventions	8145	6	3.5	0.83	3.5	0.83	62.79	35.57	1.65	0.53	0.69
Grade 8	1 Ideas and Content	7900	6	3.59	0.85	3.59	0.84	60.72	37.24	2.04	0.52	0.67
	2 Organization	7900	6	3.6	0.84	3.59	0.83	63.49	34.84	1.67	0.54	0.69
	3 Voice	7900	6	3.44	0.87	3.44	0.88	58.71	38.99	2.30	0.51	0.68
	4 Word Choice	7900	6	3.42	0.86	3.42	0.87	59.10	38.78	2.11	0.51	0.68
	Sentence Fluency	7900	6	3.41	0.87	3.41	0.87	58.71	39.15	2.14	0.51	0.68
	6 Conventions	7900	6	3.64	0.83	3.64	0.81	61.86	36.46	1.68	0.51	0.67

Note: All student responses were rated by the two raters. Only students receiving scores and condition codes of B, C, and D are included in this analysis

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Table 9.1.2.2
2009 Spring AIMS Inter-Rater Position Consistency
High School

	Trait	N	MAX Points	Rater 1 M	Rater 1 SD	Rater 2 M	Rater 2 SD	% Agreeement Perfect	% Agreeement Adjacent	% Agreeement Discrepant	Wgt Kappa	Interclass Correlation
Form A												
	1 Ideas and Content	72685	6	3.71	0.82	3.71	0.81	63.62	34.92	1.46	0.54	0.69
	2 Organization	72685	6	3.7	0.81	3.7	0.81	64.19	34.45	1.37	0.54	0.69
	3 Voice	72685	6	3.63	0.84	3.63	0.84	57.98	39.17	2.85	0.48	0.64
	4 Word Choice	72685	6	3.61	0.82	3.61	0.82	60.08	37.63	2.29	0.49	0.65
	Sentence Fluency	72685	6	3.61	0.84	3.61	0.84	59.29	38.24	2.47	0.49	0.65
	6 Conventions	72685	6	3.69	0.81	3.69	0.81	63.39	35.09	1.52	0.53	0.68
Form T												
	1 Ideas and Content	1631	6	3.26	1.07	3.28	1.07	52.85	42.49	4.66	0.54	0.73
	2 Organization	1631	6	3.32	1.08	3.3	1.09	54.75	41.32	3.92	0.57	0.76
	3 Voice	1631	6	3.48	1.05	3.54	1.08	54.45	40.83	4.72	0.55	0.73
	4 Word Choice	1631	6	3.51	1.05	3.55	1.08	56.35	40.40	3.25	0.58	0.76
	Sentence Fluency	1631	6	3.47	1.08	3.5	1.09	53.65	42.12	4.23	0.55	0.74
	6 Conventions	1631	6	3.43	1.06	3.42	1.03	54.75	41.75	3.49	0.55	0.74

Note: All student responses were rated by the two raters. Only students receiving scores and condition codes of B, C, and D are included in this analysis

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9.2 Validity

"Validity refers to the degree to which evidence and theory support the interpretations of test scores entailed by proposed users of tests. Validity is, therefore, the most fundamental consideration in developing and evaluating tests" (AERA/APA/NCME, 1999). The purpose of test score validation is not to validate the test itself but to validate interpretations of the test scores for particular purposes or uses. Test score validation is not a quantifiable property but an ongoing process, beginning at initial conceptualization and continuing throughout the entire assessment process.

The 2009 Spring AIMS tests were designed and developed to provide fair and accurate ability scores that support appropriate, meaningful, and useful educational decisions. In addition to the evidence provided in Part 2 (Involvement of Arizona Educators), additional validity evidence may be found in the following parts as described: Part 3 (Test Design), Part 4 (Test Development), Part 5 (Test Administration), Part 6 (Classical Item Analysis), Part 7 (Calibration, Scaling and Equating), Part 8 (Reliability), and Part 10 (Classification). As the Technical Report has progressed, chapter by chapter, it has moved through the phases of the testing cycle. Each part of the Technical Report detailed the procedures and processes applied in the creation of AIMS, as well as their results. Each part also highlights the meaning and significance of the procedures, processes, and results in terms of content and construct validity and the relationship to the *Standards.* Part 9.2 addresses two final issues in validity: the issues of bias and construct validity. The analyses presented here add to the perspectives provided in Chapters 2 through 10. Below is a brief review.

Part 2 of the Technical Report described the involvement of Arizona educators, ADE, and CTB in the test development process. As indicated in Part 2, the test development process and the involvement of Arizona educators in that process formed an important part of the validity of the entire AIMS. The knowledge, expertise, and professional judgment offered by Arizona educators ultimately ensured that the content of AIMS formed an adequate and representative sample of

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appropriate content and that the content formed a legitimate basis upon which to validly derive conclusions about student achievement.

Parts 3 and 4 of the Technical Report addressed the issue of test form development. Part 3 provided a general discussion of test book creation and editing process, the process of selecting operational test items, the content distribution of embedded field test item, and the process of obtaining ADE approvals. The test design process and the participation of Arizona educators in the process of test selection, including item content and bias review, provide a solid rationale for having confidence in the content and design of AIMS as a tool from which to derive valid inferences about Arizona student performance.

Part 5 of the Technical Report described the process, procedures, and policies that guided the administration of the AIMS, including accommodations, security, and the written procedures provided to test administrators and school personnel.

Part 6 described classical data analysis of the Spring 2009 AIMS.

Part 7 of the Technical Report described the calibration, scaling and equating methods, as well as processes and procedures for deriving scale scores from students' raw scores and the data cleaning steps which ensure valid calibration and scaling. Some references to introductory and advanced discussions of IRT are provided.

Part 9 of the Technical Report described Cronbach's alpha as a measure for internal consistency for Reading, Mathematics, Science, and inter-rater position consistency for Writing. Below an analysis of DIF (Differential Item Functioning) is presented complete with tables of gender and ethnic functioning of all operational items for the 2009 AIMS assessments.

Part 10 of the Technical Report will describe a detailed analysis of classification consistency and classification accuracy.

Additional evidence to support the validity of the 2009 AIMS assessments is provided by the following:

- Any items that displayed differential item functioning for subgroups of ethnicity and gender were identified, and
- Correlations between scores on the 2009 AIMS tests for each grade level as construct validity were presented.

Also note that further evidence in support of the AIMS assessment has been documented in previous AIMS technical reports.

9.2.1 Differential Item Functioning

Because test scores can have many sources of variation, the test publishers' task is to develop assessments that measure the intended abilities and skills without introducing extraneous elements or construct irrelevant variance. When tests measure something other than what they are intended to measure, test scores will reflect these unintended skills and knowledge, as well as what is purportedly assessed by the test. If this occurs, these tests can be called biased (Angoff, 1993; Camilli & Shepard, 1994; Green, 1975). One of the factors that may render test scores to be biased is differing cultural and socioeconomic experiences.

The 2009 Spring AIMS tests were developed using procedures to minimize item and test bias and included reviews such as the Content and Sensitivity Reviews described in Part 4, Test Development. Expertise in this area is not, however, a substitute for statistical analyses of the items. Thus, an empirical differential item functioning (DIF) approach was used to examine potential item bias. DIF studies include systematic item analyses to determine if examinees with the same

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underlying level of ability have the same probability of correctly responding to the item. Items identified with DIF are further examined to determine if item performance differences between identifiable subgroups of the population are due to extraneous or construct irrelevant information which make the items unfairly difficult for one of the subgroups.

DIF analyses of the 2009 Spring AIMS tests were conducted for ethnic subgroups and gender. In order to compute DIF, students must be matched on ability level using a conditioning variable. For these analyses, raw score on the CRT test in the content area of interest was used as the conditioning variable. Note that DIF analyses were conducted on Reading, Mathematics, and Science items only, as the Writing single prompt assessments do not have an appropriate conditioning variable for analysis.

The Mantel-Haenszel chi-square statistic was used to identify DIF in multiple choice items. The Mantel-Haenszel statistic was first recommended by Holland and Thayer (1988), is frequently used, and is efficient in terms of statistical power (Clauser & Mazor, 1998). The Mantel-Haenszel statistic is computed as (Zwick, Donoghue, & Grima, 1993)

$$\text{Mantel } \chi^2 = \frac{\left(\sum_k F_k - \sum_k E(F_k)\right)^2}{\sum_k \text{Var}(F_k)},$$

where F_k is the sum of scores for the focal group at the kth level of the matching variable. Note that the Mantel-Haenszel statistic is sensitive to N such that larger sample sizes increase the value of chi square.

In addition to the Mantel-Haenszel chi-square statistic, the delta statistic (MH-D DIF) was computed for all items. Educational Testing Service (ETS) first developed the MH-D DIF statistic. To compute delta, alpha (the odds ratio) is first computed as

$$\alpha_{MH} = \frac{\sum_{k=1}^{K} N_{r1k} N_{f0k} / N_k}{\sum_{k=1}^{K} N_{f1k} N_{r0k} / N_k},$$

where N_{r1k} is the number of correct responses in the reference group at ability level k, N_{f0k} is the number of incorrect responses in the focal group at ability level k, N_k is the total number of responses, N_{f1k} is the number of correct responses in the focal group at ability level k, and N_{r0k} is the number of incorrect responses in the reference group at ability level k. MH-D DIF is then computed as

$$\text{MH-D DIF} = -2.35 \ln(\alpha_{MH}).$$

Positive values of MH-D DIF indicate items that favor the focal group, whereas negative values of MH-D DIF indicate items that favor the reference group.

The Mantel-Haenszel chi-square statistic and the delta statistic were used in combination to identify the 2009 Spring AIMS items that exhibit strong, weak, or no DIF (Zieky, 1993). Table 9.2.1.1 indicates the criteria for each category used for the 2009 AIMS DIF analysis. An alpha level

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of .01 was used for all Mantel-Haenszel statistics. Note that the criteria are very lenient given very large sample sizes and the number of DIF statistics computed. In other words, a large number of items will be placed in categories B and C given the critical value. For reference, the critical value for the chi-square statistic to be significant at p<0.01 is 6.635, at p<0.001 the critical value is 10.827, and at p<0.0005 the critical value is 12.116.

Table 9.2.1.1
Differential Item Functioning Flag Categories

Category	Description	Criterion
A	No DIF	Mantel-Haenzel chi-square not significantly different than zero
B	Weak DIF	Significant Mantel-Haenzel chi-square (p<0.01) and |MH D-DIF| < 1.5
C	Strong DIF	Significant Mantel-Haenzel chi-square (p<0.01) and |MH D-DIF| ≥ 1.5

Another measure of DIF, also presented here for the 2009 Spring AIMS operational items, is the standardized mean difference (SMD; Zwick et al., 1993). The SMD is an effect size index of DIF which is relatively easy to interpret. The SMD compares the means of the reference and focus groups, adjusting for the distribution of reference and focal group members on the conditioning variable, which for these analyses is the CRT raw score. SMD is computed as (Zwick et al., 1993)

$$SMD = p_{Fk}\left(\sum_k m_{Fk} - \sum_k m_{Rk}\right),$$

where p_{fk}= proportion of the focal group members at the *k*th level of the matching variable, $m_{Fk}=1/N_{F1k}$ and $m_{Rk}=1/N_{R1k}$. A negative SMD value indicates an item on which the focal group has a lower mean than the reference group. A positive SMD value indicates an item on which the reference group has a lower mean than the focal group.

Mantel-Haenszel chi-square statistic, MH-D DIF, SMD, and flag category results for all items in the 2009 Spring AIMS CRT tests are presented in Tables 9.2.1.2 through 9.2.1.18. It is important to note that DIF analyses are also conducted on field test items prior to form construction. Very few AIMS items are identified as exhibiting strong DIF in field testing. All items exhibiting strong DIF are investigated for possible sources of differential functioning by CTB Test Development and ADE staff and such items are avoided in form construction. Not surprisingly, the vast majority of items on the operational AIMS exhibit no DIF or weak DIF. Items that were flagged for exhibiting strong DIF are summarized in Table 9.2.1.19. There were a total of 23 such items.

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Table 9.2.1.2
2009 Spring AIMS Differential Item Functioning Mathematics CRT Grade 3

	Reference: Male N=42280 Focal: Female N=40778				Reference: White N=35822 Focal: African Amer N=4898				Reference: White N=35822 Focal: Hispanic N=35560				Reference: White N=35822 Focal: Native Amer N=4260				Reference: White N=35822 Focal: Asian N=2503			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
1	408.04	-0.81	-0.06	B<	9.83	-0.28	-0.02	B<	554.48	-1.07	-0.08	B<	238.45	-1.33	-0.11	B<	14.96	-0.53	-0.03	B<
2	78.06	0.57	0.02	B>	0.33	-0.08	0.00	A	0.35	-0.05	0.00	A	0.07	-0.04	0.00	A	3.03	-0.38	-0.01	A
3	227.00	-0.65	-0.04	B<	6.55	0.24	0.02	A	121.86	0.55	0.03	B>	58.67	0.75	0.06	B>	12.62	0.54	0.02	B>
4	6.36	0.41	0.00	A	0.01	-0.05	0.00	A	0.18	0.09	0.00	A	0.6	0.29	0.00	A	10.54	-1.59	-0.01	C<
5	28.61	0.21	0.02	B>	2.77	0.15	0.01	A	19.57	0.20	0.01	B>	5.19	-0.20	-0.02	A	3.70	0.26	0.02	A
6	174.67	0.49	0.04	B>	1.97	0.11	0.01	A	128.62	0.47	0.04	B>	15.41	0.34	0.03	B>	0.75	-0.11	-0.01	A
7	13.73	0.16	0.01	B>	29.28	0.52	0.03	B>	133.42	0.58	0.04	B>	7.68	0.27	0.02	B>	57.97	1.29	0.05	B>
8	0.03	0.01	0.00	A	26.17	-0.48	-0.03	B<	272.77	-0.82	-0.05	B<	51.11	-0.67	-0.05	B<	55.88	-1.04	-0.05	B<
9	15.10	0.19	0.01	B>	10.67	0.34	0.02	B>	233.66	0.85	0.04	B>	47.03	0.77	0.04	B>	0.52	0.12	0.00	A
10	15.24	-0.14	-0.01	B<	2.47	-0.12	-0.01	A	129.87	-0.45	-0.04	B<	57.08	-0.65	-0.06	B<	14.53	-0.40	-0.04	B<
11	5.57	-0.11	-0.01	A	2.39	0.15	0.01	A	112.27	0.56	0.03	B>	11.71	0.35	0.02	B>	7.27	0.44	0.02	B>
12	28.96	0.50	0.01	B>	9.07	0.59	0.01	B>	20.46	0.49	0.01	B>	0.12	0.07	0.00	A	3.20	-0.57	-0.01	A
13	1.90	-0.06	0.00	A	0.00	0.00	0.00	A	12.65	-0.17	-0.01	B<	4.58	-0.20	-0.02	A	0.19	0.07	0.00	A
14	176.66	-0.51	-0.04	B<	62.93	-0.67	-0.05	B<	20.03	-0.19	-0.01	B<	4.83	0.20	0.02	A	0.49	-0.09	-0.01	A
15	421.46	-0.90	-0.05	B<	100.68	-0.96	-0.06	B<	718.88	-1.29	-0.09	B<	316.13	-1.83	-0.12	C<	56.94	-1.06	-0.05	B<
16	0.07	-0.01	0.00	A	2.35	-0.16	-0.01	A	4.28	-0.12	-0.01	A	1.8	-0.14	-0.01	A	0.02	-0.03	0.00	A
17	43.12	0.25	0.02	B>	4.54	-0.18	-0.02	A	33.10	0.25	0.02	B>	14.95	0.34	0.03	B>	0.11	0.04	0.00	A
18	0.61	0.03	0.00	A	4.24	0.18	0.01	A	47.62	-0.30	-0.02	B<	42.63	-0.56	-0.05	B<	4.56	-0.28	-0.02	A
19	647.68	-0.90	-0.08	B<	33.13	-0.46	-0.04	B<	36.89	-0.24	-0.02	B<	0.06	-0.02	0.00	A	3.12	-0.19	-0.02	A
20	0.46	-0.03	0.00	A	32.96	-0.55	-0.03	B<	5.64	-0.13	-0.01	A	73.18	-0.87	-0.06	B<	14.33	-0.63	-0.02	B<
21	0.78	-0.03	0.00	A	18.20	0.33	0.03	B>	89.91	0.37	0.03	B>	4.32	0.17	0.02	A	6.82	0.28	0.02	B>
22	16.51	-0.32	-0.01	B<	0.92	0.15	0.00	A	21.18	0.42	0.01	B>	3.87	0.33	0.01	A	1.28	-0.33	0.00	A
23	2.56	-0.08	0.00	A	0.69	0.08	0.01	A	48.77	0.37	0.02	B>	14.15	0.40	0.03	B>	0.79	-0.14	-0.01	A
24	0.12	-0.01	0.00	A	0.13	0.03	0.00	A	5.07	0.09	0.00	A	11.74	0.29	0.03	B>	14.56	0.45	0.03	B>
25	135.16	0.42	0.04	B>	3.34	-0.15	-0.01	A	82.22	-0.36	-0.03	B<	28.57	-0.45	-0.04	B<	3.23	-0.20	-0.02	A
26	5.64	0.11	0.01	A	13.92	0.37	0.02	B>	134.36	0.61	0.04	B>	41.9	0.68	0.05	B>	9.20	0.49	0.02	B>
27	5.76	-0.09	-0.01	A	59.24	-0.65	-0.05	B<	0.72	0.03	0.00	A	0.72	0.08	0.00	A	20.44	-0.49	-0.04	B<
28	1.07	-0.05	0.00	A	0.50	-0.07	-0.01	A	0.58	-0.04	0.00	A	19.79	-0.44	-0.03	B<	3.60	-0.32	-0.01	A
29	61.96	-0.31	-0.02	B<	60.26	0.67	0.05	B>	60.35	0.34	0.02	B>	16.85	0.37	0.03	B>	24.25	0.68	0.04	B>
30	0.83	0.05	0.00	A	3.87	0.24	0.01	A	8.44	0.19	0.01	B>	7.69	0.35	0.02	B>	0.71	0.19	0.00	A

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

(table continues)

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Table 9.2.1.2 (continued)
2009 Spring AIMS Differential Item Functioning Mathematics CRT Grade 3

	Reference: Male N=42280 Focal: Female N=40778				Reference: White N=35822 Focal: African Amer N=4898				Reference: White N=35822 Focal: Hispanic N=35560				Reference: White N=35822 Focal: Native Amer N=4260				Reference: White N=35822 Focal: Asian N=2503			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
31	1.23	0.09	0.00	A	0.05	0.04	0.00	A	42.50	0.59	0.01	B>	23.61	0.81	0.02	B>	0.09	0.11	0.00	A
32	1115.30	-1.22	-0.11	B<	125.37	-0.89	-0.08	B<	360.73	-0.76	-0.07	B<	0.78	-0.08	-0.01	A	6.81	-0.30	-0.02	B<
33	1.40	-0.05	0.00	A	3.14	0.17	0.01	A	21.22	0.23	0.01	B>	0.55	0.07	0.01	A	7.58	0.43	0.02	B>
34	0.09	0.01	0.00	A	1.43	-0.11	-0.01	A	113.69	-0.48	-0.03	B<	34.95	-0.56	-0.04	B<	1.14	0.15	0.01	A
35	22.67	-0.21	-0.01	B<	1.72	-0.12	-0.01	A	4.30	0.11	0.01	A	46.4	0.68	0.05	B>	12.33	0.58	0.02	B>
36	121.03	0.48	0.03	B>	2.51	0.15	0.01	A	10.46	-0.16	-0.01	B<	29.46	-0.51	-0.04	B<	2.86	0.27	0.01	A
37	2.63	0.07	0.00	A	38.26	0.57	0.04	B>	38.61	0.29	0.02	B>	5.13	0.21	0.02	A	52.86	1.13	0.05	B>
38	225.65	0.56	0.05	B>	1.15	-0.09	-0.01	A	0.04	0.01	0.00	A	35.38	-0.54	-0.04	B<	0.83	-0.11	-0.01	A
39	161.89	-0.48	-0.04	B<	16.31	-0.34	-0.03	B<	288.32	-0.71	-0.05	B<	46.44	-0.63	-0.05	B<	1.49	-0.14	-0.01	A
40	2.84	-0.10	0.00	A	3.79	0.23	0.01	A	21.39	0.30	0.01	B>	15.12	0.46	0.02	B>	1.44	0.27	0.01	A
41	22.12	0.21	0.01	B>	38.30	0.60	0.04	B>	247.60	0.80	0.05	B>	165.89	1.34	0.09	B>	3.86	0.31	0.01	A
42	42.47	0.33	0.01	B>	6.81	0.28	0.02	B>	72.76	0.49	0.02	B>	70.52	0.99	0.05	B>	0.00	-0.01	0.00	A
43	6.53	-0.15	-0.01	A	5.13	0.27	0.01	A	105.60	0.70	0.03	B>	24.88	0.62	0.03	B>	3.98	0.46	0.01	A
44	100.66	-0.46	-0.03	B<	0.07	0.03	0.00	A	1.56	0.06	0.00	A	77.02	0.90	0.06	B>	1.69	0.22	0.01	A
45	0.91	-0.03	0.00	A	7.96	-0.23	-0.02	B<	19.10	-0.18	-0.02	B<	0.82	-0.08	-0.01	A	9.43	-0.34	-0.03	B<
46	43.82	-0.26	-0.02	B<	23.93	0.43	0.03	B>	33.41	0.26	0.01	B>	0.12	-0.03	-0.01	A	1.09	0.14	0.01	A
47	1.22	-0.04	0.00	A	0.01	0.01	0.00	A	16.85	-0.16	-0.02	B<	27.11	0.45	0.04	B>	7.10	0.29	0.02	B>
48	105.14	-0.40	-0.03	B<	16.55	-0.35	-0.03	B<	16.83	-0.18	-0.01	B<	0	0.01	0.00	A	1.78	-0.17	-0.01	A
49	27.38	0.24	0.01	B>	6.78	0.26	0.02	B>	0.00	0.00	0.00	A	14.96	-0.37	-0.03	B<	3.45	0.33	0.01	A
50	74.87	0.34	0.03	B>	3.59	-0.16	-0.01	A	45.94	0.30	0.02	B>	1.67	-0.11	-0.01	A	4.51	-0.27	-0.02	A
51	0.59	0.04	0.00	A	5.69	0.25	0.01	A	132.47	0.65	0.03	B>	70.9	1.01	0.05	B>	0.10	-0.06	0.00	A
52	261.87	0.61	0.05	B>	3.97	0.17	0.02	A	30.39	-0.23	-0.02	B<	15.4	-0.34	-0.03	B<	1.37	-0.15	-0.01	A
53	220.82	0.53	0.05	B>	15.94	0.31	0.03	B>	8.27	0.11	0.02	B>	23.5	0.40	0.04	B>	0.18	0.05	0.00	A
54	35.49	-0.26	-0.02	B<	7.02	-0.25	-0.02	B<	403.54	-0.98	-0.06	B<	164.43	-1.18	-0.09	B<	0.77	-0.14	-0.01	A
55	158.77	0.66	0.03	B>	36.90	0.69	0.04	B>	18.81	0.26	0.01	B>	11.35	0.38	0.02	B>	1.91	0.28	0.01	A
56	251.43	0.79	0.04	B>	2.38	0.16	0.01	A	180.74	0.76	0.04	B>	5.82	0.26	0.01	A	14.14	0.69	0.02	B>
57	18.07	0.16	0.01	B>	87.21	0.78	0.07	B>	137.61	0.50	0.04	B>	40.01	0.55	0.05	B>	16.78	0.51	0.03	B>
58	43.78	-0.30	-0.02	B<	19.78	-0.42	-0.03	B<	49.84	-0.37	-0.03	B<	1.88	-0.14	-0.01	A	7.67	-0.42	-0.02	B<
59	29.92	-0.21	-0.02	B<	7.52	-0.23	-0.02	B<	155.66	-0.52	-0.04	B<	103.97	-0.90	-0.08	B<	2.05	-0.18	-0.01	A
60	13.58	0.19	0.01	B>	0.01	0.01	0.00	A	17.65	0.25	0.01	B>	21.24	0.52	0.03	B>	0.04	-0.04	0.00	A

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item numb

(table continues)

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Table 9.2.1.2 (continued)
2009 Spring AIMS Differential Item Functioning Mathematics CRT Grade 3

	Reference: Male N=42280 Focal: Female N=40778				Reference: White N=35822 Focal: African Amer N=4898				Reference: White N=35822 Focal: Hispanic N=35560				Reference: White N=35822 Focal: Native Amer N=4260				Reference: White N=35822 Focal: Asian N=2503			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
61	106.40	0.63	0.02	B>	1.02	0.13	0.01	A	21.09	0.33	0.01	B>	13.05	0.45	0.02	B>	0.02	-0.05	0.00	A
62	70.93	0.38	0.02	B>	7.06	-0.25	-0.02	B<	6.66	-0.13	-0.01	B<	50.2	-0.66	-0.05	B<	4.47	-0.34	-0.01	A
63	27.61	0.19	0.02	B>	3.45	0.15	0.01	A	39.95	0.26	0.02	B>	7.11	0.23	0.02	B>	1.53	-0.15	-0.01	A
64	1.19	-0.07	0.00	A	0.95	-0.12	-0.01	A	40.07	0.45	0.02	B>	26.09	0.67	0.03	B>	0.00	0.02	0.00	A
65	452.44	0.87	0.06	B>	5.65	-0.21	-0.01	A	65.24	-0.37	-0.03	B<	21.23	-0.41	-0.03	B<	10.31	-0.43	-0.02	B<
66	4.72	0.10	0.01	A	5.10	0.22	0.01	A	22.44	0.25	0.01	B>	6.99	-0.26	-0.02	B<	7.08	0.46	0.02	B>
67	12.43	0.14	0.01	B>	6.24	-0.21	-0.02	A	0.70	0.04	0.00	A	15.9	-0.36	-0.03	B<	0.08	-0.04	0.00	A
68	220.74	0.52	0.05	B>	6.37	0.20	0.02	A	20.99	0.18	0.01	B>	1.82	-0.11	-0.02	A	0.18	0.05	0.00	A
69	753.15	-1.25	-0.07	B<	27.99	-0.49	-0.03	B<	6.73	0.13	0.01	B>	92.14	0.99	0.07	B>	8.56	0.49	0.02	B>
70	2.82	-0.09	0.00	A	11.01	0.36	0.02	B>	73.10	0.50	0.03	B>	50.23	0.79	0.05	B>	4.60	0.40	0.01	A
71	72.88	0.32	0.03	B>	1.81	0.11	0.01	A	44.06	-0.28	-0.02	B<	13.4	-0.32	-0.03	B<	5.47	-0.29	-0.02	A
72	16.60	0.16	0.01	B>	1.31	0.10	0.01	A	14.90	-0.17	-0.01	B<	0.48	0.06	0.01	A	2.13	-0.19	-0.01	A

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item numb

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Table 9.2.1.3
2009 Spring AIMS Differential Item Functioning Mathematics CRT Grade 4

	Reference: Male N=42097 Focal: Female N=40298				Reference: White N=35504 Focal: African Amer N=4803				Reference: White N=35504 Focal: Hispanic N=35139				Reference: White N=35504 Focal: Native Amer N=4444				Reference: White N=35504 Focal: Asian N=2527			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
1	12.88	0.16	0.01	B>	5.50	0.23	0.02	A	4.20	-0.11	-0.01	A	0.04	0.02	0.00	A	0.17	-0.07	0.00	A
2	180.54	-0.61	-0.03	B<	21.94	-0.44	-0.03	B<	4.71	-0.11	-0.01	A	69.73	-0.79	-0.06	B<	14.36	-0.60	-0.02	B<
3	14.19	0.18	0.01	B>	0.36	0.06	0.00	A	7.01	0.14	0.01	B>	4.06	-0.20	-0.01	A	26.08	1.00	0.03	B>
4	125.35	-0.44	-0.03	B<	3.45	-0.16	-0.01	A	198.29	-0.62	-0.05	B<	83.6	-0.79	-0.07	B<	9.89	-0.39	-0.02	B<
5	36.11	0.22	0.02	B>	0.19	-0.04	0.00	A	4.54	-0.09	-0.01	A	3.33	-0.16	-0.02	A	2.61	-0.19	-0.01	A
6	0.46	0.04	0.00	A	12.48	-0.41	-0.02	B<	5.24	-0.15	-0.01	A	26.36	-0.59	-0.03	B<	5.20	-0.44	-0.01	A
7	71.55	0.62	0.01	B>	3.91	-0.29	-0.01	A	1.91	-0.12	0.00	A	1.13	0.16	0.00	A	3.60	-0.56	-0.01	A
8	378.05	1.06	0.04	B>	1.21	0.13	0.01	A	35.06	-0.37	-0.01	B<	21.16	-0.49	-0.03	B<	4.35	-0.43	-0.01	A
9	361.72	0.77	0.05	B>	64.28	0.72	0.05	B>	340.94	0.85	0.06	B>	77.11	0.80	0.06	B>	96.93	1.50	0.07	B>
10	198.61	0.61	0.04	B>	43.98	-0.60	-0.04	B<	25.07	-0.25	-0.02	B<	2.8	0.17	0.01	A	35.21	-0.82	-0.04	B<
11	31.17	0.31	0.01	B>	11.35	0.39	0.02	B>	96.39	0.62	0.03	B>	46.66	0.79	0.04	B>	7.17	0.56	0.01	B>
12	53.57	-0.28	-0.02	B<	15.79	-0.33	-0.03	B<	229.69	-0.65	-0.05	B<	57.87	-0.66	-0.06	B<	5.69	-0.32	-0.02	A
13	113.03	-0.57	-0.02	B<	1.06	0.12	0.01	A	16.45	0.25	0.01	B>	5.98	0.27	0.02	A	5.29	0.47	0.01	A
14	120.11	0.42	0.03	B>	10.43	0.27	0.02	B>	64.85	0.35	0.03	B>	9.48	0.27	0.02	B>	31.68	0.76	0.04	B>
15	1.13	-0.06	0.00	A	3.35	0.20	0.01	A	32.51	0.34	0.02	B>	13.55	0.40	0.02	B>	2.69	0.33	0.01	A
16	44.89	0.27	0.02	B>	23.48	0.43	0.03	B>	18.65	0.20	0.02	B>	2.09	0.13	0.01	A	8.02	0.41	0.02	B>
17	62.78	-0.46	-0.02	B<	13.88	-0.45	-0.02	B<	96.96	-0.66	-0.03	B<	19.37	-0.51	-0.03	B<	2.83	-0.39	-0.01	A
18	106.11	0.48	0.03	B>	4.93	-0.22	-0.01	A	6.90	-0.14	-0.01	B<	28.99	-0.52	-0.04	B<	0.12	-0.06	0.00	A
19	31.80	-0.26	-0.01	B<	10.84	0.32	0.02	B>	151.32	0.64	0.04	B>	76.9	0.93	0.06	B>	12.44	0.56	0.02	B>
20	9.03	0.16	0.01	B>	0.09	0.04	0.00	A	4.60	0.13	0.01	A	12.19	0.40	0.02	B>	0.24	0.10	0.00	A
21	0.35	0.02	0.00	A	22.71	-0.40	-0.03	B<	284.51	-0.72	-0.05	B<	200.97	-1.20	-0.10	B<	81.11	-1.09	-0.07	B<
22	10.14	-0.11	-0.01	B<	16.08	0.32	0.03	B>	1.06	-0.04	-0.01	A	1.08	0.09	0.01	A	0.19	-0.05	0.00	A
23	16.24	0.15	0.01	B>	3.08	0.15	0.01	A	40.97	0.27	0.02	B>	2.42	-0.15	-0.01	A	12.54	0.41	0.03	B>
24	95.35	0.41	0.03	B>	0.03	0.02	0.00	A	6.73	-0.12	-0.01	B<	0.05	0.02	0.00	A	0.05	-0.04	0.00	A
25	269.39	-0.71	-0.04	B<	50.93	-0.66	-0.05	B<	264.99	-0.78	-0.06	B<	102.34	-0.95	-0.07	B<	10.27	-0.47	-0.02	B<
26	10.40	-0.16	-0.01	B<	6.58	0.27	0.01	A	77.83	0.50	0.02	B>	23.56	0.53	0.03	B>	0.58	0.14	0.00	A
27	687.54	1.02	0.08	B>	0.74	-0.07	-0.01	A	4.95	-0.10	-0.01	A	36.23	-0.54	-0.05	B<	21.93	-0.57	-0.04	B<
28	7.04	-0.12	-0.01	B<	23.89	0.50	0.03	B>	7.47	0.15	0.01	B>	0.68	0.08	0.00	A	12.35	0.66	0.02	B>
29	0.36	-0.02	0.00	A	24.61	-0.45	-0.03	B<	257.46	-0.72	-0.06	B<	190.6	-1.29	-0.10	B<	2.93	-0.23	-0.01	A
30	246.49	0.94	0.03	B>	7.07	0.34	0.01	B>	17.54	0.29	0.01	B>	0.59	0.09	0.01	A	6.66	-0.53	-0.01	B<

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

(table continues)

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Table 9.2.1.3 (continued)
2009 Spring AIMS Differential Item Functioning Mathematics CRT Grade 4

	Reference: Male N=42097 Focal: Female N=40298				Reference: White N=35504 Focal: African Amer N=4803				Reference: White N=35504 Focal: Hispanic N=35139				Reference: White N=35504 Focal: Native Amer N=4444				Reference: White N=35504 Focal: Asian N=2527			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
31	59.66	-0.31	-0.02	B<	1.37	0.10	0.01	A	0.14	-0.02	0.00	A	6.13	0.22	0.02	A	2.87	-0.22	-0.01	A
32	265.44	-0.73	-0.04	B<	0.54	0.07	0.01	A	10.19	0.16	0.01	B>	37.59	0.60	0.04	B>	7.85	0.47	0.02	B>
33	9.38	-0.15	-0.01	B<	16.14	-0.40	-0.03	B<	21.10	-0.25	-0.02	B<	10.23	-0.33	-0.02	B<	7.49	-0.46	-0.02	B<
34	0.38	0.03	0.00	A	2.24	-0.14	-0.01	A	9.20	0.16	0.01	B>	24.75	0.50	0.03	B>	0.15	-0.07	0.00	A
35	17.82	0.23	0.01	B>	0.79	0.10	0.01	A	42.11	0.41	0.02	B>	41.23	0.80	0.04	B>	0.13	-0.07	0.00	A
36	12.82	0.29	0.00	B>	5.74	-0.36	-0.01	A	19.72	0.41	0.01	B>	26.19	0.89	0.02	B>	12.49	-0.95	-0.01	B<
37	0.30	0.03	0.00	A	2.52	0.18	0.01	A	13.56	0.23	0.01	B>	46.94	0.80	0.04	B>	0.45	-0.14	0.00	A
38	203.07	-0.57	-0.04	B<	3.26	-0.16	-0.01	A	25.92	-0.23	-0.02	B<	5.5	-0.20	-0.02	A	2.58	0.22	0.01	A
39	31.74	0.35	0.01	B>	0.17	-0.06	0.00	A	3.96	-0.14	0.00	A	2.33	0.20	0.01	A	5.11	-0.52	-0.01	A
40	192.89	-0.50	-0.04	B<	14.09	0.30	0.03	B>	37.57	0.25	0.02	B>	1.09	0.09	0.01	A	0.49	-0.08	-0.01	A
41	582.02	-0.97	-0.07	B<	45.68	-0.60	-0.04	B<	87.08	-0.41	-0.03	B<	4.64	-0.20	-0.02	A	1.20	-0.14	-0.01	A
42	0.27	0.02	0.00	A	0.48	-0.07	0.00	A	0.27	0.03	0.00	A	22.47	-0.47	-0.03	B<	7.04	-0.41	-0.02	B<
43	406.34	-0.70	-0.07	B<	0.06	0.02	0.00	A	1.83	0.05	0.00	A	0.55	-0.06	-0.01	A	0.83	0.10	0.01	A
44	10.74	0.13	0.01	B>	3.27	-0.16	-0.01	A	5.31	0.10	0.01	A	0.04	0.02	0.00	A	17.76	0.59	0.03	B>
45	63.90	0.33	0.02	B>	0.57	-0.07	-0.01	A	1.36	0.05	0.00	A	6.44	-0.23	-0.02	A	0.42	-0.10	0.00	A
46	11.65	-0.14	-0.01	B<	9.50	0.28	0.02	B>	0.98	-0.05	0.00	A	71.77	0.80	0.06	B>	0.36	0.09	0.00	A
47	0.85	-0.06	0.00	A	0.27	-0.07	0.00	A	1.43	0.08	0.00	A	2.98	0.21	0.01	A	1.24	-0.25	0.00	A
48	257.65	-0.68	-0.04	B<	0.53	-0.07	0.00	A	27.81	-0.25	-0.02	B<	5.26	-0.22	-0.02	A	4.11	0.30	0.01	A
49	3.42	0.09	0.00	A	1.28	-0.11	-0.01	A	0.53	-0.04	0.00	A	3.97	0.21	0.01	A	0.14	0.07	0.00	A
50	39.95	0.25	0.02	B>	7.32	0.23	0.02	B>	237.56	0.71	0.05	B>	29.87	0.50	0.04	B>	2.84	0.22	0.01	A
51	18.57	-0.18	-0.01	B<	5.53	-0.21	-0.02	A	4.24	-0.10	-0.01	A	0.05	0.02	0.00	A	10.71	-0.44	-0.02	B<
52	365.14	-1.02	-0.04	B<	66.04	-0.89	-0.04	B<	309.97	-1.07	-0.05	B<	121.18	-1.19	-0.07	B<	44.95	-1.33	-0.03	B<
53	80.95	0.37	0.03	B>	83.95	0.82	0.06	B>	124.18	0.52	0.04	B>	27.6	0.47	0.04	B>	36.58	0.91	0.04	B>
54	9.88	0.12	0.01	B>	1.50	-0.10	-0.01	A	0.01	0.00	0.00	A	2.09	-0.12	-0.01	A	0.94	0.13	0.01	A
55	0.65	-0.05	0.00	A	18.87	-0.51	-0.02	B<	14.89	-0.26	-0.01	B<	0.5	0.09	0.00	A	11.91	-0.73	-0.02	B<
56	60.50	0.36	0.02	B>	29.02	0.53	0.03	B>	58.17	0.40	0.02	B>	2.45	0.15	0.01	A	23.86	0.87	0.03	B>
57	253.11	-0.77	-0.04	B<	2.29	-0.15	-0.01	A	38.17	-0.34	-0.02	B<	64.72	-0.79	-0.05	B<	2.96	-0.30	-0.01	A
58	23.12	0.25	0.01	B>	3.36	0.20	0.01	A	110.09	0.62	0.03	B>	28.17	0.59	0.04	B>	4.10	0.36	0.01	A
59	134.22	0.50	0.03	B>	4.50	-0.20	-0.02	A	10.88	-0.16	-0.01	B<	101.01	-0.95	-0.07	B<	2.58	-0.24	-0.01	A
60	16.82	0.28	0.01	B>	0.23	0.07	0.00	A	24.89	0.39	0.01	B>	11.66	0.49	0.02	B>	4.80	-0.51	-0.01	A

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

(table continues)

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Table 9.2.1.3 (continued)
2009 Spring AIMS Differential Item Functioning Mathematics CRT Grade 4

	Reference: Male N=42097 Focal: Female N=40298				Reference: White N=35504 Focal: African Amer N=4803				Reference: White N=35504 Focal: Hispanic N=35139				Reference: White N=35504 Focal: Native Amer N=4444				Reference: White N=35504 Focal: Asian N=2527			
Item	MH $\chi 2$	ΔMH	SMD	Flag	MH $\chi 2$	ΔMH	SMD	Flag	MH $\chi 2$	ΔMH	SMD	Flag	MH $\chi 2$	ΔMH	SMD	Flag	MH $\chi 2$	ΔMH	SMD	Flag
61	75.63	-0.35	-0.03	B<	13.88	0.33	0.02	B>	65.36	0.36	0.02	B>	15.5	0.36	0.03	B>	43.22	0.90	0.05	B>
62	11.51	0.16	0.01	B>	2.69	-0.16	-0.01	A	27.08	-0.28	-0.02	B<	13.68	-0.36	-0.02	B<	4.05	-0.33	-0.01	A
63	150.80	0.47	0.04	B>	2.35	0.13	0.01	A	28.63	-0.23	-0.01	B<	9.94	0.27	0.03	B>	11.31	-0.42	-0.03	B<
64	44.73	-0.28	-0.02	B<	6.91	0.24	0.02	B>	8.20	-0.13	-0.01	B<	30.02	0.52	0.04	B>	12.30	0.52	0.03	B>
65	30.60	0.21	0.02	B>	55.60	0.62	0.05	B>	148.72	0.51	0.05	B>	59.73	0.65	0.06	B>	9.17	0.37	0.03	B>
66	120.23	-0.45	-0.03	B<	66.49	-0.71	-0.05	B<	96.09	-0.46	-0.03	B<	7.19	-0.25	-0.02	B<	13.73	-0.51	-0.03	B<
67	2.83	-0.08	0.00	A	9.24	0.32	0.02	B>	70.85	0.48	0.03	B>	51.92	0.77	0.05	B>	4.04	0.37	0.01	A
68	184.80	0.54	0.04	B>	13.34	0.31	0.03	B>	186.51	0.62	0.05	B>	57.82	0.67	0.06	B>	45.74	0.98	0.05	B>
69	65.94	0.55	0.01	B>	0.04	0.03	0.00	A	34.37	0.45	0.02	B>	26.24	0.72	0.03	B>	0.01	-0.04	0.00	A
70	1.74	0.05	0.00	A	37.30	-0.50	-0.04	B<	77.28	-0.35	-0.03	B<	9.02	-0.26	-0.02	B<	39.04	-0.67	-0.06	B<

Note. African Am. = African American, Native Am.= Native American, MH $\chi 2$= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

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Table 9.2.1.4
2009 Spring AIMS Differential Item Functioning Mathematics CRT Grade 5

	Reference: Male N=41411 Focal: Female N=39673				Reference: White N=35540 Focal: African Amer N=4875				Reference: White N=35540 Focal: Hispanic N=33981				Reference: White N=35540 Focal: Native Amer N=4261				Reference: White N=35540 Focal: Asian N=2436			
Item	MH $\chi 2$	ΔMH	SMD	Flag	MH $\chi 2$	ΔMH	SMD	Flag	MH $\chi 2$	ΔMH	SMD	Flag	MH $\chi 2$	ΔMH	SMD	Flag	MH $\chi 2$	ΔMH	SMD	Flag
1	164.57	-0.50	-0.04	B<	37.49	-0.51	-0.04	B<	391.91	-0.86	-0.07	B<	45.94	-0.60	-0.05	B<	67.16	-1.00	-0.06	B<
2	5.81	0.17	0.00	A	7.32	0.40	0.01	B>	15.46	0.32	0.01	B>	7.87	0.41	0.02	B>	3.14	0.53	0.01	A
3	1168.26	-1.39	-0.10	B<	8.67	-0.26	-0.02	B<	246.83	-0.70	-0.06	B<	7.44	-0.25	-0.02	B<	12.39	-0.48	-0.03	B<
4	154.58	0.68	0.03	B>	0.10	0.04	0.00	A	2.43	-0.10	-0.01	A	16.78	-0.46	-0.03	B<	6.51	-0.49	-0.01	A
5	124.44	0.51	0.03	B>	91.43	-0.87	-0.06	B<	35.16	-0.31	-0.02	B<	41.65	-0.62	-0.05	B<	69.92	-1.27	-0.05	B<
6	293.60	1.03	0.03	B>	4.10	-0.24	-0.01	A	26.10	-0.35	-0.02	B<	15.5	-0.48	-0.03	B<	1.65	-0.30	-0.01	A
7	564.30	-0.88	-0.08	B<	49.28	-0.56	-0.05	B<	29.35	-0.22	-0.02	B<	5.9	0.21	0.02	A	1.44	-0.15	-0.01	A
8	317.45	0.75	0.05	B>	18.44	0.39	0.03	B>	126.72	0.54	0.04	B>	13.6	0.34	0.03	B>	13.20	0.55	0.03	B>
9	58.71	0.30	0.02	B>	14.72	0.33	0.03	B>	97.36	0.44	0.03	B>	33.87	0.53	0.05	B>	19.43	0.60	0.04	B>
10	0.23	0.02	0.00	A	6.61	-0.23	-0.02	A	5.35	0.11	0.01	A	12.1	0.34	0.02	B>	0.78	-0.14	-0.01	A
11	23.77	0.23	0.01	B>	5.62	-0.24	-0.01	A	45.54	-0.36	-0.02	B<	20.67	-0.45	-0.03	B<	0.04	0.04	0.00	A
12	9.07	-0.12	-0.01	B<	59.57	0.68	0.05	B>	104.85	0.47	0.03	B>	22.18	0.43	0.04	B>	24.11	0.72	0.04	B>
13	0.29	-0.03	0.00	A	15.03	-0.43	-0.02	B<	32.38	-0.35	-0.02	B<	18.97	0.53	0.03	B>	2.78	-0.35	-0.01	A
14	19.00	0.19	0.01	B>	8.02	-0.26	-0.02	B<	8.06	-0.14	-0.01	B<	106.91	-0.99	-0.07	B<	9.27	-0.47	-0.02	B<
15	153.05	-0.46	-0.04	B<	66.50	-0.65	-0.06	B<	190.05	-0.56	-0.05	B<	28.02	-0.46	-0.04	B<	24.25	-0.58	-0.04	B<
16	3.59	0.08	0.01	A	1.21	0.10	0.01	A	195.95	-0.62	-0.05	B<	267.97	-1.41	-0.12	B<	48.97	-0.89	-0.05	B<
17	4.09	0.08	0.01	A	8.23	-0.23	-0.02	B<	105.47	-0.43	-0.03	B<	31.35	-0.50	-0.04	B<	13.09	-0.43	-0.03	B<
18	127.45	0.44	0.03	B>	0.97	-0.08	-0.01	A	3.42	0.08	0.01	A	0	-0.01	0.00	A	1.08	-0.14	-0.01	A
19	9.30	-0.16	-0.01	B<	39.29	-0.68	-0.04	B<	87.02	-0.57	-0.03	B<	86.33	-0.99	-0.06	B<	5.97	-0.51	-0.01	A
20	1.05	-0.04	0.00	A	0.03	0.02	0.00	A	7.20	0.13	0.01	B>	3.66	0.18	0.02	A	0.00	0.01	0.00	A
21	0.48	-0.04	0.00	A	18.51	0.50	0.02	B>	135.82	0.76	0.03	B>	67.27	1.03	0.05	B>	8.97	0.67	0.02	B>
22	29.81	0.25	0.01	B>	0.91	-0.09	-0.01	A	5.37	-0.12	-0.01	A	73.33	-0.83	-0.06	B<	6.45	-0.43	-0.01	A
23	97.98	-0.40	-0.03	B<	29.72	-0.46	-0.04	B<	54.90	-0.33	-0.02	B<	21.95	-0.42	-0.03	B<	6.31	-0.34	-0.02	A
24	470.87	1.12	0.05	B>	14.98	0.41	0.02	B>	97.14	0.57	0.03	B>	44.73	0.76	0.04	B>	0.00	0.01	0.00	A
25	448.90	-1.08	-0.05	B<	47.18	-0.69	-0.04	B<	70.82	-0.49	-0.03	B<	38.57	-0.65	-0.04	B<	8.44	-0.55	-0.02	B<
26	18.93	-0.22	-0.01	B<	1.05	0.11	0.01	A	19.66	0.26	0.01	B>	2.42	0.17	0.01	A	7.77	0.59	0.01	B>
27	39.96	0.42	0.01	B>	1.41	0.16	0.01	A	57.17	0.56	0.02	B>	19.84	0.62	0.03	B>	1.64	0.33	0.01	A
28	336.48	-0.74	-0.05	B<	44.26	-0.56	-0.04	B<	129.96	-0.51	-0.04	B<	22.37	-0.42	-0.03	B<	9.19	-0.42	-0.02	B<
29	242.68	0.64	0.04	B>	22.51	-0.41	-0.03	B<	21.01	0.21	0.02	B>	0.62	-0.07	0.00	A	0.65	-0.12	-0.01	A
30	66.02	0.31	0.03	B>	49.87	0.59	0.05	B>	117.52	0.46	0.03	B>	1.11	-0.10	-0.01	A	3.84	0.23	0.02	A

Note. African Am. = African American, Native Am.= Native American, MH $\chi 2$= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

(table continues)

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Table 9.2.1.4 (continued)
2009 Spring AIMS Differential Item Functioning Mathematics CRT Grade 5

	Reference: Male N=41411 Focal: Female N=39673				Reference: White N=35540 Focal: African Amer N=4875				Reference: White N=35540 Focal: Hispanic N=33981				Reference: White N=35540 Focal: Native Amer N=4261				Reference: White N=35540 Focal: Asian N=2436			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
31	77.32	0.39	0.02	B>	17.68	0.39	0.03	B>	200.93	0.71	0.05	B>	66.43	0.81	0.06	B>	7.36	0.43	0.02	B>
32	356.66	-0.72	-0.06	B<	1.35	-0.10	-0.01	A	9.84	-0.13	-0.01	B<	4.32	0.18	0.02	A	6.30	0.32	0.02	A
33	53.71	0.28	0.02	B>	9.35	0.25	0.02	B>	104.16	0.43	0.03	B>	25.22	0.44	0.04	B>	30.00	0.72	0.05	B>
34	9.30	0.16	0.01	B>	0.00	-0.01	0.00	A	0.09	-0.02	0.00	A	1.09	-0.12	-0.01	A	0.97	-0.21	-0.01	A
35	0.92	0.04	0.00	A	1.64	0.11	0.01	A	0.29	-0.02	0.00	A	1.39	-0.10	-0.01	A	14.58	-0.46	-0.03	B<
36	435.74	-0.88	-0.06	B<	21.47	-0.41	-0.03	B<	186.67	-0.65	-0.04	B<	40.59	-0.58	-0.05	B<	23.12	-0.73	-0.03	B<
37	4.71	-0.09	-0.01	A	0.00	0.00	0.00	A	41.11	-0.29	-0.02	B<	4.01	-0.19	-0.02	A	6.85	-0.37	-0.02	B<
38	44.50	-0.28	-0.02	B<	40.55	-0.55	-0.04	B<	108.61	-0.48	-0.03	B<	0.55	-0.07	-0.01	A	11.92	-0.49	-0.02	B<
39	185.12	0.65	0.03	B>	86.10	0.93	0.06	B>	401.45	1.08	0.06	B>	73.07	0.87	0.06	B>	80.10	1.79	0.05	C>
40	929.03	-1.23	-0.09	B<	10.27	-0.27	-0.02	B<	18.35	-0.19	-0.01	B<	2.13	0.13	0.01	A	0.14	-0.06	0.00	A
41	56.9	-0.3	-0.02	B<	2.36	-0.13	-0.01	A	26.48	0.23	0.01	B>	4.63	0.19	0.01	A	4.35	0.28	0.02	A
42	368.62	0.9	0.05	B>	14.94	0.39	0.02	B>	54.97	-0.4	-0.02	B<	85.52	-0.87	-0.06	B<	9.92	-0.54	-0.02	B<
43	7.48	0.12	0.01	B>	3.26	0.17	0.01	A	32.78	0.28	0.02	B>	13.87	0.36	0.03	B>	5.34	0.37	0.02	A
44	14.73	-0.15	-0.01	B<	7.83	0.24	0.02	B>	40.82	0.27	0.02	B>	9.36	0.28	0.02	B>	17.6	0.53	0.04	B>
45	145.59	0.45	0.04	B>	0.03	-0.01	0	A	33.59	0.24	0.02	B>	12.89	0.32	0.03	B>	15.01	0.5	0.03	B>
46	299.36	-0.64	-0.06	B<	27.81	-0.42	-0.04	B<	323.47	-0.74	-0.06	B<	170.08	-1.12	-0.1	B<	30.65	-0.65	-0.05	B<
47	30.5	-0.21	-0.02	B<	1.06	0.09	0.01	A	19.42	0.19	0.01	B>	12.52	0.31	0.03	B>	0.02	0.02	0	A
48	27.79	0.2	0.02	B>	51.06	0.59	0.05	B>	37.68	0.26	0.02	B>	0.17	0.04	0	A	24.62	0.62	0.04	B>
49	96.76	0.57	0.02	B>	0.04	0.03	0	A	0.91	-0.06	0	A	4.84	-0.26	-0.01	A	0.9	-0.21	0	A
50	3.92	0.08	0.01	A	2.17	-0.13	-0.01	A	34.14	-0.25	-0.02	B<	0.17	0.04	0	A	7.29	-0.33	-0.02	B<
51	404.19	-0.93	-0.05	B<	1.37	0.12	0.01	A	0.03	-0.01	0	A	0.08	0.03	0	A	1.34	0.2	0.01	A
52	107.11	0.46	0.03	B>	10.64	0.31	0.02	B>	19.24	0.22	0.02	B>	6.5	0.25	0.02	A	0.14	-0.06	0	A
53	75.71	-0.38	-0.02	B<	22.38	-0.44	-0.03	B<	26.41	-0.25	-0.02	B<	2.54	-0.16	-0.01	A	0.22	-0.07	0	A
54	2.25	0.06	0	A	2.79	-0.14	-0.01	A	1.3	0.05	0.01	A	17.87	0.37	0.03	B>	10.19	0.44	0.03	B>
55	22.09	-0.2	-0.01	B<	0.72	-0.08	-0.01	A	13.75	0.17	0.01	B>	28.52	0.49	0.04	B>	12.56	0.56	0.02	B>
56	80.94	-0.4	-0.02	B<	0	0	0	A	16.08	-0.2	-0.01	B<	2.63	-0.16	-0.01	A	0.4	-0.11	0	A
57	1.44	-0.06	0	A	44.44	0.69	0.04	B>	74.29	0.48	0.03	B>	34.92	0.61	0.04	B>	25.79	1.01	0.03	B>
58	58.13	0.52	0.01	B>	21.8	0.63	0.02	B>	158.91	0.97	0.03	B>	32.72	0.77	0.03	B>	0.65	0.21	0	A
59	180.78	0.5	0.04	B>	35.7	0.49	0.04	B>	111.07	0.44	0.05	B>	101.85	0.87	0.08	B>	3.14	0.21	0.02	A
60	181.24	0.74	0.03	B>	11.57	0.39	0.02	B>	6.76	0.16	0.01	B>	3.17	0.2	0.01	A	0	0	0	A

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

(table continues)

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Table 9.2.1.4 (continued)
2009 Spring AIMS Differential Item Functioning Mathematics CRT Grade 5

	Reference: Male N=41411 Focal: Female N=39673				Reference: White N=35540 Focal: African Amer N=4875				Reference: White N=35540 Focal: Hispanic N=33981				Reference: White N=35540 Focal: Native Amer N=4261				Reference: White N=35540 Focal: Asian N=2436			
Item	MH $\chi 2$	ΔMH	SMD	Flag	MH $\chi 2$	ΔMH	SMD	Flag	MH $\chi 2$	ΔMH	SMD	Flag	MH $\chi 2$	ΔMH	SMD	Flag	MH $\chi 2$	ΔMH	SMD	Flag
61	35.11	0.27	0.01	B>	0.52	0.07	0	A	0.53	-0.04	0	A	0.29	-0.05	0	A	3.94	-0.33	-0.01	A
62	0.04	0.01	0	A	0.7	0.07	0	A	10.99	-0.14	-0.02	B<	92.44	-0.82	-0.08	B<	22.51	-0.55	-0.04	B<
63	103.24	0.39	0.03	B>	14.18	0.31	0.03	B>	52.38	0.31	0.02	B>	39.38	0.55	0.05	B>	18.02	0.56	0.03	B>
64	61.31	0.3	0.02	B>	33.08	0.49	0.04	B>	51.44	0.31	0.02	B>	2.8	0.16	0.01	A	61.86	0.93	0.07	B>
65	1.75	-0.05	0	A	0.51	0.06	0.01	A	71.14	0.37	0.04	B>	24.42	0.44	0.04	B>	0	0.01	0	A
66	163.41	0.48	0.04	B>	1.59	0.1	0.01	A	14.13	0.16	0.01	B>	3.74	0.17	0.01	A	8.37	0.37	0.02	B>
67	95.42	0.37	0.03	B>	8.08	0.23	0.02	B>	8.38	0.12	0.01	B>	27.51	0.46	0.04	B>	6.27	0.32	0.02	A
68	7.59	0.1	0.01	B>	3.99	0.16	0.02	A	0.39	0.03	0.01	A	10.07	0.28	0.03	B>	0.3	0.07	0	A

Note. African Am. = African American, Native Am.= Native American, MH $\chi 2$= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

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Table 9.2.1.5
2009 Spring AIMS Differential Item Functioning Mathematics CRT Grade 6

	Reference: Male N=41500 Focal: Female N=39344				Reference: White N=35736 Focal: African Amer N=4755				Reference: White N=35736 Focal: Hispanic N=33765				Reference: White N=35736 Focal: Native Amer N=4176				Reference: White N=35736 Focal: Asian N=2441			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
1	371.60	-0.91	-0.05	B<	12.77	-0.35	-0.02	B<	5.06	-0.12	-0.01	A	0.88	-0.10	-0.01	A	1.28	-0.19	-0.01	A
2	233.57	0.55	0.05	B>	10.24	0.25	0.02	B>	0.83	0.04	0.00	A	6.29	-0.22	-0.02	A	0.70	-0.10	-0.01	A
3	51.83	0.30	0.02	B>	30.57	0.49	0.04	B>	41.86	0.30	0.02	B>	17.42	-0.39	-0.03	B<	31.64	0.84	0.04	B>
4	1.02	0.04	0.00	A	40.34	0.60	0.04	B>	99.64	0.49	0.03	B>	5.19	0.21	0.02	A	5.48	0.38	0.02	A
5	81.53	0.33	0.03	B>	1.08	0.09	0.01	A	104.18	0.42	0.03	B>	56.63	0.65	0.06	B>	14.22	0.45	0.03	B>
6	3.65	-0.13	0.00	A	4.36	-0.29	-0.01	A	30.93	-0.44	-0.01	B<	6.98	-0.37	-0.01	B<	9.66	-0.76	-0.01	B<
7	41.59	-0.30	-0.02	B<	8.32	0.28	0.02	B>	49.29	0.37	0.02	B>	2.06	0.15	0.01	A	3.01	0.30	0.01	A
8	246.02	-0.64	-0.05	B<	0.59	-0.07	0.00	A	64.85	-0.36	-0.03	B<	19.53	-0.40	-0.03	B<	0.72	0.13	0.01	A
9	59.92	-0.46	-0.01	B<	8.86	-0.35	-0.02	B<	1.09	0.07	0.00	A	11.49	0.44	0.02	B>	0.86	-0.22	0.00	A
10	9.71	0.14	0.01	B>	2.06	-0.14	-0.01	A	42.40	-0.34	-0.02	B<	26.33	-0.50	-0.04	B<	0.13	-0.07	0.00	A
11	0.53	-0.03	0.00	A	1.30	-0.09	-0.01	A	7.51	0.11	0.01	B>	4.8	0.19	0.02	A	1.37	0.14	0.01	A
12	76.10	-0.36	-0.03	B<	45.46	-0.57	-0.05	B<	48.89	-0.32	-0.02	B<	0.02	-0.02	0.00	A	20.16	-0.62	-0.03	B<
13	102.47	-0.45	-0.03	B<	23.86	-0.45	-0.03	B<	30.28	-0.27	-0.02	B<	2.44	-0.15	-0.01	A	5.04	0.37	0.01	A
14	171.98	0.47	0.04	B>	6.08	0.20	0.02	A	47.29	0.28	0.03	B>	0.62	0.07	0.01	A	10.17	0.37	0.03	B>
15	2.50	0.06	0.01	A	35.64	-0.49	-0.04	B<	127.12	-0.47	-0.04	B<	32.76	-0.50	-0.04	B<	2.92	-0.22	-0.01	A
16	225.90	-0.57	-0.05	B<	96.11	-0.81	-0.07	B<	341.36	-0.77	-0.06	B<	95.06	-0.87	-0.07	B<	51.43	-0.84	-0.06	B<
17	117.90	-0.39	-0.04	B<	13.64	0.30	0.03	B>	3.51	0.08	0.00	A	4.46	0.18	0.02	A	2.46	0.18	0.01	A
18	5.62	-0.10	-0.01	A	9.72	-0.27	-0.02	B<	3.99	-0.09	-0.01	A	35.06	-0.54	-0.05	B<	0.00	0.00	0.00	A
19	43.43	0.26	0.02	B>	2.42	-0.13	-0.01	A	13.15	-0.16	-0.01	B<	2.98	-0.16	-0.01	A	0.27	0.07	0.00	A
20	84.21	0.35	0.03	B>	28.78	-0.45	-0.04	B<	30.94	-0.24	-0.02	B<	36.38	-0.53	-0.05	B<	11.24	-0.43	-0.03	B<
21	57.39	0.38	0.02	B>	0.06	-0.03	0.00	A	0.79	0.05	0.00	A	13.04	-0.37	-0.03	B<	0.12	0.07	0.00	A
22	4.98	-0.18	0.00	A	3.40	-0.30	-0.01	A	0.01	0.01	0.00	A	2	0.24	0.01	A	12.02	-0.99	-0.01	B<
23	172.19	-0.76	-0.03	B<	1.42	-0.14	-0.01	A	0.05	0.02	0.00	A	7.08	0.33	0.02	B>	0.26	-0.12	0.00	A
24	1024.78	-1.33	-0.09	B<	54.53	-0.64	-0.05	B<	46.74	-0.31	-0.02	B<	0	-0.01	0.00	A	2.97	-0.25	-0.01	A
25	57.36	-0.30	-0.02	B<	0.10	-0.03	0.00	A	1.64	-0.06	0.00	A	0.53	0.07	0.01	A	0.06	0.04	0.00	A
26	468.21	1.04	0.05	B>	17.52	0.45	0.02	B>	86.42	-0.50	-0.03	B<	9.93	-0.33	-0.02	B<	18.80	-0.70	-0.03	B<
27	1.49	0.09	0.00	A	9.21	-0.43	-0.01	B<	4.03	0.17	0.00	A	2.15	0.23	0.01	A	2.05	-0.41	-0.01	A
28	50.69	0.33	0.02	B>	0.38	-0.06	0.00	A	170.02	0.68	0.04	B>	82.39	0.93	0.07	B>	4.21	0.34	0.01	A
29	30.18	-0.21	-0.02	B<	1.70	0.11	0.01	A	29.64	0.24	0.02	B>	2.49	0.14	0.01	A	1.53	0.17	0.01	A
30	0.20	-0.02	0.00	A	92.34	1.05	0.06	B>	182.79	0.78	0.04	B>	22.36	0.50	0.03	B>	12.51	0.70	0.02	B>

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item numb

(table continues)

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Table 9.2.1.5 (continued)
2009 Spring AIMS Differential Item Functioning Mathematics CRT Grade 6

	Reference: Male N=41500 Focal: Female N=39344				Reference: White N=35736 Focal: African Amer N=4755				Reference: White N=35736 Focal: Hispanic N=33765				Reference: White N=35736 Focal: Native Amer N=4176				Reference: White N=35736 Focal: Asian N=2441			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
31	31.93	0.25	0.01	B>	0.86	-0.09	-0.01	A	21.02	-0.23	-0.02	B<	12.77	-0.36	-0.03	B<	17.30	-0.60	-0.03	B<
32	56.13	0.28	0.02	B>	0.00	0.00	0.00	A	444.80	-0.87	-0.07	B<	71.86	-0.75	-0.06	B<	8.77	-0.36	-0.03	B<
33	35.85	-0.28	-0.01	B<	0.00	0.01	0.00	A	9.17	0.16	0.01	B>	2.5	0.16	0.01	A	0.36	0.11	0.00	A
34	8.19	-0.12	-0.01	B<	1.95	-0.12	-0.01	A	1.16	0.05	0.01	A	7.54	0.26	0.02	B>	0.87	0.14	0.01	A
35	116.60	0.46	0.03	B>	38.86	0.58	0.04	B>	66.21	0.39	0.03	B>	3.56	0.17	0.02	A	1.84	-0.20	-0.01	A
36	222.50	-0.54	-0.05	B<	0.25	0.04	0.01	A	17.80	-0.17	-0.01	B<	4.75	0.19	0.02	A	7.50	-0.32	-0.02	B<
37	128.22	-0.48	-0.03	B<	65.79	-0.72	-0.05	B<	111.17	-0.49	-0.03	B<	7.64	-0.26	-0.02	B<	6.29	-0.37	-0.02	A
38	4.12	0.11	0.00	A	1.68	-0.15	-0.01	A	0.70	-0.05	0.00	A	0.27	0.06	0.01	A	0.91	-0.21	0.00	A
39	5.06	-0.09	-0.01	A	6.47	-0.22	-0.02	A	4.14	-0.09	-0.01	A	9.56	-0.28	-0.03	B<	0.41	-0.09	0.00	A
40	2.52	-0.08	0.00	A	11.09	0.34	0.02	B>	56.51	0.40	0.02	B>	14.57	0.40	0.03	B>	5.60	0.42	0.01	A
41	40.3	-0.28	-0.02	B<	0.06	0.02	0	A	0.02	0.01	0	A	0.22	0.05	0	A	0	0.01	0	A
42	0.48	-0.03	0	A	37.12	0.51	0.04	B>	13.24	0.15	0.01	B>	0.4	0.06	0.01	A	3.89	0.26	0.02	A
43	90.67	0.39	0.03	B>	1.66	-0.11	-0.01	A	0.19	-0.02	0	A	13.29	-0.33	-0.03	B<	0.51	-0.11	-0.01	A
44	53.87	0.34	0.02	B>	0.95	0.1	0.01	A	14.64	-0.2	-0.02	B<	10.17	-0.32	-0.02	B<	1.68	0.24	0.01	A
45	78.23	0.39	0.02	B>	45.3	0.63	0.04	B>	125.91	0.55	0.03	B>	0.16	-0.04	0	A	31.19	0.94	0.04	B>
46	7.44	-0.14	-0.01	B<	7.38	0.29	0.02	B>	11.77	0.2	0.01	B>	3.93	0.21	0.01	A	5.65	0.48	0.01	A
47	85.3	-0.36	-0.03	B<	2.62	-0.14	-0.01	A	30.82	0.24	0.02	B>	1.19	0.1	0.01	A	0.2	-0.06	0	A
48	246.39	0.59	0.05	B>	27.24	0.43	0.04	B>	3.61	0.08	0	A	1.28	0.1	0.01	A	11.23	0.42	0.03	B>
49	76.67	0.53	0.02	B>	2.57	0.2	0.01	A	58.25	0.53	0.02	B>	41.59	0.83	0.04	B>	0.34	-0.13	0	A
50	75.16	-0.36	-0.02	B<	0.13	-0.03	0	A	0.1	-0.02	0	A	22.89	0.45	0.04	B>	13.38	-0.51	-0.03	B<
51	35.23	-0.23	-0.02	B<	1.17	0.09	0.01	A	48.68	-0.3	-0.03	B<	84.15	-0.79	-0.07	B<	0.7	-0.11	-0.01	A
52	20.9	0.18	0.01	B>	2.63	-0.14	-0.01	A	1.91	-0.06	-0.01	A	2.2	-0.13	-0.01	A	0.85	-0.12	-0.01	A
53	1.6	0.07	0	A	39.68	-0.69	-0.03	B<	20.24	-0.29	-0.01	B<	1.99	-0.16	-0.01	A	2.58	-0.36	-0.01	A
54	3.89	0.08	0.01	A	1.31	0.1	0.01	A	52.72	0.34	0.03	B>	78.56	0.85	0.07	B>	0	0	0	A
55	34.38	0.28	0.01	B>	0.02	0.02	0	A	9.48	-0.16	-0.01	B<	2.29	-0.15	-0.01	A	1.07	0.19	0.01	A
56	108.49	0.42	0.03	B>	56.32	0.67	0.05	B>	113.27	0.48	0.04	B>	22.96	0.43	0.04	B>	40.26	0.95	0.05	B>
57	41.35	-0.25	-0.02	B<	7.61	-0.23	-0.02	B<	0.55	0.03	0	A	3.09	0.16	0.01	A	0.01	0.01	0	A
58	349.24	-0.73	-0.06	B<	0.34	-0.05	0	A	51.71	-0.31	-0.02	B<	72.58	-0.76	-0.06	B<	95.15	-1.19	-0.08	B<
59	1.9	0.06	0	A	9.51	0.27	0.02	B>	34.71	0.27	0.02	B>	35.58	0.55	0.04	B>	7.74	0.41	0.02	B>
60	699.83	1.1	0.08	B>	7.42	0.24	0.02	B>	4.8	0.1	0.01	A	5.52	0.22	0.02	A	8.99	0.45	0.02	B>

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item numb

(table continues)

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Table 9.2.1.5 (continued)
2009 Spring AIMS Differential Item Functioning Mathematics CRT Grade 6

	Reference: Male N=41500 Focal: Female N=39344				Reference: White N=35736 Focal: African Amer N=4755				Reference: White N=35736 Focal: Hispanic N=33765				Reference: White N=35736 Focal: Native Amer N=4176				Reference: White N=35736 Focal: Asian N=2441			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
61	413.92	0.93	0.05	B>	47.98	0.68	0.05	B>	175.29	0.67	0.05	B>	84.85	0.92	0.07	B>	12.99	0.59	0.02	B>
62	71.55	-0.39	-0.02	B<	15.05	-0.37	-0.02	B<	0.43	0.03	0	A	15.78	0.4	0.03	B>	0.13	0.07	0	A
63	9.67	0.13	0.01	B>	1.53	0.11	0.01	A	0.68	0.04	0	A	11.55	0.32	0.02	B>	23.49	0.75	0.03	B>
64	104.57	-0.4	-0.03	B<	0.02	0.01	0	A	72.16	-0.37	-0.03	B<	4.46	-0.19	-0.02	A	6.21	-0.32	-0.02	A
65	0.49	0.03	0	A	0.73	-0.08	-0.01	A	0.59	0.04	0.01	A	7.09	-0.25	-0.02	B<	0	0	0	A
66	84.87	0.46	0.02	B>	0.34	-0.06	0	A	0.08	0.02	0	A	0.02	-0.02	0	A	0.22	-0.1	0	A
67	0.01	0	0	A	15.24	-0.32	-0.03	B<	80.74	-0.37	-0.03	B<	37.3	-0.53	-0.04	B<	3.33	-0.22	-0.02	A
68	268.45	0.86	0.04	B>	1.77	0.14	0.01	A	335.5	1.08	0.06	B>	116.05	1.23	0.07	B>	0.88	0.18	0.01	A

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

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Table 9.2.1.6
2009 Spring AIMS Differential Item Functioning Mathematics CRT Grade 7

	Reference: Male N=41228 Focal: Female N=39810				Reference: White N=36703 Focal: African Amer N=4736				Reference: White N=36703 Focal: Hispanic N=32892				Reference: White N=36703 Focal: Native Amer N=4317				Reference: White N=36703 Focal: Asian N=2418			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
1	62.90	-0.29	-0.02	B<	26.95	-0.41	-0.04	B<	278.91	-0.68	-0.06	B<	159.16	-1.06	-0.10	B<	1.32	-0.14	-0.01	A
2	80.77	-0.33	-0.03	B<	0.00	0.00	0.00	A	27.81	-0.21	-0.02	B<	19.92	-0.37	-0.04	B<	3.33	-0.22	-0.02	A
3	197.94	-0.56	-0.04	B<	86.64	-0.77	-0.06	B<	60.17	-0.34	-0.03	B<	156.49	-1.05	-0.09	B<	24.03	-0.65	-0.04	B<
4	44.62	-0.33	-0.02	B<	6.66	-0.27	-0.01	B<	76.48	-0.50	-0.03	B<	12.21	-0.37	-0.02	B<	5.09	-0.42	-0.01	A
5	1.32	0.05	0.00	A	1.79	-0.13	-0.01	A	1.12	0.05	0.01	A	2.45	0.15	0.01	A	29.93	-0.80	-0.04	B<
6	8.30	0.13	0.01	B>	0.09	0.03	0.00	A	6.90	0.14	0.01	B>	13.46	-0.35	-0.03	B<	14.59	0.71	0.02	B>
7	11.64	0.15	0.01	B>	0.61	0.07	0.00	A	91.33	0.46	0.03	B>	43.13	0.62	0.05	B>	1.96	0.23	0.01	A
8	181.11	-0.75	-0.03	B<	42.16	-0.72	-0.03	B<	156.77	-0.79	-0.04	B<	1.21	-0.13	-0.01	A	12.16	-0.73	-0.02	B<
9	34.05	-0.24	-0.02	B<	3.00	0.15	0.01	A	48.13	0.31	0.02	B>	19.57	0.40	0.03	B>	6.38	0.37	0.02	A
10	219.26	-0.57	-0.04	B<	13.54	-0.31	-0.03	B<	12.22	-0.15	-0.02	B<	16.07	-0.35	-0.03	B<	0.45	-0.09	-0.01	A
11	42.59	-0.24	-0.02	B<	0.03	0.02	0.00	A	11.47	-0.14	-0.01	B<	39.21	-0.52	-0.05	B<	0.03	0.03	0.00	A
12	11.29	0.18	0.01	B>	7.10	-0.30	-0.01	B<	97.75	-0.60	-0.03	B<	64.81	-0.86	-0.05	B<	64.36	-1.44	-0.04	B<
13	91.87	0.35	0.03	B>	5.75	0.19	0.02	A	156.92	0.52	0.04	B>	26.15	0.44	0.04	B>	9.66	0.38	0.03	B>
14	27.93	-0.22	-0.02	B<	9.62	-0.26	-0.02	B<	0.49	0.03	0.00	A	49.01	0.64	0.05	B>	4.44	0.32	0.01	A
15	11.34	-0.12	-0.01	B<	0.06	-0.02	0.00	A	1.73	0.05	0.00	A	10.98	0.28	0.03	B>	0.31	-0.06	-0.01	A
16	153.74	0.61	0.03	B>	0.05	0.03	0.00	A	19.46	0.24	0.01	B>	4.24	0.22	0.01	A	2.87	0.32	0.01	A
17	3.19	0.07	0.01	A	1.10	-0.09	-0.01	A	50.49	-0.29	-0.02	B<	0.57	-0.07	-0.01	A	0.45	-0.08	-0.01	A
18	915.83	-1.15	-0.10	B<	57.09	-0.62	-0.06	B<	290.48	-0.70	-0.06	B<	90.56	-0.81	-0.07	B<	55.93	-0.89	-0.06	B<
19	9.99	-0.18	-0.01	B<	8.84	-0.34	-0.02	B<	2.16	-0.10	0.00	A	2.15	0.17	0.01	A	2.30	-0.34	-0.01	A
20	0.42	0.03	0.00	A	9.80	0.29	0.02	B>	1.24	0.05	0.00	A	5.23	0.21	0.02	A	2.84	0.25	0.01	A
21	13.69	-0.20	-0.01	B<	25.49	-0.53	-0.03	B<	7.17	0.17	0.01	B>	52.35	0.89	0.04	B>	0.33	-0.12	0.00	A
22	3.64	-0.07	-0.01	A	0.16	-0.03	0.00	A	6.77	-0.11	-0.01	B<	23.74	0.41	0.04	B>	1.34	0.15	0.01	A
23	11.41	-0.14	-0.01	B<	0.94	-0.09	-0.01	A	33.59	-0.26	-0.02	B<	62.15	-0.75	-0.05	B<	0.34	-0.08	0.00	A
24	548.07	-1.10	-0.06	B<	29.59	-0.53	-0.04	B<	9.98	-0.17	-0.02	B<	11.28	-0.34	-0.03	B<	6.12	-0.39	-0.02	A
25	77.27	0.36	0.03	B>	41.80	0.57	0.04	B>	156.33	0.58	0.04	B>	112.82	0.98	0.08	B>	14.38	0.56	0.03	B>
26	9.79	0.15	0.01	B>	1.70	0.13	0.01	A	9.23	-0.16	-0.01	B<	114.89	-1.01	-0.07	B<	26.94	-0.82	-0.03	B<
27	253.70	0.73	0.04	B>	9.94	0.31	0.02	B>	0.67	0.04	0.00	A	1.25	0.11	0.01	A	3.42	-0.30	-0.01	A
28	29.91	-0.22	-0.02	B<	34.12	-0.51	-0.04	B<	187.81	-0.61	-0.05	B<	19.92	-0.40	-0.03	B<	0.09	0.05	0.00	A
29	23.29	0.44	0.01	B>	0.28	0.10	0.00	A	24.47	0.50	0.01	B>	24.05	0.90	0.02	B>	0.28	0.21	0.00	A
30	79.06	0.43	0.02	B>	72.21	0.89	0.05	B>	0.10	-0.02	0.00	A	27.41	-0.51	-0.03	B<	7.06	0.53	0.01	B>

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

(table continues)

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Table 9.2.1.6 (continued)
2009 Spring AIMS Differential Item Functioning Mathematics CRT Grade 7

	Reference: Male N=41228 Focal: Female N=39810				Reference: White N=36703 Focal: African Amer N=4736				Reference: White N=36703 Focal: Hispanic N=32892				Reference: White N=36703 Focal: Native Amer N=4317				Reference: White N=3Item Focal: Asian N=2418			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
31	37.34	-0.26	-0.02	B<	46.80	0.61	0.05	B>	18.15	0.20	0.01	B>	3.56	-0.17	-0.01	A	12.58	0.58	0.02	B>
32	0.25	-0.02	0.00	A	2.85	-0.16	-0.01	A	6.61	-0.12	-0.01	A	36.47	-0.58	-0.05	B<	3.41	-0.29	-0.01	A
33	60.91	-0.37	-0.02	B<	0.78	-0.09	0.00	A	7.13	0.14	0.01	B>	0.23	0.05	0.00	A	0.86	0.18	0.01	A
34	27.62	0.22	0.02	B>	6.05	0.22	0.02	A	201.63	0.66	0.05	B>	57.99	0.69	0.06	B>	20.95	0.70	0.03	B>
35	35.02	-0.26	-0.02	B<	2.22	-0.14	-0.01	A	60.75	-0.38	-0.02	B<	0.12	-0.03	0.00	A	4.60	-0.35	-0.01	A
36	59.19	0.42	0.02	B>	5.14	-0.25	-0.01	A	48.05	-0.42	-0.02	B<	11.94	-0.38	-0.02	B<	0.98	-0.23	-0.01	A
37	46.87	0.30	0.02	B>	1.57	0.12	0.01	A	8.80	0.15	0.01	B>	0.69	-0.08	0.00	A	6.91	0.45	0.02	B>
38	12.79	-0.14	-0.01	B<	22.55	0.41	0.03	B>	57.71	0.32	0.02	B>	3.14	0.17	0.01	A	44.90	0.80	0.06	B>
39	379.64	0.88	0.05	B>	9.10	0.29	0.02	B>	34.94	-0.29	-0.02	B<	25.68	-0.47	-0.03	B<	7.55	0.50	0.02	B>
40	320.48	0.71	0.05	B>	0.00	0.00	0.00	A	309.17	0.78	0.06	B>	88.46	0.84	0.07	B>	18.41	0.61	0.03	B>
41	104.44	0.37	0.03	B>	4.22	-0.17	-0.02	A	33.96	-0.24	-0.02	B<	16.59	-0.36	-0.03	B<	8.95	0.36	0.03	B>
42	66.04	-0.34	-0.02	B<	23.43	0.44	0.03	B>	26.93	0.24	0.02	B>	15.39	0.36	0.03	B>	26.24	0.79	0.04	B>
43	13.88	0.16	0.01	B>	1.56	0.12	0.01	A	7.11	-0.13	-0.01	B<	3.5	-0.18	-0.01	A	0.06	-0.04	0	A
44	157.78	-0.47	-0.04	B<	6.19	-0.21	-0.02	A	0.01	0	0	A	19.62	0.39	0.03	B>	1.51	-0.14	-0.01	A
45	184.29	-0.49	-0.04	B<	8.6	-0.23	-0.02	B<	15.03	0.16	0.01	B>	5.71	0.2	0.02	A	18.91	-0.48	-0.04	B<
46	284.46	0.8	0.04	B>	47.51	0.76	0.04	B>	82.83	-0.48	-0.03	B<	2.01	-0.15	-0.01	A	23.27	-0.77	-0.03	B<
47	74.96	0.37	0.02	B>	5.17	0.21	0.01	A	8.51	0.14	0.01	B>	1.06	-0.1	-0.01	A	1.78	0.21	0.01	A
48	80.9	-0.37	-0.03	B<	0.52	0.07	0	A	1.59	-0.06	0	A	69.04	0.79	0.06	B>	0.24	-0.07	0	A
49	7.36	-0.17	-0.01	B<	27.66	0.69	0.03	B>	53.46	0.51	0.02	B>	4.77	0.28	0.01	A	3.06	0.45	0.01	A
50	35.99	0.28	0.02	B>	29.15	0.54	0.03	B>	11.69	0.18	0.01	B>	0.88	0.09	0.01	A	10.59	0.61	0.02	B>
51	89.54	-0.38	-0.03	B<	0.11	-0.03	0	A	17.49	-0.19	-0.02	B<	4.08	-0.19	-0.02	A	0.03	-0.03	0	A
52	85.02	0.43	0.02	B>	29.95	0.56	0.03	B>	17.36	0.22	0.01	B>	0.02	-0.02	0	A	4.87	0.36	0.01	A
53	65.79	-0.33	-0.02	B<	65.02	-0.7	-0.06	B<	198.09	-0.64	-0.05	B<	2.22	0.14	0.01	A	40.42	-0.86	-0.05	B<
54	1.04	-0.05	0	A	0.09	-0.03	0	A	52.71	0.36	0.02	B>	40.43	0.62	0.05	B>	2.81	0.29	0.01	A
55	25.36	0.19	0.02	B>	9.42	-0.25	-0.02	B<	26.73	0.22	0.02	B>	0	0.01	0	A	0	0.01	0	A
56	8.87	0.17	0.01	B>	5.65	0.28	0.01	A	0.02	-0.01	0	A	6.49	-0.29	-0.02	A	4.01	-0.4	-0.01	A
57	24.23	0.28	0.01	B>	2.87	0.2	0.01	A	2.6	-0.1	0	A	15.77	-0.44	-0.02	B<	7.67	0.73	0.01	B>
58	163.33	0.63	0.03	B>	23.4	0.51	0.03	B>	19.51	0.24	0.01	B>	9.08	-0.3	-0.02	B<	1.07	0.2	0.01	A
59	27.07	0.23	0.01	B>	0.05	-0.02	0	A	3.65	0.09	0.01	A	19.51	0.44	0.03	B>	0.02	-0.03	0	A
60	36.33	-0.21	-0.02	B<	0.68	-0.07	-0.01	A	56.14	-0.3	-0.03	B<	37.56	-0.51	-0.05	B<	6.09	-0.27	-0.02	A

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak, DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

(table continues)

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Table 9.2.1.6 (continued)
2009 Spring AIMS Differential Item Functioning Mathematics CRT Grade 7

	Reference: Male N=41228 Focal: Female N=39810				Reference: White N=36703 Focal: African Amer N=4736				Reference: White N=36703 Focal: Hispanic N=32892				Reference: White N=36703 Focal: Native Amer N=4317				Reference: White N=36703 Focal: Asian N=2418			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
61	109.86	0.69	0.02	B>	24.69	0.68	0.02	B>	100.96	0.73	0.03	B>	37.55	0.84	0.03	B>	1.16	0.29	0	A
62	66.47	0.4	0.02	B>	0.36	-0.06	0	A	71.25	0.47	0.03	B>	12.58	0.37	0.03	B>	0.31	0.11	0	A
63	126.88	0.42	0.04	B>	0.18	-0.03	0	A	179.15	0.56	0.05	B>	174.88	1.15	0.1	B>	0.02	0.02	0	A
64	0.8	-0.04	0	A	4.86	0.2	0.02	A	11.05	0.16	0.01	B>	34.78	-0.56	-0.04	B<	0.06	-0.04	0	A
65	292.34	0.99	0.03	B>	4.98	0.26	0.01	A	66.72	0.52	0.02	B>	69.31	1.02	0.05	B>	0.37	0.14	0	A
66	2.09	0.07	0	A	19.68	0.47	0.03	B>	52.05	0.41	0.02	B>	6.22	0.26	0.02	A	7.46	0.52	0.01	B>
67	40.26	0.29	0.02	B>	6.44	0.25	0.02	A	29.31	0.28	0.02	B>	11.5	0.33	0.02	B>	11.63	0.62	0.02	B>
68	69.64	0.32	0.03	B>	33.08	-0.48	-0.04	B<	91.65	-0.41	-0.03	B<	7.89	-0.24	-0.02	B<	20.25	-0.58	-0.04	B<

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

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Table 9.2.1.7
2009 Spring AIMS Differential Item Functioning Mathematics CRT Grade 8

	Reference: Male N=40573 Focal: Female N=38963				Reference: White N=36361 Focal: African Amer N=4706				Reference: White N=36361 Focal: Hispanic N=31890				Reference: White N=36361 Focal: Native Amer N=4133				Reference: White N=36361 Focal: Asian N=2486			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
1	0.10	-0.01	0.00	A	29.70	-0.46	-0.04	B<	85.09	-0.40	-0.03	B<	1.32	0.10	0.01	A	13.96	-0.47	-0.03	B<
2	518.71	-0.90	-0.07	B<	6.87	-0.22	-0.02	B<	3.64	0.08	0.01	A	47.59	0.61	0.06	B>	0.84	0.13	0.01	A
3	43.04	-0.42	-0.01	B<	1.92	-0.19	-0.01	A	64.87	-0.60	-0.02	B<	7.11	-0.37	-0.02	B<	8.09	-0.69	-0.01	B<
4	8.51	-0.12	-0.01	B<	12.71	-0.32	-0.02	B<	99.13	-0.47	-0.04	B<	39.83	-0.58	-0.05	B<	9.75	-0.45	-0.02	B<
5	158.44	0.47	0.04	B>	9.09	0.25	0.02	B>	53.03	0.31	0.03	B>	13.14	0.32	0.03	B>	8.41	0.36	0.02	B>
6	53.13	0.27	0.02	B>	29.57	0.46	0.04	B>	18.37	0.18	0.01	B>	22.57	-0.45	-0.03	B<	16.47	0.45	0.04	B>
7	66.88	0.30	0.03	B>	24.66	0.40	0.04	B>	32.86	0.24	0.02	B>	14.12	0.33	0.03	B>	24.82	0.59	0.04	B>
8	299.87	-0.67	-0.05	B<	41.50	-0.54	-0.05	B<	23.82	-0.21	-0.02	B<	2.31	0.14	0.01	A	24.90	-0.65	-0.04	B<
9	9.48	-0.12	-0.01	B<	7.39	0.23	0.02	B>	27.82	0.24	0.02	B>	0	0.00	0.00	A	63.80	1.21	0.06	B>
10	54.31	-0.31	-0.02	B<	0.12	-0.03	0.00	A	30.13	-0.26	-0.02	B<	0.78	0.08	0.01	A	0.45	-0.10	0.00	A
11	92.32	0.39	0.03	B>	5.26	0.20	0.01	A	0.17	-0.02	0.00	A	19.71	-0.40	-0.04	B<	0.31	-0.08	0.00	A
12	1.04	0.05	0.00	A	0.25	-0.05	0.00	A	21.56	0.25	0.02	B>	2.29	0.15	0.01	A	0.31	-0.10	0.00	A
13	2.45	-0.06	0.00	A	1.72	0.11	0.01	A	19.99	-0.19	-0.02	B<	24.85	-0.46	-0.04	B<	14.93	0.49	0.03	B>
14	185.74	0.66	0.03	B>	0.61	-0.08	0.00	A	3.99	-0.11	-0.01	A	13.87	-0.38	-0.03	B<	0.23	-0.09	0.00	A
15	250.93	-0.59	-0.05	B<	3.03	-0.14	-0.01	A	24.26	0.21	0.02	B>	73.78	0.75	0.07	B>	4.43	-0.25	-0.02	A
16	417.57	-0.97	-0.05	B<	27.87	-0.51	-0.03	B<	93.70	-0.52	-0.03	B<	0.46	0.07	0.00	A	19.84	-0.74	-0.02	B<
17	93.17	0.46	0.02	B>	57.19	0.78	0.05	B>	35.30	0.32	0.02	B>	14.5	0.39	0.03	B>	4.72	0.41	0.01	A
18	79.35	0.40	0.02	B>	55.37	-0.70	-0.05	B<	155.99	-0.63	-0.04	B<	53.25	-0.71	-0.05	B<	23.58	-0.77	-0.03	B<
19	28.02	0.19	0.02	B>	3.14	0.14	0.01	A	3.46	0.08	0.00	A	0	0.01	0.00	A	7.82	0.30	0.03	B>
20	61.54	0.32	0.02	B>	4.43	0.19	0.01	A	8.45	0.13	0.01	B>	0.48	-0.06	-0.01	A	4.39	0.30	0.02	A
21	113.49	-0.47	-0.03	B<	68.08	-0.73	-0.05	B<	0.04	-0.01	0.00	A	31.5	0.55	0.04	B>	1.01	-0.15	-0.01	A
22	0.02	0.01	0.00	A	0.42	-0.06	-0.01	A	45.26	0.35	0.02	B>	29.95	0.56	0.04	B>	1.97	0.24	0.01	A
23	338.80	0.93	0.04	B>	3.53	0.20	0.01	A	0.14	-0.02	0.00	A	0.35	-0.06	0.00	A	1.62	0.25	0.01	A
24	130.86	0.55	0.03	B>	2.45	0.16	0.01	A	30.04	-0.29	-0.02	B<	20.15	-0.45	-0.03	B<	9.48	0.59	0.02	B>
25	13.47	0.14	0.01	B>	34.26	0.49	0.04	B>	0.22	-0.02	0.00	A	1.83	-0.12	-0.01	A	1.80	0.18	0.01	A
26	18.16	-0.19	-0.01	B<	8.25	0.27	0.02	B>	17.17	-0.20	-0.02	B<	48.8	-0.65	-0.05	B<	0.21	0.08	0.00	A
27	62.65	0.30	0.03	B>	52.70	0.60	0.05	B>	78.03	0.37	0.04	B>	6.14	-0.21	-0.02	A	16.56	0.53	0.03	B>
28	49.33	0.40	0.01	B>	4.82	0.26	0.01	A	25.47	0.33	0.02	B>	3.8	0.24	0.01	A	0.49	0.16	0.00	A
29	98.81	0.52	0.02	B>	3.49	0.21	0.01	A	16.04	0.24	0.01	B>	16.41	0.48	0.03	B>	0.68	-0.15	0.00	A
30	176.56	-0.53	-0.04	B<	25.15	-0.46	-0.03	B<	97.28	-0.44	-0.03	B<	3.81	-0.19	-0.01	A	18.37	-0.52	-0.04	B<

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak, DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

(table continues)

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Table 9.2.1.7 (continued)
2009 Spring AIMS Differential Item Functioning Mathematics CRT Grade 8

	Reference: Male N=40573 Focal: Female N=38963				Reference: White N=36361 Focal: African Amer N=4706				Reference: White N=36361 Focal: Hispanic N=31890				Reference: White N=36361 Focal: Native Amer N=4133				Reference: White N=36361 Focal: Asian N=2486			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
31	30.46	0.21	0.02	B>	14.38	0.32	0.03	B>	1.37	0.05	0.00	A	8.26	-0.25	-0.02	B<	0.62	0.10	0.01	A
32	2.86	0.08	0.00	A	9.11	-0.29	-0.02	B<	1.30	0.06	0.00	A	0.09	0.03	0.00	A	1.00	-0.17	-0.01	A
33	5.49	0.09	0.01	A	0.61	-0.07	-0.01	A	7.20	0.11	0.01	B>	7.95	0.25	0.02	B>	6.47	0.30	0.02	A
34	22.20	0.22	0.01	B>	8.47	0.29	0.02	B>	13.62	0.20	0.01	B>	1.53	0.13	0.01	A	1.42	-0.21	-0.01	A
35	0.74	-0.03	0.00	A	0.16	-0.04	0.00	A	22.38	-0.20	-0.02	B<	4.04	-0.19	-0.01	A	17.64	-0.46	-0.04	B<
36	440.29	-0.80	-0.07	B<	16.67	-0.34	-0.03	B<	220.13	-0.62	-0.05	B<	68.86	-0.71	-0.06	B<	16.25	-0.49	-0.03	B<
37	33.11	0.25	0.02	B>	1.87	0.13	0.01	A	23.59	0.24	0.02	B>	8.29	0.29	0.02	B>	0.02	0.02	0.00	A
38	98.79	-0.39	-0.03	B<	13.70	-0.31	-0.03	B<	6.37	0.11	0.01	A	1.67	0.12	0.01	A	9.91	-0.39	-0.03	B<
39	94.14	-0.39	-0.03	B<	0.09	-0.03	0.00	A	101.55	-0.46	-0.03	B<	2.56	0.15	0.01	A	4.00	-0.28	-0.01	A
40	50.81	0.27	0.02	B>	20.19	0.37	0.03	B>	0.43	-0.03	0.00	A	4.67	-0.20	-0.02	A	25.23	0.61	0.04	B>
41	114.27	0.46	0.03	B>	23.04	0.44	0.03	B>	494.76	1.10	0.08	B>	7.41	-0.25	-0.02	B<	10.36	0.47	0.02	B>
42	177.26	0.51	0.04	B>	3.28	0.16	0.01	A	58.46	0.33	0.02	B>	10.28	0.29	0.02	B>	22.60	0.59	0.04	B>
43	233.80	-1.02	-0.03	B<	53.47	-0.91	-0.03	B<	27.19	-0.41	-0.01	B<	46.45	-0.91	-0.04	B<	40.31	-1.39	-0.02	B<
44	417.96	-0.81	-0.06	B<	130.56	-0.97	-0.08	B<	275.59	-0.72	-0.06	B<	19.3	-0.39	-0.03	B<	5.62	-0.31	-0.02	A
45	5.35	-0.11	-0.01	A	12.12	0.34	0.02	B>	1.92	0.07	0.00	A	6.36	-0.25	-0.02	A	11.09	0.60	0.02	B>
46	23.34	0.20	0.01	B>	32.06	0.51	0.04	B>	14.74	-0.18	-0.02	B<	141.25	-1.05	-0.09	B<	34.52	-0.73	-0.04	B<
47	562.95	-1.17	-0.06	B<	9.47	-0.31	-0.02	B<	62.51	-0.44	-0.03	B<	5.99	-0.25	-0.02	A	0.18	0.09	0.00	A
48	591.46	-0.92	-0.08	B<	63.03	-0.64	-0.06	B<	91.82	-0.41	-0.04	B<	2.26	-0.13	-0.01	A	73.15	-0.99	-0.07	B<
49	10.46	-0.13	-0.01	B<	5.36	-0.19	-0.02	A	26.48	-0.22	-0.01	B<	7.55	-0.24	-0.02	B	2.41	0.21	0.01	A
50	406.41	0.83	0.06	B>	32.14	0.51	0.04	B>	7.05	0.12	0.01	B>	1.05	0.10	0.01	<A	6.82	0.37	0.02	B>
51	241.52	0.93	0.03	B>	39.31	0.77	0.03	B>	74.58	0.59	0.02	B>	0.08	0.04	0.00	A	36.43	1.64	0.03	C>
52	0.86	0.05	0.00	A	8.82	-0.30	-0.02	B<	85.22	0.53	0.03	B>	71.06	0.95	0.06	B>	0.08	-0.06	0.00	A
53	654.92	-0.99	-0.08	B<	30.76	-0.50	-0.04	B<	77.97	-0.38	-0.03	B<	1.76	0.13	0.01	A	28.90	-0.61	-0.05	B<
54	94.88	0.41	0.03	B>	48.80	0.62	0.05	B>	221.73	0.70	0.05	B>	58.01	0.71	0.06	B>	9.82	0.46	0.02	B>
55	258.83	0.79	0.04	B>	54.41	0.76	0.05	B>	94.89	0.55	0.03	B>	16.4	-0.42	-0.03	B<	20.18	0.86	0.03	B>
56	28.57	-0.31	-0.01	B<	7.98	-0.33	-0.02	B<	0.02	0.01	0.00	A	33.5	0.77	0.03	B>	0.19	-0.10	0.00	A
57	19.97	0.19	0.01	B>	10.18	-0.28	-0.02	B<	1.74	0.06	0.01	A	13.76	0.36	0.03	B>	3.93	-0.29	-0.01	A
58	89.79	-0.39	-0.03	B<	1.63	-0.11	-0.01	A	0.20	-0.02	0.00	A	36.64	0.56	0.05	B>	6.56	0.37	0.02	A
59	62.65	0.30	0.03	B>	14.97	0.32	0.03	B>	12.05	0.15	0.01	B>	0.49	0.06	0.01	A	0.47	0.09	0.01	A
60	124.27	0.47	0.03	B>	21.67	0.42	0.03	B>	9.25	0.14	0.02	B>	0.83	0.09	0.01	A	0.54	-0.10	-0.01	A

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak, DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

(table continues)

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Table 9.2.1.7 (continued)
2009 Spring AIMS Differential Item Functioning Mathematics CRT Grade 8

	Reference: Male N=40573 Focal: Female N=38963				Reference: White N=36361 Focal: African Amer N=4706				Reference: White N=36361 Focal: Hispanic N=31890				Reference: White N=36361 Focal: Native Amer N=4133				Reference: White N=36361 Focal: Asian N=2486			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
61	5.65	0.09	0.01	A	0.00	0.00	0.00	A	0.06	-0.01	0.00	A	9.28	-0.26	-0.02	B<	0.01	0.01	0.00	A
62	6.08	0.12	0.01	A	0.04	-0.02	0.00	A	17.57	-0.24	-0.01	B<	2.12	-0.15	-0.01	A	3.08	-0.32	-0.01	A
63	256.68	-0.65	-0.05	B<	64.43	-0.68	-0.06	B<	0.03	-0.01	0.00	A	17.96	0.39	0.03	B>	9.94	-0.43	-0.02	B<
64	51.25	0.27	0.02	B>	13.62	-0.33	-0.02	B<	7.60	-0.12	-0.01	B<	13.38	-0.36	-0.03	B<	16.02	-0.44	-0.04	B<
65	0.54	0.03	0.00	A	10.74	-0.30	-0.02	B<	43.87	0.33	0.02	B>	56.33	0.74	0.06	B>	0.21	0.08	0.00	A
66	1095.18	1.77	0.08	C>	35.37	0.64	0.04	B>	151.35	0.73	0.04	B>	19.36	0.48	0.03	B>	24.61	1.09	0.03	B>

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak, DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

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Table 9.2.1.8
2009 Spring AIMS Differential Item Functioning Mathematics CRT High School

	Reference: Male N=37578 Focal: Female N=36813				Reference: White N=34873 Focal: African Amer N=4500				Reference: White N=34873 Focal: Hispanic N=28316				Reference: White N=34873 Focal: Native Amer N=4401				Reference: White N=34873 Focal: Asian N=2307			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
1	0.10	-0.01	0.00	A	0.84	-0.08	-0.01	A	45.63	-0.29	-0.02	B<	18.32	-0.36	-0.03	B<	24.25	-0.59	-0.04	B<
2	55.39	-0.46	-0.02	B<	37.32	-0.72	-0.03	B<	0.05	-0.02	0.00	A	1.93	-0.17	-0.01	A	0.05	-0.07	0.00	A
3	443.21	-0.88	-0.07	B<	0.13	-0.03	0.00	A	31.29	-0.26	-0.02	B<	17.91	-0.38	-0.04	B<	0.84	-0.13	-0.01	A
4	13.06	-0.14	-0.01	B<	34.85	0.49	0.05	B>	51.86	0.32	0.03	B>	13.92	0.31	0.03	B>	21.09	0.62	0.04	B>
5	78.85	-0.60	-0.02	B<	17.40	-0.53	-0.02	B<	6.91	0.20	0.01	B>	57.73	1.12	0.04	B>	1.47	-0.30	-0.01	A
6	8.73	-0.13	-0.01	B<	13.43	-0.33	-0.02	B<	0.29	0.03	0.01	A	0	0.00	0.00	A	1.76	-0.20	-0.01	A
7	7.85	-0.14	-0.01	B<	0.10	-0.03	0.00	A	61.38	-0.43	-0.02	B<	1.12	-0.11	-0.01	A	2.69	-0.28	-0.01	A
8	8.83	0.21	0.01	B>	20.78	-0.62	-0.02	B<	3.56	-0.16	0.00	A	1.92	-0.19	-0.01	A	3.34	-0.47	-0.01	A
9	10.69	-0.13	-0.01	B<	46.81	-0.57	-0.05	B<	203.52	-0.62	-0.06	B<	10.92	-0.28	-0.03	B<	23.93	-0.62	-0.04	B<
10	0.47	0.03	0.00	A	26.22	0.51	0.03	B>	59.72	0.42	0.03	B>	2.96	0.17	0.01	A	10.60	0.60	0.02	B>
11	394.23	-0.97	-0.05	B<	4.56	-0.22	-0.01	A	182.26	-0.74	-0.05	B<	72.08	-0.83	-0.06	B<	85.69	-1.47	-0.06	B<
12	0.55	-0.03	0.00	A	18.86	0.41	0.03	B>	2.60	0.08	0.01	A	5.44	0.22	0.02	A	5.93	0.43	0.02	A
13	6.52	0.17	0.01	A	4.66	0.29	0.01	A	23.47	0.37	0.01	B>	21.73	-0.56	-0.03	B<	18.75	1.23	0.02	B>
14	141.94	-0.49	-0.04	B<	21.54	-0.40	-0.04	B<	1.21	-0.05	0.00	A	37.02	0.54	0.05	B>	3.62	-0.27	-0.01	A
15	1.28	-0.05	0.00	A	4.00	-0.18	-0.01	A	0.00	0.00	0.00	A	0	0.00	0.00	A	2.59	0.21	0.01	A
16	0.15	0.02	0.00	A	0.60	-0.07	-0.01	A	4.04	0.09	0.01	A	12.3	0.32	0.02	B>	4.05	0.28	0.02	A
17	265.46	-0.76	-0.05	B<	165.19	-1.20	-0.08	B<	349.03	-1.00	-0.06	B<	62.49	-0.74	-0.05	B<	156.69	-1.77	-0.08	C<
18	0.38	0.02	0.00	A	21.83	-0.39	-0.03	B<	26.06	-0.23	-0.01	B<	1.59	0.11	0.01	A	0.43	-0.09	-0.01	A
19	96.99	0.36	0.04	B>	6.38	0.20	0.02	A	78.62	-0.37	-0.04	B<	83.3	-0.77	-0.07	B<	3.58	-0.21	-0.02	A
20	225.38	-0.67	-0.04	B<	68.11	-0.77	-0.05	B<	411.95	-1.01	-0.07	B<	89.18	-0.87	-0.06	B<	3.28	-0.28	-0.01	A
21	12.58	0.28	0.01	B>	2.31	-0.23	-0.01	A	2.98	0.16	0.00	A	6.96	0.41	0.01	B>	5.76	-0.62	-0.01	A
22	22.70	-0.27	-0.01	B<	5.13	0.26	0.01	A	24.90	0.32	0.02	B>	1.16	0.12	0.01	A	1.92	0.32	0.01	A
23	176.51	0.59	0.04	B>	2.71	0.16	0.01	A	19.24	0.22	0.02	B>	0.34	0.06	0.01	A	1.34	-0.17	-0.01	A
24	0.00	0.00	0.00	A	4.95	0.19	0.02	A	5.32	0.10	0.01	A	13.52	0.31	0.03	B>	0.28	0.07	0.01	A
25	0.07	0.02	0.00	A	19.56	-0.64	-0.02	B<	21.14	0.42	0.01	B>	98.63	1.80	0.05	C>	5.64	-0.63	-0.01	A
26	93.49	-0.53	-0.02	B<	32.75	-0.61	-0.03	B<	34.32	-0.37	-0.02	B<	4.35	0.23	0.01	A	25.22	-0.98	-0.03	B<
27	144.00	-0.46	-0.04	B<	1.14	0.09	0.01	A	25.31	-0.22	-0.02	B<	48.26	-0.58	-0.05	B<	0.50	-0.09	-0.01	A
28	278.12	0.74	0.05	B>	16.93	0.38	0.03	B>	34.28	0.29	0.02	B>	8.14	0.27	0.02	B>	15.65	0.62	0.03	B>
29	157.26	0.82	0.02	B>	0.39	-0.08	0.00	A	6.68	-0.20	-0.01	B<	5.9	-0.30	-0.01	A	0.04	-0.06	0.00	A
30	105.82	0.50	0.03	B>	12.55	0.36	0.02	B>	0.03	-0.01	0.00	A	36.73	-0.58	-0.04	B<	1.99	-0.26	-0.01	A

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak, DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items

(table continues)

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Table 9.2.1.8 (continued)
2009 Spring AIMS Differential Item Functioning Mathematics CRT High School

	Reference: Male N=37578 Focal: Female N=36813				Reference: White N=34873 Focal: African Amer N=4500				Reference: White N=34873 Focal: Hispanic N=28316				Reference: White N=34873 Focal: Native Amer N=4401				Reference: White N=34873 Focal: Asian N=2307			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
31	13.57	-0.17	-0.01	B<	4.53	0.21	0.01	A	74.39	0.45	0.03	B>	0.2	0.05	0.00	A	7.54	0.47	0.02	B>
32	139.92	-0.47	-0.04	B<	41.47	-0.54	-0.05	B<	194.60	-0.62	-0.06	B<	66.9	-0.69	-0.06	B<	23.78	-0.63	-0.04	B<
33	77.23	-0.52	-0.02	B<	5.62	-0.28	-0.01	A	2.83	-0.11	-0.01	A	0.43	0.08	0.00	A	8.29	-0.60	-0.01	B<
34	258.41	0.67	0.05	B>	10.51	0.29	0.02	B>	38.07	0.29	0.02	B>	2.04	-0.13	-0.01	A	0.43	0.09	0.01	A
35	5.76	0.12	0.01	A	0.83	0.10	0.01	A	18.05	0.25	0.02	B>	9.48	0.32	0.02	B>	1.17	-0.20	-0.01	A
36	50.49	0.35	0.02	B>	19.53	0.45	0.03	B>	2.02	-0.08	0.00	A	1.03	-0.10	0.00	A	4.76	0.39	0.01	A
37	48.87	-0.31	-0.02	B<	3.38	-0.17	-0.01	A	72.08	-0.42	-0.03	B<	28.14	-0.49	-0.03	B<	7.80	-0.43	-0.02	B<
38	340.45	1.13	0.04	B>	0.89	0.11	0.01	A	6.64	0.18	0.01	B>	52.89	0.86	0.05	B>	8.32	0.77	0.01	B>
39	46.92	0.36	0.02	B>	3.55	-0.20	-0.01	A	6.54	-0.15	-0.01	A	27.09	-0.54	-0.04	B<	0.43	0.14	0.00	A
40	20.24	0.18	0.02	B>	3.16	0.15	0.01	A	20.83	0.20	0.02	B>	0.02	0.01	0.00	A	0.03	0.03	0.00	A
41	77.88	0.32	0.03	B>	18.51	0.35	0.03	B>	41.59	0.27	0.02	B>	3.47	0.16	0.01	A	1.20	0.13	0.01	A
42	76.79	0.34	0.03	B>	0.14	0.03	0.00	A	2.98	0.08	0.01	A	10.14	0.27	0.03	B>	0.32	0.08	0.01	A
43	19.21	-0.21	-0.01	B<	0.01	0.01	0.00	A	11.90	0.19	0.01	B>	0.94	-0.10	-0.01	A	1.65	0.22	0.01	A
44	62.39	0.30	0.03	B>	4.12	0.17	0.02	A	45.59	0.30	0.03	B>	0.01	0.01	0.00	A	10.80	0.41	0.03	B>
45	196.78	0.64	0.04	B>	17.76	0.42	0.03	B>	14.62	-0.20	-0.01	B<	77.15	-0.79	-0.06	B<	0.33	-0.10	0.00	A
46	309.83	0.72	0.05	B>	23.88	0.44	0.04	B>	29.42	0.26	0.02	B>	6.71	0.23	0.02	B>	10.80	-0.41	-0.03	B<
47	580.93	-0.99	-0.08	B<	152.47	-1.07	-0.09	B<	202.25	-0.65	-0.05	B<	6.06	-0.22	-0.02	A	41.41	-0.89	-0.05	B<
48	38.87	-0.30	-0.02	B<	0.52	-0.07	-0.01	A	10.05	0.17	0.01	B>	0.05	0.02	0.00	A	0.07	-0.05	0.00	A
49	148.05	0.46	0.04	B>	19.86	0.37	0.03	B>	115.83	0.47	0.04	B>	39.3	0.54	0.05	B>	0.25	-0.06	-0.01	A
50	4.55	0.11	0.01	A	17.12	-0.44	-0.02	B<	28.36	-0.33	-0.02	B<	13.24	0.41	0.02	B>	14.19	-0.71	-0.02	B<
51	10.83	0.13	0.01	B>	1.19	0.09	0.01	A	9.55	0.14	0.01	B>	13.92	-0.33	-0.03	B<	5.05	0.28	0.02	A
52	77.83	-0.38	-0.03	B<	10.42	-0.29	-0.02	B<	0.59	0.04	0.00	A	1.99	0.13	0.01	A	26.07	-0.70	-0.04	B<
53	68.18	-0.39	-0.02	B<	0.24	-0.05	0.00	A	4.11	0.11	0.01	A	41.51	0.63	0.05	B>	0.01	0.03	0.00	A
54	2.51	-0.06	0.00	A	7.71	0.24	0.02	B>	39.56	0.28	0.02	B>	8.99	0.27	0.02	B>	18.96	0.57	0.04	B>
55	114.71	0.48	0.03	B>	5.92	0.24	0.01	A	51.95	0.36	0.02	B>	8.7	0.29	0.02	B>	35.48	0.88	0.05	B>
56	45.27	0.26	0.02	B>	3.33	0.15	0.01	A	0.86	0.04	0.00	A	1.65	-0.11	-0.01	A	24.64	0.68	0.04	B>
57	328.98	0.77	0.05	B>	0.09	0.03	0.00	A	0.03	0.01	0.00	A	5.8	-0.22	-0.02	A	0.01	-0.02	0.00	A
58	103.25	0.55	0.02	B>	3.53	0.20	0.01	A	19.77	0.27	0.02	B>	21.47	0.50	0.03	B>	0.08	0.06	0.00	A
59	154.11	0.60	0.03	B>	17.72	0.42	0.03	B>	40.77	0.35	0.02	B>	36.12	0.59	0.04	B>	30.05	1.08	0.03	B>
60	120.69	0.42	0.04	B>	6.82	0.22	0.02	B>	92.52	0.42	0.04	B>	42.02	0.56	0.05	B>	0.04	0.03	0.00	A

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak, DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

(table continues)

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Table 9.2.1.8 (continued)
2009 Spring AIMS Differential Item Functioning Mathematics CRT High School

	Reference: Male N=37578 Focal: Female N=36813				Reference: White N=34873 Focal: African Amer N=4500				Reference: White N=34873 Focal: Hispanic N=28316				Reference: White N=34873 Focal: Native Amer N=4401				Reference: White N=34873 Focal: Asian N=2307			
Item	MH χ2	ΔMH	SMD	Flag	MHχ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
61	113.72	-0.53	-0.03	B<	86.57	-0.93	-0.06	B<	363.13	-1.06	-0.06	B<	184.11	-1.33	-0.09	B<	27.70	-0.98	-0.03	B<
62	3.85	0.09	0.01	A	1.24	-0.11	-0.01	A	37.28	-0.31	-0.02	B<	0.04	-0.02	0.00	A	1.10	-0.13	-0.01	A
63	236.80	-0.77	-0.04	B<	1.25	-0.12	-0.01	A	0.03	-0.01	0.00	A	17.28	-0.42	-0.03	B<	0.66	-0.16	0.00	A
64	0.30	0.02	0.00	A	18.68	0.37	0.03	B>	151.90	0.55	0.04	B>	56.81	0.65	0.06	B>	23.41	0.64	0.04	B>
65	3.47	-0.07	-0.01	A	4.74	0.19	0.02	A	9.58	0.14	0.01	B>	3.04	0.15	0.01	A	6.75	0.35	0.02	B>
66	27.99	-0.20	-0.02	B<	10.00	-0.26	-0.02	B<	3.81	-0.08	0.00	A	6.94	0.22	0.02	B>	12.51	-0.44	-0.03	B<
67	5.63	0.09	0.01	A	37.29	0.50	0.05	B>	136.66	0.51	0.04	B>	4.15	0.17	0.01	A	38.91	0.78	0.06	B>
68	83.51	-0.38	-0.03	B<	3.92	-0.18	-0.01	A	12.77	-0.17	-0.01	B<	0.8	0.09	0.01	A	15.88	0.52	0.03	B>
69	68.97	-0.37	-0.02	B<	29.52	-0.50	-0.04	B<	68.48	-0.42	-0.03	B<	14.7	0.37	0.03	B>	9.04	-0.46	-0.02	B<
70	0.02	0.01	0.00	A	23.81	-0.50	-0.03	B<	163.87	-0.75	-0.04	B<	32.34	-0.57	-0.03	B<	29.46	-0.99	-0.03	B<
71	334.72	-0.77	-0.06	B<	41.31	-0.57	-0.05	B<	43.92	-0.31	-0.02	B<	1.39	-0.11	-0.01	A	29.10	-0.72	-0.04	B<
72	5.20	-0.09	-0.01	A	30.23	0.48	0.04	B>	5.46	0.11	0.01	A	6.44	-0.23	-0.02	A	0.21	-0.06	0.00	A
73	84.74	-0.58	-0.02	B<	23.50	-0.59	-0.03	B<	21.29	-0.33	-0.01	B<	0.06	0.03	0.00	A	10.64	-0.79	-0.01	B<
74	78.05	0.36	0.03	B>	54.89	0.66	0.05	B>	34.18	0.27	0.03	B>	0	0.00	0.00	A	39.43	0.90	0.05	B>
75	27.27	0.21	0.02	B>	31.82	0.50	0.04	B>	106.43	0.48	0.04	B>	14.34	0.35	0.02	B>	50.80	1.00	0.06	B>
76	1.46	0.05	0.00	A	10.70	0.27	0.02	B>	13.63	0.16	0.01	B>	4.4	0.18	0.02	A	33.57	0.76	0.05	B>
77	2.41	0.07	0.00	A	6.00	-0.22	-0.02	A	87.63	0.45	0.04	B>	103.82	0.92	0.08	B>	0.45	0.10	0.01	A
78	153.49	0.57	0.04	B>	92.00	0.93	0.06	B>	92.63	0.50	0.04	B>	9.24	-0.29	-0.02	B<	66.08	1.50	0.05	B>
79	143.45	0.54	0.03	B>	3.71	0.18	0.01	A	1.61	0.07	0.01	A	3.02	-0.16	-0.01	A	10.02	-0.50	-0.02	B<
80	26.95	-0.20	-0.02	B<	25.64	0.42	0.04	B>	66.19	0.36	0.03	B>	12.07	0.29	0.03	B>	0.00	-0.01	0.00	A
81	56.82	-0.40	-0.02	B<	3.63	-0.21	-0.01	A	61.33	-0.48	-0.02	B<	21.04	-0.47	-0.03	B<	14.89	-0.72	-0.02	B<
82	14.58	-0.19	-0.01	B<	2.22	-0.15	-0.01	A	0.18	0.02	0.00	A	80.09	0.93	0.06	B>	0.64	-0.15	0.00	A
83	4.06	0.09	0.01	A	18.30	0.42	0.03	B>	29.04	0.28	0.02	B>	19.11	0.42	0.03	B>	41.05	1.10	0.04	B>
84	283.97	0.82	0.04	B>	1.59	-0.13	-0.01	A	5.37	-0.13	-0.01	A	0.01	-0.01	0.00	A	14.28	-0.62	-0.02	B<
85	298.56	-0.68	-0.06	B<	5.50	-0.20	-0.02	A	43.94	-0.29	-0.02	B<	88.97	-0.80	-0.07	B<	0.01	-0.02	0.00	A

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak, DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

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Table 9.2.1.9
2009 Spring AIMS Differential Item Functioning Reading CRT Grade 3

	Reference: Male N=42278 Focal: Female N=40781				Reference: White N=35824 Focal: African Amer N=4900				Reference: White N=35824 Focal: Hispanic N=35564				Reference: White N=35824 Focal: Native Amer N=4255				Reference: White N=35824 Focal: Asian N=2501			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
1	14.94	0.31	0.00	B>	16.06	-0.61	-0.02	B<	7.30	0.25	0.01	B>	1.14	0.17	0.01	A	0.00	0.04	0.00	A
2	20.78	0.23	0.01	B>	0.23	0.05	0.00	A	20.16	-0.26	-0.02	B<	6.49	-0.27	-0.02	A	0.15	-0.07	0.00	A
3	11.77	0.29	0.00	B>	0.26	0.09	0.00	A	3.49	0.18	0.00	A	4.29	0.36	0.01	A	0.41	0.23	0.00	A
4	31.82	0.27	0.01	B>	31.98	-0.54	-0.03	B<	0.08	-0.02	0.00	A	49.75	-0.68	-0.05	B<	6.13	-0.39	-0.02	A
5	104.62	-0.39	-0.03	B<	0.05	0.02	0.00	A	0.21	-0.02	-0.01	A	1.25	0.10	0.00	A	1.78	0.17	0.01	A
6	139.38	0.47	0.03	B>	0.69	0.07	0.01	A	44.98	0.31	0.02	B>	0.09	0.03	0.00	A	4.54	0.29	0.02	A
7	78.22	-0.33	-0.03	B<	2.28	-0.12	-0.01	A	4.95	-0.09	-0.01	A	28.43	-0.49	-0.04	B<	2.26	0.17	0.01	A
8	73.42	0.52	0.02	B>	6.38	0.31	0.01	A	43.65	0.46	0.02	B>	8.94	0.37	0.02	B>	0.96	0.22	0.00	A
9	31.46	-0.30	-0.01	B<	16.71	-0.46	-0.02	B<	128.06	-0.71	-0.03	B<	147.65	-1.30	-0.07	B<	14.17	-0.69	-0.02	B<
10	2.73	-0.06	0.00	A	0.01	-0.01	0.00	A	22.22	0.19	0.01	B>	6.08	0.21	0.02	A	0.02	0.02	0.00	A
11	506.42	1.00	0.06	B>	3.03	-0.17	-0.01	A	1.30	-0.06	0.00	A	2.93	-0.17	-0.01	A	6.90	-0.38	-0.02	B<
12	31.29	0.38	0.01	B>	0.26	0.08	0.00	A	18.06	0.33	0.01	B>	4.52	0.29	0.01	A	9.16	0.87	0.01	B>
13	62.38	-0.38	-0.02	B<	9.57	-0.32	-0.02	B<	241.26	-0.86	-0.05	B<	10.1	-0.33	-0.02	B<	26.92	-0.86	-0.03	B<
14	99.85	0.45	0.02	B>	1.70	-0.13	-0.01	A	61.43	0.40	0.03	B>	0.01	0.01	0.00	A	10.33	0.51	0.02	B>
15	103.02	0.41	0.03	B>	1.39	-0.10	-0.01	A	3.85	0.09	0.01	A	0.08	0.03	0.00	A	15.12	-0.50	-0.03	B<
16	65.87	0.32	0.03	B>	2.13	-0.13	-0.01	A	12.91	-0.16	0.00	B<	0.05	0.02	0.00	A	0.13	-0.04	0.00	A
17	2.79	0.07	0.01	A	0.05	0.02	0.00	A	14.82	-0.17	-0.02	B<	7.85	-0.25	-0.02	B<	1.79	-0.18	-0.01	A
18	137.57	0.42	0.04	B>	24.27	0.40	0.03	B>	155.50	0.51	0.03	B>	45.13	0.60	0.05	B>	3.27	-0.19	-0.02	A
19	7.05	0.11	0.01	B>	25.37	0.47	0.03	B>	38.09	0.30	0.02	B>	0.65	0.08	0.00	A	2.00	0.20	0.01	A
20	35.33	0.22	0.02	B>	8.47	0.24	0.02	B>	77.92	-0.37	-0.03	B<	34.6	-0.51	-0.04	B<	10.04	-0.37	-0.03	B<
21	80.64	-0.44	-0.02	B<	19.07	-0.44	-0.02	B<	125.87	-0.62	-0.03	B<	42.94	-0.67	-0.04	B<	22.82	-0.76	-0.03	B<
22	4.19	-0.10	0.00	A	14.56	0.41	0.02	B>	103.97	0.58	0.03	B>	34.84	0.65	0.04	B>	38.74	1.20	0.04	B>
23	21.26	0.19	0.01	B>	24.37	0.44	0.03	B>	4.28	0.10	0.01	A	0.69	0.08	0.01	A	0.75	-0.12	-0.01	A
24	17.44	0.15	0.01	B>	12.58	0.28	0.03	B>	167.69	0.51	0.05	B>	39.37	0.53	0.05	B>	5.90	0.25	0.02	A
25	24.74	0.20	0.01	B>	7.96	0.25	0.02	B>	33.43	0.27	0.02	B>	8.29	0.27	0.02	B>	2.30	0.21	0.01	A
26	0.57	0.03	0.00	A	0.13	0.04	0.00	A	14.51	-0.18	-0.01	B<	39.21	0.61	0.05	B>	4.52	0.33	0.01	A
27	88.56	-0.36	-0.03	B<	6.99	0.22	0.02	B>	82.55	0.39	0.04	B>	17.02	0.36	0.03	B>	12.04	0.43	0.03	B>
28	46.07	-0.36	-0.01	B<	0.01	0.01	0.00	A	9.18	0.18	0.01	B>	4.58	0.24	0.01	A	12.30	0.70	0.02	B>
29	67.09	-0.30	-0.03	B<	1.42	-0.10	-0.01	A	59.96	0.32	0.03	B>	1.47	-0.10	-0.01	A	4.71	0.25	0.02	A
30	0.01	0.00	0.00	A	3.81	0.16	0.01	A	6.12	-0.10	-0.01	A	6.73	0.23	0.02	B>	3.92	0.24	0.02	A

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

(table continues)

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Table 9.2.1.9 (continued)
2009 Spring AIMS Differential Item Functioning Reading CRT Grade 3

	Reference: Male N=42278 Focal: Female N=40781				Reference: White N=35824 Focal: African Amer N=4900				Reference: White N=35824 Focal: Hispanic N=35564				Reference: White N=35824 Focal: Native Amer N=4255				Reference: White N=35824 Focal: Asian N=2501			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
31	51.10	-0.33	-0.02	B<	10.35	0.33	0.02	B>	0.03	-0.01	0.00	A	1.06	0.11	0.01	A	5.79	0.40	0.02	A
32	5.84	0.11	0.01	A	1.37	0.11	0.01	A	119.27	0.57	0.03	B>	8.85	0.29	0.02	B>	10.01	0.51	0.02	B>
33	28.41	0.20	0.02	B>	4.33	-0.17	-0.01	A	0.00	0.00	0.00	A	17.23	0.37	0.03	B>	1.88	-0.16	-0.01	A
34	75.82	-0.41	-0.02	B<	8.03	-0.28	-0.02	B<	0.52	-0.04	0.00	A	172.24	1.42	0.09	B>	0.13	0.06	0.00	A
35	345.23	-0.81	-0.05	B<	26.48	-0.49	-0.03	B<	977.04	-1.52	-0.10	C<	115.01	-1.02	-0.07	B<	25.78	-0.73	-0.03	B<
36	18.92	0.19	0.01	B>	5.20	-0.21	-0.01	A	2.69	-0.08	0.00	A	42.31	0.64	0.05	B>	3.02	0.28	0.01	A
37	75.47	0.73	0.01	B>	0.12	-0.06	0.00	A	2.27	0.15	0.00	A	0.18	0.07	0.00	A	4.86	-0.69	-0.01	A
38	0.14	0.02	0.00	A	0.43	-0.07	0.00	A	142.04	-0.66	-0.03	B<	21.35	-0.48	-0.03	B<	4.16	-0.36	-0.01	A
39	0.67	0.03	0.00	A	9.11	0.26	0.02	B>	5.42	-0.10	-0.01	A	9.71	-0.27	-0.02	B<	17.93	-0.47	-0.04	B<
40	59.52	0.39	0.02	B>	2.33	0.17	0.01	A	11.17	0.20	0.01	B>	6.94	-0.27	-0.02	B<	3.83	-0.36	-0.01	A
41	0.10	0.02	0.00	A	0.25	0.06	0.00	A	0.04	-0.01	0.00	A	7.61	-0.33	-0.02	B<	7.99	0.67	0.01	B>
42	1.60	-0.05	0.00	A	1.25	-0.10	-0.01	A	6.73	0.12	0.01	B>	1.1	-0.10	-0.01	A	2.90	0.24	0.01	A
43	41.83	0.24	0.02	B>	2.45	0.13	0.01	A	40.12	-0.26	-0.02	B<	20.53	-0.40	-0.03	B<	8.02	-0.31	-0.03	B<
44	111.40	0.41	0.03	B>	2.25	0.13	0.01	A	0.06	0.01	0.00	A	14.46	0.36	0.03	B>	2.54	-0.19	-0.01	A
45	187.58	0.50	0.04	B>	7.34	0.22	0.02	B>	46.56	0.28	0.03	B>	60.37	0.67	0.06	B>	0.06	-0.03	0.00	A
46	84.28	-0.39	-0.02	B<	18.68	-0.39	-0.03	B<	161.50	-0.61	-0.04	B<	10.39	-0.29	-0.02	B<	9.12	-0.44	-0.02	B<
47	137.77	-0.47	-0.03	B<	140.98	-1.00	-0.08	B<	164.82	-0.58	-0.05	B<	24.22	0.48	0.03	B>	55.44	-0.89	-0.06	B<
48	17.18	-0.15	-0.01	B<	3.58	-0.15	-0.01	A	14.21	0.15	0.01	B>	10.43	0.28	0.02	B>	30.43	0.58	0.05	B>
49	574.32	-0.91	-0.07	B<	1.05	-0.09	-0.01	A	4.30	-0.09	-0.01	A	78.26	-0.75	-0.07	B<	9.18	-0.36	-0.03	B<
50	23.72	-0.20	-0.01	B<	1.50	0.11	0.01	A	41.77	0.29	0.02	B>	0.3	-0.05	0.00	A	7.37	0.35	0.02	B>
51	76.46	-0.34	-0.03	B<	2.44	0.13	0.01	A	5.97	-0.11	-0.01	A	72.76	-0.75	-0.06	B<	2.18	-0.19	-0.01	A
52	96.49	-0.39	-0.03	B<	4.14	0.18	0.01	A	86.30	0.42	0.04	B>	10.75	0.29	0.03	B>	20.52	0.60	0.04	B>
53	40.36	-0.28	-0.02	B<	10.57	-0.30	-0.02	B<	161.06	-0.62	-0.04	B<	58.27	-0.73	-0.05	B<	1.52	0.20	0.01	A
54	10.78	0.13	0.01	B>	6.29	0.22	0.02	A	84.07	0.42	0.03	B>	2.45	0.14	0.01	A	3.00	0.22	0.01	A

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

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Table 9.2.1.10
2009 Spring AIMS Differential Item Functioning Reading CRT Grade 4

	Reference: Male N=42107 Focal: Female N=40301				Reference: White N=35507 Focal: African Amer N=4803				Reference: White N=35507 Focal: Hispanic N=35144				Reference: White N=35507 Focal: Native Amer N=4448				Reference: White N=35507 Focal: Asian N=2528			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
1	17.03	-0.23	-0.01	B<	5.85	0.30	0.01	A	0.08	-0.02	0.00	A	4.91	-0.25	-0.01	A	0.23	-0.10	0.00	A
2	0.09	-0.01	0.00	A	16.41	0.36	0.03	B>	132.44	0.52	0.04	B>	45.89	0.61	0.05	B>	13.67	0.49	0.03	B>
3	62.13	-0.32	-0.02	B<	7.50	0.25	0.02	B>	5.84	0.11	0.01	A	15.57	-0.35	-0.03	B<	22.55	0.66	0.04	B>
4	4.56	-0.08	-0.01	A	17.86	0.34	0.03	B>	230.64	0.62	0.06	B>	10.57	-0.28	-0.03	B<	3.99	0.22	0.02	A
5	49.85	-0.36	-0.02	B<	1.38	0.13	0.01	A	29.69	0.32	0.02	B>	27.36	0.56	0.03	B>	0.50	0.13	0.00	A
6	85.14	0.36	0.03	B>	0.02	0.01	0.00	A	0.02	0.01	0.00	A	3.37	-0.16	-0.01	A	2.14	0.19	0.01	A
7	9.73	-0.15	-0.01	B<	78.01	-0.89	-0.05	B<	287.65	-0.96	-0.06	B<	27.53	-0.53	-0.04	B<	9.74	-0.55	-0.02	B<
8	64.73	-0.35	-0.02	B<	17.19	-0.38	-0.03	B<	0.03	-0.01	0.00	A	17.72	-0.39	-0.03	B<	1.28	-0.16	-0.01	A
9	229.48	0.61	0.04	B>	17.65	0.37	0.03	B>	0.88	-0.04	-0.01	A	13.26	0.33	0.03	B>	8.50	0.41	0.02	B>
10	64.10	-0.29	-0.03	B<	4.09	-0.16	-0.02	A	12.27	0.14	0.01	B>	0.83	-0.08	-0.01	A	5.87	0.27	0.02	A
11	19.89	-0.16	-0.01	B<	1.01	-0.08	-0.01	A	0.03	-0.01	-0.01	A	4.95	0.19	0.02	A	2.83	0.19	0.02	A
12	1.08	0.05	0.00	A	0.46	-0.07	0.00	A	2.65	0.09	0.01	A	11.68	-0.33	-0.02	B<	0.17	0.07	0.00	A
13	225.52	0.67	0.04	B>	1.37	0.12	0.01	A	0.01	0.01	0.00	A	14.89	-0.36	-0.03	B<	3.12	-0.26	-0.01	A
14	46.02	0.48	0.01	B>	1.75	-0.19	-0.01	A	7.15	0.22	0.01	B>	0.04	-0.03	0.00	A	0.00	0.00	0.00	A
15	125.25	-0.41	-0.04	B<	2.26	0.12	0.01	A	20.92	-0.19	-0.02	B<	17.52	-0.36	-0.03	B<	5.41	0.26	0.02	A
16	163.19	0.58	0.03	B>	0.57	-0.07	0.00	A	0.08	0.01	0.00	A	12.03	0.34	0.03	B>	0.24	-0.08	0.00	A
17	98.03	0.57	0.02	B>	5.15	0.28	0.01	A	11.68	0.23	0.01	B>	14.12	0.45	0.02	B>	1.06	-0.21	-0.01	A
18	11.56	0.16	0.01	B>	0.01	0.02	0.00	A	235.99	-0.86	-0.05	B<	126.96	-1.10	-0.07	B<	32.70	-0.90	-0.03	B<
19	428.52	0.78	0.07	B>	7.17	0.23	0.02	B>	129.68	-0.48	-0.04	B<	20.04	-0.38	-0.04	B<	52.87	-0.81	-0.06	B<
20	41.93	0.26	0.02	B>	20.09	0.39	0.03	B>	30.12	0.25	0.02	B>	3.56	0.17	0.01	A	3.44	0.24	0.01	A
21	0.46	0.03	0.00	A	7.70	-0.26	-0.02	B<	208.26	-0.70	-0.04	B<	32.95	-0.53	-0.04	B<	50.64	-0.92	-0.05	B<
22	33.06	0.43	0.01	B>	7.57	0.44	0.01	B>	35.12	0.51	0.01	B>	28.36	0.80	0.03	B>	0.04	0.07	0.00	A
23	45.73	0.38	0.01	B>	4.16	-0.24	-0.01	A	18.75	-0.28	-0.01	B<	43.46	0.83	0.04	B>	29.95	-0.97	-0.03	B<
24	183.36	-0.54	-0.04	B<	3.03	0.15	0.01	A	1.52	0.06	0.00	A	28.54	-0.47	-0.04	B<	59.54	-0.88	-0.06	B<
25	24.32	0.31	0.01	B>	14.78	0.50	0.02	B>	128.27	0.81	0.03	B>	64.1	1.05	0.05	B>	0.96	0.22	0.01	A
26	3.46	0.09	0.00	A	16.67	0.43	0.02	B>	53.30	0.40	0.02	B>	0.21	0.05	0.00	A	1.26	-0.17	-0.01	A
27	417.29	1.00	0.05	B>	9.71	0.33	0.02	B>	69.77	0.47	0.03	B>	12.42	0.37	0.02	B>	0.07	-0.05	0.00	A
28	95.35	0.43	0.03	B>	0.01	0.01	0.00	A	39.96	0.32	0.03	B>	41.58	0.64	0.05	B>	0.99	-0.15	-0.01	A
29	8.24	0.13	0.01	B>	11.14	-0.32	-0.02	B<	11.67	0.18	0.01	B>	43.66	0.67	0.04	B>	0.47	0.11	0.00	A
30	83.90	0.39	0.03	B>	14.12	-0.35	-0.02	B<	6.44	-0.12	0.00	A	110.55	1.02	0.07	B>	0.05	-0.03	0.00	A

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

(table continues)

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Table 9.2.1.10 (continued)
2009 Spring AIMS Differential Item Functioning Reading CRT Grade 4

	Reference: Male N = Focal: Female N =				Reference: White N = Focal: African Am. N =				Reference: White N = Focal: Hispanic N =				Reference: White N = Focal: Native Am. N =				Reference: White N = Focal: Asian N =			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
31	1.75	0.05	0.00	A	0.75	0.08	0.01	A	19.93	0.21	0.02	B>	4.98	0.21	0.02	A	0.88	0.12	0.01	A
32	32.17	0.24	0.02	B>	0.27	-0.05	0.00	A	93.79	-0.46	-0.04	B<	27.36	-0.47	-0.04	B<	0.06	0.04	0.00	A
33	74.26	0.41	0.02	B>	23.15	0.50	0.03	B>	151.40	0.67	0.04	B>	38.28	0.63	0.04	B>	17.61	0.69	0.03	B>
34	49.22	-0.27	-0.02	B<	40.62	-0.52	-0.04	B<	48.90	-0.30	-0.02	B<	13.69	-0.31	-0.03	B<	1.75	-0.16	-0.01	A
35	37.18	0.25	0.02	B>	4.65	0.19	0.01	A	62.29	0.36	0.03	B>	2.92	-0.15	-0.01	A	13.21	0.49	0.03	B>
36	1.14	-0.05	0.00	A	0.96	0.11	0.01	A	0.57	0.04	0.01	A	2.63	-0.17	-0.01	A	1.11	0.20	0.01	A
37	138.44	-0.46	-0.04	B<	13.62	-0.31	-0.03	B<	84.43	-0.40	-0.03	B<	37.23	-0.53	-0.05	B<	5.51	-0.29	-0.02	A
38	180.16	-0.64	-0.03	B<	44.16	-0.67	-0.04	B<	269.50	-0.91	-0.06	B<	114.23	-1.04	-0.07	B<	8.78	-0.49	-0.02	B<
39	149.44	-0.51	-0.03	B<	7.19	-0.24	-0.02	B<	3.04	-0.08	-0.01	A	0	0.00	0.00	A	12.96	0.50	0.03	B>
40	232.19	-0.67	-0.04	B<	40.51	-0.58	-0.04	B<	78.46	-0.44	-0.03	B<	47.57	-0.63	-0.05	B<	8.11	-0.41	-0.02	B<
41	0.09	-0.01	0.00	A	6.00	-0.24	-0.01	A	115.33	-0.58	-0.04	B<	6.18	-0.25	-0.02	A	17.55	-0.67	-0.03	B<
42	97.19	0.40	0.03	B>	13.59	-0.33	-0.02	B<	2.39	-0.07	0.00	A	37.84	0.56	0.05	B>	5.22	-0.30	-0.02	A
43	12.73	-0.13	-0.01	B<	7.73	0.22	0.02	B>	32.94	0.23	0.02	B>	0.4	-0.06	0.00	A	22.61	-0.49	-0.05	B<
44	22.10	-0.20	-0.01	B<	7.19	-0.25	-0.02	B<	14.38	-0.18	-0.01	B<	21.04	-0.40	-0.03	B<	0.74	0.13	0.01	A
45	0.00	0.00	0.00	A	0.28	-0.07	0.00	A	141.83	0.86	0.03	B>	71.5	1.10	0.05	B>	7.26	0.63	0.01	B>
46	33.05	-0.29	-0.01	B<	2.01	-0.15	-0.01	A	1.12	0.06	0.01	A	1.04	0.11	0.01	A	0.11	-0.06	0.00	A
47	0.09	-0.02	0.00	A	2.48	-0.21	-0.01	A	32.85	0.44	0.02	B>	19.48	0.59	0.03	B>	7.23	0.72	0.01	B>
48	71.86	-0.54	-0.01	B<	0.95	0.13	0.01	A	4.41	0.16	0.00	A	20.21	0.60	0.03	B>	3.68	0.50	0.01	A
49	15.65	-0.19	-0.01	B<	0.83	0.09	0.01	A	21.28	0.25	0.02	B>	44.68	0.69	0.05	B>	2.95	0.29	0.01	A
50	0.00	-0.01	0.00	A	0.15	-0.06	0.00	A	55.85	0.61	0.02	B>	25.1	0.70	0.03	B>	7.26	0.73	0.01	B>
51	57.85	0.31	0.02	B>	0.98	0.09	0.01	A	35.76	0.28	0.02	B>	10.09	0.29	0.02	B>	14.12	0.53	0.03	B>
52	45.42	-0.26	-0.02	B<	1.80	0.12	0.01	A	7.97	-0.12	-0.01	B<	2.26	0.14	0.01	A	24.47	0.58	0.04	B>
53	173.32	-0.56	-0.03	B<	1.16	0.10	0.01	A	162.81	-0.61	-0.05	B<	37.74	-0.57	-0.05	B<	0.00	-0.01	0.00	A
54	136.51	-0.47	-0.03	B<	17.35	0.37	0.03	B>	11.01	0.15	0.01	B>	3.25	-0.16	-0.01	A	6.76	0.33	0.02	B>

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

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Table 9.2.1.11
2009 Spring AIMS Differential Item Functioning Reading CRT Grade 5

	Reference: Male N=41409 Focal: Female N=39675				Reference: White N=35537 Focal: African Amer N=4875				Reference: White N=35537 Focal: Hispanic N=33983				Reference: White N=35537 Focal: Native Amer N=4262				Reference: White N=35537 Focal: Asian N=2436			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
1	32.23	0.25	0.01	B>	63.22	-0.75	-0.05	B<	535.40	-1.17	-0.08	B<	168.11	-1.20	-0.09	B<	102.22	-1.40	-0.07	B<
2	45.67	0.48	0.01	B>	5.98	-0.37	-0.01	A	111.74	-0.87	-0.03	B<	0.11	-0.06	0.00	A	8.44	-0.72	-0.01	B<
3	38.40	-0.32	-0.01	B<	0.41	-0.07	0.00	A	33.92	-0.35	-0.02	B<	38.57	-0.65	-0.04	B<	3.63	-0.36	-0.01	A
4	9.55	-0.11	-0.01	B<	3.14	-0.14	-0.01	A	2.17	0.06	0.00	A	12.69	0.30	0.03	B>	8.31	0.32	0.03	B>
5	0.28	0.03	0.00	A	0.01	-0.01	0.00	A	16.17	-0.25	-0.02	B<	6.65	0.30	0.02	B>	13.62	-0.66	-0.02	B<
6	1.54	-0.05	0.00	A	0.25	-0.04	0.00	A	33.85	0.26	0.01	B>	1.04	0.09	0.01	A	3.22	0.23	0.02	A
7	17.31	-0.21	-0.01	B<	1.98	-0.15	-0.01	A	7.97	0.16	0.01	B>	0.39	0.07	0.00	A	0.14	-0.07	0.00	A
8	62.96	0.34	0.02	B>	4.35	0.19	0.01	A	82.62	0.44	0.03	B>	6	-0.23	-0.02	A	1.73	-0.18	-0.01	A
9	17.68	0.16	0.01	B>	14.04	-0.30	-0.03	B<	43.56	-0.28	-0.02	B<	8.42	0.25	0.02	B>	1.41	-0.14	-0.01	A
10	148.17	-0.49	-0.04	B<	57.29	-0.66	-0.05	B<	1015.42	-1.45	-0.11	B<	190.2	-1.20	-0.10	B<	53.98	-0.96	-0.05	B<
11	1.70	-0.07	0.00	A	38.23	-0.69	-0.03	B<	231.58	-0.97	-0.05	B<	91.59	-1.03	-0.06	B<	4.84	-0.45	-0.01	A
12	0.85	0.04	0.00	A	30.41	0.45	0.04	B>	153.01	0.54	0.04	B>	47.49	0.61	0.05	B>	4.99	0.27	0.02	A
13	35.62	0.28	0.01	B>	0.00	0.00	0.00	A	4.03	0.11	0.01	A	4.99	0.23	0.01	A	0.51	0.13	0.00	A
14	33.07	0.23	0.02	B>	0.20	-0.04	0.00	A	47.74	-0.31	-0.02	B<	15.41	-0.36	-0.03	B<	1.00	0.13	0.01	A
15	0.99	0.04	0.00	A	1.01	-0.09	-0.01	A	11.46	0.16	0.01	B>	8.24	0.27	0.02	B>	5.47	0.32	0.02	A
16	29.38	0.29	0.01	B>	0.75	0.10	0.01	A	73.17	0.52	0.03	B>	39.34	0.72	0.04	B>	6.26	0.49	0.01	A
17	4.91	0.10	0.01	A	4.50	-0.21	-0.01	A	1.31	0.06	0.00	A	2.01	0.14	0.01	A	0.39	-0.10	0.00	A
18	0.81	0.04	0.00	A	61.05	-0.74	-0.05	B<	259.25	-0.81	-0.05	B<	81.39	-0.86	-0.06	B<	24.00	-0.77	-0.03	B<
19	19.01	0.16	0.01	B>	17.07	0.34	0.03	B>	227.21	0.64	0.06	B>	71.51	0.74	0.07	B>	0.27	0.06	0.00	A
20	123.47	0.42	0.03	B>	5.74	0.20	0.02	A	90.50	0.41	0.03	B>	1.4	0.11	0.01	A	63.48	1.01	0.07	B>
21	107.94	0.38	0.03	B>	17.35	0.34	0.03	B>	74.80	0.36	0.03	B>	7.8	0.24	0.02	B>	0.00	0.00	0.00	A
22	90.86	0.40	0.03	B>	8.29	-0.26	-0.02	B<	20.21	-0.22	-0.01	B<	88.83	-0.83	-0.07	B<	15.99	-0.54	-0.03	B<
23	1.16	0.05	0.00	A	0.40	-0.07	0.00	A	9.69	0.18	0.01	B>	0	0.00	0.00	A	0.07	0.05	0.00	A
24	0.68	0.04	0.00	A	12.13	-0.32	-0.02	B<	2.91	-0.08	0.00	A	21.71	0.45	0.03	B>	5.67	0.36	0.02	A
25	64.23	0.45	0.02	B>	0.56	-0.09	0.00	A	36.73	0.39	0.02	B>	10.71	0.38	0.02	B>	5.41	0.50	0.01	A
26	109.06	-0.45	-0.03	B<	0.50	0.07	0.00	A	52.93	0.36	0.02	B>	26.11	0.49	0.04	B>	4.31	0.30	0.02	A
27	302.73	-0.72	-0.05	B<	3.32	-0.16	-0.01	A	1.97	-0.07	0.00	A	10.6	-0.29	-0.02	B<	6.70	0.37	0.02	B>
28	128.42	-0.64	-0.02	B<	3.12	-0.21	-0.01	A	5.42	-0.16	-0.01	A	107.36	-1.13	-0.06	B<	1.14	-0.23	-0.01	A
29	223.36	-0.52	-0.05	B<	0.09	-0.02	0.00	A	202.53	-0.55	-0.06	B<	30.46	-0.45	-0.05	B<	5.16	0.24	0.02	A
30	7.84	-0.15	-0.01	B<	1.39	-0.13	-0.01	A	1.49	0.08	0.00	A	19.94	-0.48	-0.03	B<	2.26	-0.27	-0.01	A

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

(table continues)

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Table 9.2.1.11 (continued)
2009 Spring AIMS Differential Item Functioning Reading CRT Grade 5

	Reference: Male N=41409 Focal: Female N=39675				Reference: White N=35537 Focal: African Amer N=4875				Reference: White N=35537 Focal: Hispanic N=33983				Reference: White N=35537 Focal: Native Amer N=4262				Reference: White N=35537 Focal: Asian N=2436			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
31	281.47	0.60	0.06	B>	18.29	0.34	0.03	B>	54.54	0.30	0.03	B>	20.23	0.38	0.04	B>	0.00	0.00	0.00	A
32	7.75	0.17	0.01	B>	0.23	0.06	0.00	A	7.36	0.19	0.01	B>	0.53	0.09	0.01	A	0.29	-0.12	0.00	A
33	12.62	0.24	0.01	B>	0.91	0.13	0.00	A	68.76	0.65	0.02	B>	4.69	0.29	0.01	A	0.65	0.20	0.00	A
34	0.01	0.00	0.00	A	29.29	0.44	0.04	B>	498.67	0.96	0.08	B>	2.38	-0.13	-0.01	A	0.18	0.05	0.00	A
35	13.34	0.22	0.01	B>	30.36	0.68	0.03	B>	205.27	0.95	0.04	B>	69.17	1.06	0.05	B>	10.95	0.71	0.02	B>
36	0.75	-0.04	0.00	A	38.86	0.57	0.04	B>	283.71	0.83	0.06	B>	171.06	1.28	0.10	B>	26.72	0.77	0.04	B>
37	10.51	0.13	0.01	B>	47.11	0.60	0.05	B>	300.82	0.80	0.06	B>	85.52	0.86	0.07	B>	54.70	1.01	0.06	B>
38	4.57	-0.09	-0.01	A	17.01	0.36	0.03	B>	14.66	0.17	0.02	B>	22.06	0.43	0.04	B>	26.02	0.70	0.04	B>
39	267.22	-0.77	-0.04	B<	16.55	-0.41	-0.02	B<	635.48	-1.34	-0.08	B<	78.48	-0.89	-0.06	B<	8.82	-0.49	-0.02	B<
40	1.29	-0.04	-0.01	A	20.49	-0.35	-0.03	B<	22.07	0.19	0.03	B>	0.11	0.03	0.01	A	0.62	-0.09	-0.01	A
41	382.98	-0.77	-0.06	B<	0.59	-0.07	0.00	A	97.04	-0.43	-0.03	B<	22.43	0.42	0.04	B>	3.53	-0.23	-0.02	A
42	50.56	-0.26	-0.02	B<	3.34	-0.15	-0.01	A	138.31	-0.48	-0.04	B<	7.19	-0.24	-0.02	B<	18.87	-0.47	-0.04	B<
43	13.46	0.16	0.01	B>	0.46	-0.06	0.00	A	4.32	-0.10	-0.01	A	1.15	-0.10	-0.01	A	1.00	0.15	0.01	A
44	172.16	-0.47	-0.04	B<	36.50	-0.47	-0.04	B<	250.97	-0.64	-0.06	B<	0.27	-0.04	0.00	A	21.36	-0.51	-0.04	B<
45	25.36	0.18	0.02	B>	63.86	0.62	0.06	B>	34.21	0.23	0.02	B>	45.91	0.57	0.06	B>	0.00	0.01	0.00	A
46	15.66	0.14	0.01	B>	30.47	0.44	0.04	B>	60.89	0.32	0.03	B>	1.21	0.10	0.01	A	5.01	0.26	0.02	A
47	19.40	-0.26	-0.01	B<	1.30	-0.14	-0.01	A	0.04	-0.01	0.00	A	2.17	0.18	0.01	A	3.71	-0.41	-0.01	A
48	15.72	0.14	0.01	B>	4.95	-0.18	-0.02	A	39.44	-0.25	-0.02	B<	11.34	-0.29	-0.03	B<	3.20	-0.20	-0.02	A
49	243.61	0.78	0.03	B>	9.35	0.32	0.02	B>	80.53	0.51	0.03	B>	7.44	0.29	0.02	B>	5.05	0.41	0.01	A
50	27.92	-0.23	-0.01	B<	13.77	0.35	0.02	B>	13.03	0.18	0.02	B>	0.21	-0.04	0.00	A	2.30	0.23	0.01	A
51	0.86	-0.04	0.00	A	14.92	-0.35	-0.02	B<	113.90	-0.51	-0.03	B<	5.52	-0.22	-0.02	A	44.88	-0.92	-0.05	B<
52	56.21	0.44	0.01	B>	2.26	0.18	0.01	A	20.59	0.30	0.01	B>	14	0.44	0.02	B>	8.22	0.67	0.01	B>
53	0.34	-0.02	0.00	A	6.18	-0.21	-0.02	A	164.00	-0.55	-0.04	B<	119.67	-1.01	-0.08	B<	27.89	-0.62	-0.05	B<
54	1.80	0.05	0.00	A	7.42	0.23	0.02	B>	157.42	0.57	0.04	B>	0.48	-0.06	0.00	A	8.45	0.37	0.02	B>

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

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Table 9.2.1.12
2009 Spring AIMS Differential Item Functioning Reading CRT Grade 6

	Reference: Male N=41492 Focal: Female N=39342				Reference: White N=35728 Focal: African Amer N=4753				Reference: White N=35728 Focal: Hispanic N=33765				Reference: White N=35728 Focal: Native Amer N=4176				Reference: White N=35728 Focal: Asian N=2441			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
1	4.87	0.09	0.01	A	0.03	-0.02	0.00	A	14.46	-0.18	-0.02	B<	33.19	-0.52	-0.05	B<	33.99	-0.74	-0.04	B<
2	19.89	0.34	0.01	B>	1.59	0.20	0.01	A	6.64	0.23	0.01	B>	11.6	0.54	0.02	B>	5.03	-0.59	-0.01	A
3	121.46	-0.49	-0.03	B<	6.62	0.25	0.02	A	18.92	0.22	0.01	B>	14.65	0.38	0.03	B>	15.87	-0.56	-0.03	B<
4	71.11	-0.44	-0.02	B<	13.36	0.41	0.02	B>	19.31	0.26	0.01	B>	46.23	0.79	0.04	B>	1.31	0.22	0.01	A
5	289.79	-0.83	-0.04	B<	11.45	0.35	0.02	B>	67.16	0.46	0.03	B>	12.4	0.37	0.02	B>	9.70	0.54	0.02	B>
6	54.04	0.32	0.02	B>	4.74	0.20	0.01	A	6.80	0.13	0.01	B>	18.46	0.42	0.03	B>	37.41	-0.78	-0.05	B<
7	3.15	0.14	0.00	A	0.18	0.07	0.00	A	34.93	0.53	0.01	B>	23.91	0.83	0.02	B>	0.00	0.02	0.00	A
8	0.64	-0.05	0.00	A	0.97	0.14	0.00	A	20.20	-0.33	-0.01	B<	9.98	-0.40	-0.02	B<	9.61	-0.66	-0.01	B<
9	46.10	0.30	0.02	B>	0.66	-0.08	-0.01	A	53.32	-0.37	-0.02	B<	4.66	-0.21	-0.01	A	0.23	-0.08	0.00	A
10	4.00	0.10	0.00	A	1.16	0.12	0.01	A	0.26	0.03	0.00	A	65.53	-0.82	-0.06	B<	0.17	-0.08	0.00	A
11	0.47	-0.03	0.00	A	0.00	-0.01	0.00	A	3.06	0.07	0.01	A	0	0.00	0.00	A	1.01	-0.12	-0.01	A
12	0.00	0.00	0.00	A	0.30	0.05	0.00	A	0.00	0.00	0.00	A	4.32	-0.18	-0.02	A	1.43	0.14	0.01	A
13	66.35	0.29	0.03	B>	10.27	-0.25	-0.02	B<	11.92	0.14	0.01	B>	0.58	0.07	0.01	A	9.58	0.35	0.03	B>
14	104.28	0.73	0.02	B>	1.64	-0.19	-0.01	A	1.46	-0.10	0.00	A	0.25	0.07	0.00	A	0.42	0.19	0.00	A
15	249.68	-0.87	-0.03	B<	5.43	-0.30	-0.01	A	674.85	-1.71	-0.08	C<	157.99	-1.42	-0.07	B<	10.78	-0.67	-0.02	B<
16	191.96	0.86	0.02	B>	1.10	0.13	0.01	A	86.51	0.67	0.03	B>	54.36	0.94	0.05	B>	3.03	0.43	0.01	A
17	70.43	0.52	0.01	B>	0.42	0.09	0.00	A	18.40	0.31	0.01	B>	3.1	0.22	0.01	A	0.92	0.23	0.00	A
18	67.58	-0.29	-0.03	B<	0.11	-0.03	0.00	A	10.05	0.13	0.01	B>	0.81	0.08	0.01	A	21.77	0.50	0.05	B>
19	214.16	-0.73	-0.03	B<	0.04	-0.02	0.00	A	1.63	-0.07	-0.01	A	3.93	0.21	0.01	A	0.82	0.17	0.01	A
20	104.78	-0.52	-0.02	B<	22.28	-0.49	-0.03	B<	32.87	-0.33	-0.02	B<	17.49	0.46	0.03	B>	1.18	0.21	0.01	A
21	1.92	0.05	0.01	A	0.08	0.03	0.00	A	24.37	-0.22	-0.02	B<	5.61	-0.21	-0.02	A	0.00	-0.01	0.00	A
22	1.28	-0.07	0.00	A	0.03	0.02	0.00	A	37.98	0.42	0.02	B>	18.46	0.54	0.03	B>	10.45	0.73	0.02	B>
23	0.62	-0.03	0.00	A	61.73	0.67	0.06	B>	222.21	0.65	0.04	B>	11.24	0.30	0.02	B>	2.24	0.17	0.01	A
24	17.33	-0.19	-0.01	B<	3.69	-0.19	-0.01	A	31.95	-0.29	-0.02	B<	2.61	0.17	0.01	A	0.94	-0.15	-0.01	A
25	57.99	0.47	0.01	B>	1.04	-0.13	0.00	A	19.80	0.32	0.01	B>	9	0.40	0.02	B>	9.90	-0.63	-0.02	B<
26	0.04	-0.01	0.00	A	174.07	-1.31	-0.07	B<	854.91	-1.68	-0.09	C<	87.66	-0.98	-0.06	B<	102.79	-1.63	-0.05	C<
27	57.45	0.33	0.02	B>	5.99	0.23	0.02	A	0.21	-0.02	0.00	A	0.23	0.05	0.00	A	7.64	-0.38	-0.02	B<
28	26.87	0.19	0.02	B>	8.00	0.23	0.02	B>	52.68	0.31	0.03	B>	1.49	-0.11	-0.01	A	0.00	0.00	0.00	A
29	131.31	-0.48	-0.03	B<	0.85	-0.09	-0.01	A	13.42	0.18	0.01	B>	11.24	0.32	0.02	B>	4.88	0.31	0.02	A
30	301.42	-0.64	-0.06	B<	0.05	-0.02	0.00	A	22.69	-0.20	-0.02	B<	0.01	0.01	0.00	A	1.41	0.14	0.01	A

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

(table continues)

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Table 9.2.1.12 (continued)
2009 Spring AIMS Differential Item Functioning Reading CRT Grade 6

	Reference: Male N=41492 Focal: Female N=39342				Reference: White N=35728 Focal: African Amer N=4753				Reference: White N=35728 Focal: Hispanic N=33765				Reference: White N=35728 Focal: Native Amer N=4176				Reference: White N=35728 Focal: Asian N=2441			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
31	1282.36	-1.55	-0.10	C<	4.20	0.19	0.01	A	10.38	-0.15	-0.01	B<	0.02	-0.02	0.00	A	7.86	0.41	0.02	B>
32	0.16	0.02	0.00	A	1.36	-0.10	-0.01	A	536.35	-1.04	-0.08	B<	64.21	-0.71	-0.06	B<	16.32	-0.53	-0.03	B<
33	156.96	0.53	0.03	B>	8.73	0.28	0.02	B>	0.18	0.02	0.00	A	9.61	-0.29	-0.03	B<	1.14	0.16	0.01	A
34	152.49	0.48	0.04	B>	0.95	-0.08	-0.01	A	0.22	-0.02	0.00	A	4.69	0.19	0.02	A	0.82	0.12	0.01	A
35	188.31	-0.48	-0.05	B<	6.23	0.19	0.02	A	12.53	0.14	0.02	B>	4.89	-0.19	-0.02	A	10.74	-0.35	-0.03	B<
36	0.82	0.04	0.00	A	0.73	-0.08	-0.01	A	4.34	-0.10	-0.02	A	40.25	-0.58	-0.05	B<	1.67	0.18	0.01	A
37	5.26	-0.11	0.00	A	34.80	-0.60	-0.03	B<	121.84	-0.62	-0.04	B<	18.9	-0.46	-0.03	B<	11.76	-0.56	-0.02	B<
38	26.62	0.19	0.02	B>	1.21	-0.09	-0.01	A	115.64	-0.45	-0.04	B<	4.13	-0.18	-0.02	A	6.37	-0.30	-0.02	A
39	47.92	0.30	0.02	B>	0.70	0.08	0.01	A	3.29	0.09	0.01	A	30.57	0.54	0.04	B>	0.15	0.06	0.00	A
40	45.55	0.27	0.02	B>	8.13	-0.24	-0.02	B<	13.95	0.17	0.02	B>	39.79	0.57	0.05	B>	13.48	0.49	0.03	B>
41	9.75	0.12	0.01	B>	2.79	-0.14	-0.01	A	0.94	-0.04	0.00	A	2.29	-0.14	-0.01	A	1.29	0.14	0.01	A
42	53.22	0.27	0.02	B>	4.75	0.18	0.02	A	0.23	-0.02	0.00	A	10.32	0.28	0.02	B>	1.02	0.11	0.01	A
43	12.30	0.13	0.01	B>	4.54	0.17	0.02	A	7.49	0.11	0.01	B>	0.22	-0.04	0.00	A	24.85	-0.53	-0.05	B<
44	62.13	0.29	0.03	B>	0.63	-0.07	0.00	A	8.28	-0.12	-0.01	B<	0.01	-0.01	0.00	A	1.33	-0.14	-0.01	A
45	12.70	0.13	0.01	B>	0.78	0.07	0.01	A	112.59	0.43	0.04	B>	53.49	0.62	0.06	B>	37.44	0.67	0.06	B>
46	15.68	0.17	0.01	B>	0.42	0.06	0.01	A	32.88	0.29	0.02	B>	45.06	0.67	0.05	B>	4.16	0.31	0.01	A
47	0.00	0.00	0.00	A	39.27	-0.60	-0.04	B<	1.29	-0.06	0.00	A	9.04	-0.30	-0.02	B<	12.63	-0.55	-0.02	B<
48	204.31	0.55	0.04	B>	2.85	-0.14	-0.01	A	56.88	0.33	0.03	B>	16.45	0.35	0.04	B>	17.09	0.53	0.03	B>
49	156.69	0.58	0.03	B>	0.71	0.08	0.01	A	3.81	0.10	0.01	A	97.71	-0.92	-0.07	B<	0.11	-0.06	0.00	A
50	54.31	-0.26	-0.02	B<	3.50	0.15	0.01	A	5.11	0.09	0.01	A	2.84	-0.15	-0.01	A	0.92	0.11	0.01	A
51	1.98	0.05	0.00	A	12.42	0.30	0.02	B>	89.93	0.41	0.04	B>	43.36	-0.57	-0.05	B<	2.70	-0.20	-0.01	A
52	82.98	0.47	0.02	B>	1.79	-0.15	-0.01	A	0.05	0.01	0.00	A	123.9	-1.14	-0.07	B<	0.01	-0.03	0.00	A
53	91.81	-0.36	-0.03	B<	0.00	0.00	0.00	A	6.15	0.11	0.01	A	19.49	0.39	0.03	B>	5.68	0.28	0.02	A
54	0.06	-0.01	0.00	A	3.01	-0.14	-0.01	A	16.83	0.17	0.02	B>	49.8	0.62	0.05	B>	15.78	0.48	0.03	B>

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

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Table 9.2.1.13
2009 Spring AIMS Differential Item Functioning Reading CRT Grade 7

	Reference: Male N=41231 Focal: Female N=39816				Reference: White N=36707 Focal: African Amer N=4735				Reference: White N=36707 Focal: Hispanic N=32895				Reference: White N=36707 Focal: Native Amer N=4320				Reference: White N=36707 Focal: Asian N=2418			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
1	45.72	0.45	0.01	B>	1.52	-0.18	-0.01	A	14.12	-0.28	-0.01	B<	0.41	-0.09	0.00	A	18.01	-0.91	-0.02	B<
2	357.74	0.68	0.06	B>	2.84	-0.13	-0.01	A	62.31	-0.32	-0.03	B<	20.9	-0.37	-0.03	B<	0.42	-0.08	-0.01	A
3	434.92	-1.12	-0.04	B<	38.86	-0.71	-0.03	B<	367.45	-1.17	-0.06	B<	174.22	-1.38	-0.08	B<	24.23	-0.92	-0.02	B<
4	172.03	-0.57	-0.03	B<	45.70	-0.63	-0.04	B<	549.19	-1.14	-0.08	B<	273.45	-1.50	-0.12	C<	75.66	-1.26	-0.06	B<
5	0.05	0.01	0.00	A	0.05	-0.02	0.00	A	42.36	0.31	0.02	B>	15.16	0.37	0.03	B>	12.62	0.54	0.03	B>
6	15.60	-0.16	-0.01	B<	0.37	-0.06	0.00	A	55.80	-0.34	-0.03	B<	7.45	-0.25	-0.02	B<	8.05	-0.39	-0.02	B<
7	0.98	-0.06	0.00	A	8.91	0.38	0.01	B>	13.68	-0.24	-0.01	B<	21.38	-0.52	-0.03	B<	2.07	-0.31	-0.01	A
8	11.16	-0.13	-0.01	B<	0.08	0.02	0.00	A	1.05	-0.04	0.00	A	11.07	-0.28	-0.03	B<	4.40	-0.25	-0.02	A
9	5.00	-0.10	0.00	A	6.26	0.25	0.02	A	13.64	-0.19	-0.01	B<	32.43	-0.53	-0.04	B<	1.43	-0.19	-0.01	A
10	44.35	-0.27	-0.02	B<	0.08	-0.03	0.00	A	8.66	0.13	0.01	B>	1.19	0.10	0.01	A	0.14	0.06	0.00	A
11	52.49	-0.29	-0.02	B<	2.12	0.13	0.01	A	3.80	0.09	0.01	A	1.84	0.12	0.01	A	14.78	0.50	0.03	B>
12	934.99	-1.23	-0.09	B<	6.69	-0.22	-0.02	B<	163.39	-0.56	-0.05	B<	15.5	-0.35	-0.03	B<	0.35	0.08	0.01	A
13	170.03	-0.66	-0.03	B<	26.79	-0.53	-0.03	B<	38.64	-0.35	-0.02	B<	0.02	-0.02	0.00	A	0.39	-0.12	0.00	A
14	5.96	-0.09	-0.01	A	1.49	-0.10	-0.01	A	49.31	-0.29	-0.03	B<	4	-0.17	-0.02	A	5.19	-0.26	-0.02	A
15	19.10	-0.21	-0.01	B<	3.50	0.19	0.01	A	58.69	0.41	0.02	B>	4.57	0.22	0.01	A	2.33	0.25	0.01	A
16	117.85	-0.43	-0.03	B<	19.56	-0.38	-0.03	B<	38.85	-0.28	-0.03	B<	21.63	-0.41	-0.04	B<	0.93	-0.13	-0.01	A
17	16.40	-0.24	-0.01	B<	1.72	-0.17	-0.01	A	1.73	-0.09	0.00	A	8.42	0.39	0.02	B>	0.01	-0.03	0.00	A
18	52.49	0.33	0.02	B>	14.98	-0.36	-0.02	B<	1.87	-0.07	0.00	A	7.27	-0.25	-0.01	B<	3.72	-0.29	-0.01	A
19	698.55	1.02	0.08	B>	1.14	-0.09	-0.01	A	1.72	-0.06	-0.01	A	0.06	-0.02	0.00	A	5.93	-0.30	-0.02	A
20	105.59	0.36	0.03	B>	23.40	0.38	0.04	B>	140.86	0.47	0.05	B>	64.15	0.66	0.06	B>	6.71	0.29	0.02	B>
21	240.76	-0.68	-0.04	B<	18.02	-0.40	-0.03	B<	674.51	-1.26	-0.09	B<	117.88	-0.99	-0.07	B<	61.14	-1.10	-0.05	B<
22	3.76	0.07	0.01	A	21.40	0.39	0.03	B>	101.43	0.43	0.04	B>	4.13	0.17	0.02	A	0.15	0.05	0.00	A
23	5.25	0.12	0.01	A	0.44	-0.07	0.00	A	50.13	-0.41	-0.02	B<	76.58	-0.87	-0.05	B<	18.18	-0.74	-0.02	B<
24	17.73	-0.18	-0.01	B<	42.12	0.61	0.04	B>	304.54	0.85	0.06	B>	24.64	0.48	0.03	B>	0.05	0.03	0.00	A
25	47.98	-0.31	-0.02	B<	0.04	-0.02	0.00	A	528.75	-1.15	-0.07	B<	23.47	-0.47	-0.03	B<	23.66	-0.73	-0.03	B<
26	121.39	-0.39	-0.04	B<	11.76	0.27	0.03	B>	46.55	0.27	0.02	B>	24.63	0.41	0.04	B>	5.26	0.25	0.02	A
27	12.82	0.17	0.01	B>	3.55	0.19	0.01	A	36.98	0.32	0.02	B>	1.15	-0.11	-0.01	A	15.91	0.71	0.03	B>
28	0.37	0.03	0.00	A	12.25	0.33	0.02	B>	283.98	0.83	0.06	B>	32.28	0.55	0.04	B>	5.00	0.33	0.02	A
29	77.44	0.33	0.03	B>	2.95	0.14	0.01	A	82.34	0.38	0.03	B>	18.29	0.36	0.03	B>	21.91	0.55	0.04	B>
30	268.60	0.73	0.04	B>	11.97	0.34	0.02	B>	5.62	-0.12	-0.01	A	5.93	-0.23	-0.02	A	6.07	-0.37	-0.02	A

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

(table continues)

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Table 9.2.1.13 (continued)
2009 Spring AIMS Differential Item Functioning Reading CRT Grade 7

	Reference: Male N=41231 Focal: Female N=39816				Reference: White N=36707 Focal: African Amer N=4735				Reference: White N=36707 Focal: Hispanic N=32895				Reference: White N=36707 Focal: Native Amer N=4320				Reference: White N=36707 Focal: Asian N=2418			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
31	198.59	0.60	0.04	B>	11.23	-0.31	-0.02	B<	17.12	-0.20	-0.01	B<	2.31	-0.14	-0.01	A	5.16	-0.33	-0.02	A
32	2.08	0.05	0.01	A	2.08	0.12	0.01	A	22.27	0.20	0.01	B>	1.84	-0.12	-0.01	A	6.01	-0.28	-0.02	A
33	258.44	0.78	0.04	B>	0.90	0.10	0.01	A	76.75	0.48	0.03	B>	2.97	0.17	0.01	A	13.25	0.64	0.02	B>
34	19.64	-0.17	-0.01	B<	34.62	-0.48	-0.04	B<	10.97	-0.14	-0.01	B<	8.99	-0.26	-0.02	B<	26.55	-0.58	-0.05	B<
35	257.26	0.69	0.04	B>	6.93	0.25	0.02	B>	74.28	0.42	0.03	B>	11.94	0.32	0.03	B>	2.82	0.25	0.01	A
36	606.13	-0.96	-0.08	B<	3.05	-0.15	-0.01	A	110.35	-0.46	-0.03	B<	8.65	-0.28	-0.02	B<	7.45	-0.32	-0.03	B<
37	104.10	0.38	0.03	B>	4.69	0.18	0.02	A	15.00	0.16	0.02	B>	0.23	0.04	0.00	A	6.38	0.30	0.02	A
38	49.07	-0.27	-0.02	B<	1.16	-0.09	-0.01	A	0.34	-0.03	0.00	A	1.83	-0.12	-0.01	A	0.87	-0.12	-0.01	A
39	42.23	-0.22	-0.02	B<	28.49	0.41	0.04	B>	1.74	0.05	0.01	A	156.48	1.01	0.10	B>	0.71	-0.09	-0.01	A
40	20.71	0.20	0.01	B>	1.16	-0.10	-0.01	A	61.62	0.38	0.03	B>	328.32	1.89	0.13	C>	8.15	0.43	0.02	B>
41	106.69	0.46	0.03	B>	1.48	0.12	0.01	A	19.80	0.22	0.02	B>	105.78	1.02	0.07	B>	17.32	0.68	0.03	B>
42	88.68	0.38	0.03	B>	1.13	0.10	0.01	A	7.09	0.12	0.01	B>	0.01	-0.01	0.00	A	4.34	0.28	0.02	A
43	260.61	0.75	0.04	B>	0.00	-0.01	0.00	A	29.83	0.29	0.01	B>	12.2	0.36	0.02	B>	4.93	0.36	0.02	A
44	102.59	0.41	0.03	B>	0.46	-0.06	0.00	A	8.21	0.13	0.01	B>	5.37	-0.20	-0.02	A	4.63	-0.27	-0.02	A
45	17.22	0.17	0.01	B>	23.46	0.42	0.03	B>	374.69	0.88	0.07	B>	90.48	0.86	0.07	B>	18.07	0.58	0.03	B>
46	35.44	-0.21	-0.02	B<	0.05	0.02	0.00	A	2.20	0.06	0.00	A	7.97	-0.24	-0.02	B<	2.86	-0.17	-0.02	A
47	21.96	0.24	0.01	B>	5.83	-0.26	-0.01	A	49.42	-0.40	-0.02	B<	8.19	-0.30	-0.02	B<	3.57	0.37	0.01	A
48	16.19	-0.15	-0.01	B<	22.80	0.40	0.03	B>	13.69	0.16	0.01	B>	3.74	-0.17	-0.02	A	21.81	0.58	0.04	B>
49	7.10	0.11	0.01	B>	0.87	-0.08	-0.01	A	0.08	-0.01	0.00	A	6.08	-0.21	-0.02	A	5.23	0.31	0.02	A
50	164.27	0.60	0.03	B>	0.00	0.01	0.00	A	40.14	0.33	0.02	B>	10.1	-0.31	-0.02	B<	2.21	0.25	0.01	A
51	91.48	-0.37	-0.03	B<	19.89	-0.37	-0.03	B<	63.42	-0.34	-0.03	B<	12.01	-0.30	-0.03	B<	0.12	0.05	0.00	A
52	65.24	0.37	0.02	B>	2.86	-0.16	-0.01	A	44.32	0.35	0.02	B>	34.91	0.61	0.04	B>	14.19	0.65	0.02	B>
53	23.20	-0.21	-0.02	B<	3.08	-0.16	-0.01	A	3.35	-0.09	0.00	A	9.93	0.30	0.02	B>	0.31	0.09	0.00	A
54	104.78	-0.39	-0.03	B<	4.20	-0.17	-0.01	A	12.33	0.15	0.01	B>	27.35	0.45	0.04	B>	4.50	0.26	0.02	A

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item numb

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Table 9.2.1.14
2009 Spring AIMS Differential Item Functioning Reading CRT Grade 8

	Reference: Male N=40573 Focal: Female N=38973				Reference: White N=36378 Focal: African Amer N=4705				Reference: White N=36378 Focal: Hispanic N=31895				Reference: White N=36378 Focal: Native Amer N=4123				Reference: White N=36378 Focal: Asian N=2485			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
1	101.46	0.58	0.02	B>	19.26	-0.51	-0.02	B<	40.57	-0.42	-0.02	B<	0	0.01	0.00	A	39.12	-1.08	-0.03	B<
2	72.08	0.32	0.03	B>	99.72	0.84	0.07	B>	320.55	0.77	0.07	B>	102.59	0.90	0.08	B>	67.35	1.04	0.07	B>
3	51.15	-0.27	-0.02	B<	4.99	0.19	0.02	A	24.02	-0.21	-0.02	B<	3.23	-0.16	-0.01	A	0.52	-0.09	-0.01	A
4	2.11	-0.07	0.00	A	1.01	-0.10	-0.01	A	16.36	-0.21	-0.02	B<	24.89	-0.48	-0.04	B<	1.26	-0.18	-0.01	A
5	1.95	-0.07	0.00	A	1.49	-0.14	-0.01	A	7.99	-0.17	-0.01	B<	0.03	-0.02	0.00	A	1.26	-0.22	-0.01	A
6	13.32	-0.21	-0.01	B<	0.05	0.03	0.00	A	19.96	-0.30	-0.02	B<	19.98	-0.53	-0.03	B<	12.88	-0.69	-0.02	B<
7	7.66	-0.13	-0.01	B<	3.51	0.19	0.01	A	5.70	0.13	0.01	A	22.51	0.50	0.04	B>	6.22	0.41	0.02	A
8	35.31	-0.21	-0.02	B<	1.57	0.10	0.01	A	15.26	0.16	0.02	B>	19.75	0.37	0.04	B>	1.26	0.13	0.01	A
9	430.68	-0.82	-0.06	B<	46.47	-0.57	-0.05	B<	344.90	-0.82	-0.07	B<	54.01	-0.64	-0.06	B<	48.47	-0.84	-0.05	B<
10	210.47	-0.65	-0.04	B<	37.79	-0.56	-0.04	B<	52.43	-0.36	-0.02	B<	10.42	-0.31	-0.02	B<	0.18	-0.07	0.00	A
11	166.24	-0.51	-0.04	B<	6.03	0.21	0.02	A	4.27	-0.09	-0.01	A	26.44	0.46	0.04	B>	6.94	0.34	0.02	B>
12	0.15	0.02	0.00	A	8.08	-0.23	-0.02	B<	32.65	-0.25	-0.03	B<	37.56	-0.54	-0.05	B<	82.83	-1.04	-0.08	B<
13	80.69	-0.34	-0.03	B<	17.64	0.35	0.03	B>	29.09	0.23	0.02	B>	6.45	0.22	0.02	A	34.98	0.73	0.05	B>
14	2.50	-0.08	0.00	A	1.85	-0.15	-0.01	A	58.19	-0.44	-0.02	B<	86.46	-0.93	-0.06	B<	3.17	-0.32	-0.01	A
15	18.24	0.16	0.01	B>	0.19	0.04	0.00	A	46.58	-0.28	-0.02	B<	0.03	-0.02	0.00	A	1.11	-0.13	-0.01	A
16	192.45	0.58	0.04	B>	12.59	0.32	0.02	B>	57.14	0.36	0.03	B>	17.66	0.39	0.03	B>	3.81	0.29	0.01	A
17	97.77	0.39	0.03	B>	9.04	0.26	0.02	B>	4.29	0.09	0.00	A	0.03	-0.02	0.00	A	8.42	0.38	0.02	B>
18	45.60	0.26	0.02	B>	11.99	-0.29	-0.02	B<	62.66	-0.34	-0.03	B<	22.49	-0.41	-0.04	B<	5.37	0.29	0.02	A
19	15.67	-0.16	-0.01	B<	77.70	-0.77	-0.06	B<	469.35	-0.99	-0.08	B<	204.19	-1.24	-0.11	B<	155.93	-1.55	-0.09	C<
20	13.88	-0.14	-0.01	B<	26.79	-0.42	-0.04	B<	48.90	-0.29	-0.03	B<	42.49	-0.57	-0.05	B<	0.02	-0.02	0.00	A
21	105.02	0.39	0.03	B>	7.05	-0.22	-0.02	B<	0.59	0.03	0.00	A	0.08	-0.03	0.00	A	39.75	-0.69	-0.05	B<
22	0.19	-0.02	0.00	A	3.39	-0.18	-0.01	A	16.79	-0.21	-0.01	B<	285.72	-1.53	-0.12	C<	23.31	-0.75	-0.03	B<
23	501.61	-1.20	-0.05	B<	18.73	-0.48	-0.02	B<	52.88	-0.44	-0.02	B<	11.77	-0.38	-0.02	B<	25.21	-0.86	-0.03	B<
24	738.81	-1.01	-0.09	B<	94.37	-0.78	-0.07	B<	321.89	-0.74	-0.07	B<	2.97	-0.15	-0.02	A	22.62	-0.54	-0.04	B<
25	27.12	0.23	0.01	B>	0.25	-0.05	0.00	A	0.02	0.01	0.00	A	24.27	-0.46	-0.03	B<	0.20	-0.07	0.00	A
26	79.39	-0.42	-0.02	B<	0.18	0.04	0.00	A	0.05	0.01	0.00	A	3.2	-0.18	-0.01	A	2.77	0.28	0.01	A
27	337.11	-0.85	-0.05	B<	25.88	-0.50	-0.03	B<	586.71	-1.24	-0.08	B<	0.81	0.09	0.01	A	39.54	-0.97	-0.04	B<
28	130.45	0.47	0.03	B>	0.71	-0.08	-0.01	A	10.14	-0.15	-0.01	B<	21.28	0.44	0.03	B>	0.22	0.07	0.00	A
29	33.27	0.22	0.02	B>	0.19	-0.04	0.00	A	14.92	0.17	0.01	B>	0.15	0.03	0.00	A	0.93	-0.12	-0.01	A
30	46.93	0.28	0.02	B>	0.03	-0.02	0.00	A	6.77	0.12	0.01	B>	109.83	1.00	0.08	B>	2.08	-0.19	-0.01	A

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

(table continues)

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Table 9.2.1.14 (continued)
2009 Spring AIMS Differential Item Functioning Reading CRT Grade 8

	Reference: Male N=40573 Focal: Female N=38973				Reference: White N=36378 Focal: African Amer N=4705				Reference: White N=36378 Focal: Hispanic N=31895				Reference: White N=36378 Focal: Native Amer N=4123				Reference: White N=36378 Focal: Asian N=2485			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
31	90.23	0.34	0.03	B>	3.21	-0.14	-0.01	A	1.28	-0.05	-0.01	A	3.92	-0.17	-0.02	A	0.68	-0.09	-0.01	A
32	49.69	0.24	0.02	B>	35.66	0.46	0.04	B>	27.05	0.20	0.02	B>	11.88	0.29	0.03	B>	0.75	0.09	0.01	A
33	5.61	0.10	0.01	A	8.13	-0.24	-0.02	B<	7.83	0.13	0.01	B>	0	0.00	0.00	A	0.47	-0.09	-0.01	A
34	14.74	0.16	0.01	B>	1.60	-0.11	-0.01	A	25.29	0.23	0.01	B>	1.04	-0.09	-0.01	A	5.61	0.32	0.02	A
35	120.48	0.57	0.02	B>	0.02	0.02	0.00	A	30.73	0.32	0.02	B>	17.79	-0.44	-0.03	B<	0.04	-0.04	0.00	A
36	14.07	0.20	0.01	B>	13.62	-0.42	-0.02	B<	114.88	-0.66	-0.03	B<	139.2	-1.23	-0.07	B<	9.88	-0.60	-0.02	B<
37	64.96	0.29	0.03	B>	0.27	-0.04	0.00	A	66.99	-0.33	-0.03	B<	85.18	0.79	0.07	B>	7.43	-0.30	-0.03	B<
38	0.65	0.04	0.00	A	23.59	0.45	0.03	B>	54.66	0.36	0.03	B>	72.68	0.82	0.06	B>	67.96	1.31	0.06	B>
39	0.77	0.03	0.00	A	63.25	-0.62	-0.06	B<	4.97	-0.09	0.00	A	10.22	-0.27	-0.02	B<	0.16	-0.05	0.00	A
40	19.81	0.16	0.01	B>	8.89	0.24	0.02	B>	208.14	0.60	0.06	B>	50.39	0.61	0.06	B>	36.87	0.73	0.05	B>
41	389.71	-0.75	-0.06	B<	61.39	-0.65	-0.06	B<	22.83	-0.20	-0.02	B<	28.4	-0.48	-0.04	B<	0.00	0.00	0.00	A
42	0.60	-0.04	0.00	A	5.73	0.27	0.01	A	28.57	0.32	0.02	B>	2.41	0.17	0.01	A	0.03	-0.03	0.00	A
43	262.27	-0.60	-0.05	B<	3.00	0.14	0.01	A	2.16	0.06	0.00	A	8.15	-0.25	-0.02	B<	0.68	-0.09	-0.01	A
44	14.51	-0.15	-0.01	B<	16.02	0.34	0.03	B>	9.21	0.13	0.01	B>	0.17	0.04	0.00	A	26.59	0.67	0.04	B>
45	0.12	-0.01	0.00	A	70.59	0.66	0.06	B>	274.81	0.67	0.06	B>	3.46	0.16	0.02	A	21.99	0.51	0.04	B>
46	34.06	0.24	0.02	B>	4.03	0.18	0.01	A	63.92	0.37	0.03	B>	53.75	0.67	0.06	B>	18.07	0.58	0.03	B>
47	12.72	-0.15	-0.01	B<	0.88	-0.08	-0.01	A	9.30	0.15	0.01	B>	4.89	0.21	0.02	A	0.00	0.01	0.00	A
48	125.16	0.55	0.03	B>	2.98	-0.18	-0.01	A	76.72	-0.48	-0.03	B<	73.87	-0.85	-0.06	B<	3.98	-0.35	-0.01	A
49	141.01	0.58	0.03	B>	23.03	0.50	0.03	B>	84.80	0.51	0.03	B>	0.04	0.02	0.00	A	0.82	0.16	0.01	A
50	31.78	0.23	0.02	B>	23.93	0.42	0.03	B>	189.03	0.62	0.05	B>	81.13	0.82	0.07	B>	31.92	0.74	0.04	B>
51	166.82	0.59	0.03	B>	6.51	0.25	0.02	A	94.01	0.49	0.03	B>	27.2	0.51	0.04	B>	12.53	0.58	0.02	B>
52	277.92	0.71	0.05	B>	48.04	0.63	0.05	B>	268.67	0.79	0.06	B>	145.86	1.15	0.09	B>	27.75	0.78	0.04	B>
53	0.62	0.03	0.00	A	32.49	0.53	0.04	B>	14.94	0.19	0.01	B>	17.25	-0.38	-0.03	B<	6.95	-0.37	-0.02	B<
54	22.16	0.20	0.01	B>	18.46	0.39	0.03	B>	155.65	0.60	0.05	B>	115.69	1.02	0.08	B>	7.12	0.38	0.02	B>

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item numb

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Table 9.2.1.15
2009 Spring AIMS Differential Item Functioning Reading CRT High School

	Reference: Male N=37628 Focal: Female N=36887				Reference: White N=34910 Focal: African Amer N=4488				Reference: White N=34910 Focal: Hispanic N=28424				Reference: White N=34910 Focal: Native Amer N=4374				Reference: White N=34910 Focal: Asian N=2317			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
1	14.31	0.16	0.01	B>	21.96	-0.42	-0.03	B<	157.94	-0.61	-0.05	B<	19.29	-0.39	-0.03	B<	15.25	-0.54	-0.03	B<
2	206.69	0.59	0.04	B>	2.68	-0.14	-0.01	A	0.90	0.05	0.00	A	6.26	-0.22	-0.02	A	25.94	-0.64	-0.04	B<
3	5.53	-0.12	-0.01	A	6.66	-0.27	-0.01	B<	45.38	-0.40	-0.02	B<	6.11	-0.26	-0.02	A	13.68	-0.62	-0.02	B<
4	32.45	0.25	0.02	B>	2.80	-0.16	-0.01	A	71.78	-0.42	-0.04	B<	18.71	-0.39	-0.03	B<	5.72	-0.33	-0.02	A
5	259.79	0.62	0.05	B>	13.53	0.31	0.03	B>	40.67	0.28	0.02	B>	9.73	0.27	0.02	B>	35.93	0.78	0.05	B>
6	1.22	-0.04	0.00	A	1.87	0.12	0.01	A	1.42	-0.05	-0.01	A	6.33	-0.21	-0.02	A	0.61	0.10	0.01	A
7	50.17	-0.30	-0.02	B<	52.07	0.66	0.05	B>	114.10	0.52	0.04	B>	36.97	0.56	0.05	B>	20.37	0.63	0.04	B>
8	137.45	0.59	0.03	B>	9.55	-0.33	-0.02	B<	45.88	-0.40	-0.03	B<	69.35	-0.85	-0.06	B<	87.01	-1.36	-0.06	B<
9	24.33	-0.29	-0.01	B<	10.72	-0.38	-0.02	B<	34.43	0.40	0.02	B>	12.04	0.40	0.02	B>	3.52	-0.38	-0.01	A
10	64.21	0.83	0.01	B>	0.01	0.03	0.00	A	16.87	0.50	0.01	B>	14.72	0.76	0.02	B>	0.07	-0.12	0.00	A
11	0.03	0.01	0.00	A	71.36	-1.06	-0.04	B<	116.95	-0.84	-0.03	B<	2.4	-0.21	-0.01	A	25.43	-1.15	-0.02	B<
12	35.69	0.27	0.02	B>	0.92	0.09	0.01	A	25.93	0.27	0.02	B>	6.61	-0.24	-0.02	A	2.40	-0.23	-0.01	A
13	4.70	-0.10	-0.01	A	43.92	0.66	0.04	B>	28.73	0.28	0.02	B>	9.23	0.29	0.02	B>	22.94	0.75	0.04	B>
14	199.71	0.57	0.04	B>	53.19	0.68	0.05	B>	82.28	0.43	0.03	B>	29.83	0.50	0.04	B>	2.42	0.20	0.01	A
15	60.88	-0.30	-0.03	B<	41.96	-0.54	-0.05	B<	0.01	-0.01	0.00	A	28	-0.45	-0.04	B<	0.04	-0.03	0.00	A
16	7.44	0.12	0.01	B>	0.91	0.09	0.01	A	20.41	0.23	0.01	B>	0.89	-0.09	-0.01	A	0.25	0.08	0.00	A
17	51.81	-0.36	-0.02	B<	19.98	-0.46	-0.03	B<	108.15	-0.60	-0.03	B<	10.82	-0.33	-0.02	B<	15.46	-0.62	-0.02	B<
18	113.05	0.46	0.03	B>	0.01	0.01	0.00	A	14.92	-0.20	-0.02	B<	93.02	-0.86	-0.07	B<	26.77	-0.68	-0.04	B<
19	36.04	0.26	0.02	B>	0.63	0.07	0.01	A	20.12	0.22	0.02	B>	27.1	0.48	0.04	B>	2.20	0.21	0.01	A
20	78.93	-0.35	-0.03	B<	9.19	-0.26	-0.02	B<	9.16	-0.14	-0.02	B<	0.05	-0.02	0.00	A	2.51	-0.20	-0.01	A
21	0.60	-0.03	0.00	A	3.72	0.16	0.01	A	17.04	0.18	0.02	B>	6.76	-0.23	-0.02	B<	15.76	0.48	0.04	B>
22	134.31	-0.68	-0.02	B<	0.80	-0.11	0.00	A	0.02	-0.01	0.00	A	0.7	0.10	0.01	A	1.59	0.29	0.01	A
23	371.83	-0.75	-0.06	B<	0.23	-0.04	0.00	A	39.30	0.28	0.02	B>	3.39	0.16	0.01	A	4.28	-0.25	-0.02	A
24	235.16	-0.65	-0.05	B<	4.98	-0.20	-0.01	A	0.78	0.04	0.00	A	0.22	-0.04	0.00	A	2.43	0.22	0.01	A
25	50.12	-0.32	-0.02	B<	2.20	-0.14	-0.01	A	21.28	-0.24	-0.02	B<	6.91	-0.25	-0.02	B<	0.08	0.05	0.00	A
26	2.95	0.11	0.00	A	0.18	0.06	0.00	A	46.63	0.53	0.02	B>	16.92	0.52	0.03	B>	11.34	0.83	0.02	B>
27	18.46	-0.32	-0.01	B<	0.35	-0.09	0.00	A	48.81	0.61	0.02	B>	35.48	0.85	0.03	B>	12.39	1.08	0.01	B>
28	103.56	0.50	0.03	B>	1.72	0.14	0.01	A	0.60	-0.04	0.00	A	29.27	0.55	0.04	B>	17.49	-0.66	-0.03	B<
29	171.58	0.54	0.04	B>	89.94	0.87	0.07	B>	161.90	0.62	0.04	B>	10.68	-0.29	-0.02	B<	5.56	-0.29	-0.02	A
30	31.36	0.23	0.02	B>	8.09	0.26	0.02	B>	2.62	0.08	0.00	A	43.24	-0.59	-0.05	B<	41.93	-0.77	-0.06	B<

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

(table continues)

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Table 9.2.1.15 (continued)
2009 Spring AIMS Differential Item Functioning Reading CRT High School

	Reference: Male N=37628 Focal: Female N=36887				Reference: White N=34910 Focal: African Amer N=4488				Reference: White N=34910 Focal: Hispanic N=28424				Reference: White N=34910 Focal: Native Amer N=4374				Reference: White N=34910 Focal: Asian N=2317			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
31	3142.82	-2.47	-0.17	C<	21.79	-0.42	-0.03	B<	469.67	-1.04	-0.08	B<	246.19	-1.36	-0.12	B<	3.25	-0.27	-0.01	A
32	60.69	-0.35	-0.02	B<	1.57	0.12	0.01	A	113.40	-0.55	-0.04	B<	34.88	-0.54	-0.04	B<	9.63	-0.47	-0.02	B<
33	36.14	0.23	0.02	B>	46.53	0.56	0.05	B>	0.51	-0.03	0.00	A	1.41	-0.11	-0.01	A	1.53	-0.14	-0.01	A
34	64.57	-0.35	-0.02	B<	0.07	-0.03	0.00	A	77.40	-0.43	-0.02	B<	2.27	0.14	0.01	A	0.79	0.13	0.01	A
35	7.10	-0.11	-0.01	B<	11.82	-0.31	-0.02	B<	0.24	0.02	0.00	A	74.25	0.80	0.07	B>	0.00	0.00	0.00	A
36	5.49	0.11	0.01	A	19.59	0.44	0.03	B>	14.07	0.20	0.02	B>	14.79	0.37	0.03	B>	2.62	0.25	0.01	A
37	152.70	-0.52	-0.04	B<	6.39	-0.23	-0.02	A	85.64	-0.44	-0.03	B<	17.41	-0.38	-0.03	B<	2.01	-0.20	-0.01	A
38	91.37	0.43	0.03	B>	7.95	-0.27	-0.02	B<	37.20	-0.32	-0.02	B<	45.93	-0.62	-0.05	B<	0.47	-0.11	-0.01	A
39	36.73	0.27	0.02	B>	2.91	-0.16	-0.01	A	16.11	-0.20	-0.02	B<	30.04	-0.49	-0.04	B<	0.99	0.15	0.01	A
40	0.09	0.01	0.00	A	0.02	-0.01	0.00	A	29.05	0.25	0.03	B>	1.77	0.12	0.01	A	6.64	0.34	0.02	B>
41	27.19	0.25	0.01	B>	2.85	-0.17	-0.01	A	26.73	0.29	0.02	B>	6.89	0.26	0.02	B>	5.27	-0.36	-0.02	A
42	338.74	0.76	0.06	B>	19.61	-0.39	-0.03	B<	15.56	-0.19	-0.02	B<	0.17	0.04	0.00	A	28.06	-0.68	-0.04	B<
43	471.59	1.07	0.06	B>	0.24	0.05	0.00	A	16.27	0.23	0.02	B>	29.74	0.56	0.04	B>	1.32	0.19	0.01	A
44	99.70	0.38	0.03	B>	2.64	-0.13	-0.01	A	2.31	-0.07	-0.01	A	17.48	0.37	0.03	B>	10.54	0.39	0.03	B>
45	286.55	-0.63	-0.06	B<	27.83	-0.43	-0.04	B<	77.29	-0.38	-0.03	B<	2.81	0.15	0.01	A	2.54	0.18	0.02	A
46	0.44	0.03	0.00	A	10.33	-0.27	-0.02	B<	70.45	-0.37	-0.03	B<	10.05	-0.27	-0.02	B<	3.13	-0.21	-0.02	A
47	44.13	-0.27	-0.02	B<	3.28	0.16	0.01	A	21.79	0.22	0.02	B>	11.92	0.30	0.03	B>	2.52	0.22	0.01	A
48	23.05	-0.20	-0.01	B<	14.93	0.35	0.03	B>	99.51	0.49	0.03	B>	65.12	0.77	0.05	B>	55.14	1.00	0.06	B>
49	541.20	-1.02	-0.07	B<	36.27	-0.55	-0.04	B<	331.23	-0.89	-0.06	B<	12.88	-0.33	-0.02	B<	1.05	0.15	0.01	A
50	1.84	-0.05	0.00	A	3.03	0.15	0.01	A	235.13	0.69	0.06	B>	204.33	1.25	0.10	B>	20.42	0.54	0.04	B>
51	170.45	0.49	0.04	B>	27.91	0.44	0.04	B>	172.03	0.57	0.05	B>	34.33	0.51	0.04	B>	13.62	0.40	0.04	B>
52	188.01	0.50	0.05	B>	6.02	0.20	0.02	A	0.53	0.03	0.01	A	7.52	0.23	0.02	B>	3.27	0.21	0.02	A
53	58.92	0.31	0.02	B>	3.38	-0.16	-0.01	A	50.43	0.33	0.03	B>	8.71	0.26	0.02	B>	0.09	-0.04	0.00	A
54	18.71	-0.17	-0.01	B<	23.73	0.42	0.03	B>	14.38	0.17	0.01	B>	4.52	-0.19	-0.02	A	15.36	0.49	0.04	B>

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

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Table 9.2.1.16
2009 Spring AIMS Differential Item Functioning Science CRT Grade 4

	Reference: Male N=41626 Focal: Female N=39843				Reference: White N=35138 Focal: African Amer N=4740				Reference: White N=35138 Focal: Hispanic N=34805				Reference: White N=35138 Focal: Native Amer N=4384				Reference: White N=35138 Focal: Asian N=2508			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
1	2.49	0.13	0.00	A	0.81	0.16	0.00	A	15.21	0.41	0.01	B>	11.05	-0.53	-0.02	B<	0.66	0.29	0.00	A
2	433.75	-0.89	-0.06	B<	0.62	0.08	0.00	A	1.08	0.05	-0.01	A	5.87	-0.23	-0.02	A	2.96	0.25	0.01	A
3	7.42	-0.11	-0.01	B<	2.22	-0.13	-0.01	A	0.68	-0.04	-0.01	A	30.79	-0.50	-0.05	B<	0.01	0.02	0.00	A
4	12.51	0.22	0.01	B>	1.90	0.20	0.01	A	0.34	0.05	0.00	A	97.62	-1.18	-0.06	B<	2.49	-0.38	-0.01	A
5	0.07	0.01	0.00	A	0.05	0.02	0.00	A	65.38	-0.42	-0.04	B<	7.07	0.27	0.02	B>	11.21	-0.49	-0.02	B<
6	72.67	0.34	0.02	B>	45.89	0.64	0.05	B>	12.31	0.17	0.01	B>	35.1	-0.53	-0.05	B<	0.00	-0.01	0.00	A
7	102.04	0.55	0.02	B>	4.47	0.25	0.01	A	56.76	0.49	0.03	B>	21.38	0.53	0.03	B>	0.43	0.13	0.00	A
8	89.84	0.34	0.03	B>	5.14	0.19	0.02	A	25.01	0.21	0.02	B>	0.04	0.02	0.00	A	8.59	0.34	0.03	B>
9	451.98	-1.03	-0.05	B<	14.23	-0.40	-0.02	B<	268.20	-0.94	-0.06	B<	42.93	-0.67	-0.04	B<	26.06	-0.85	-0.03	B<
10	69.46	0.79	0.01	B>	8.31	0.54	0.01	B>	115.41	1.19	0.02	B>	61.41	1.65	0.03	C>	2.53	0.57	0.01	A
11	98.01	0.71	0.02	B>	24.17	0.76	0.02	B>	212.49	1.25	0.03	B>	57.87	1.23	0.04	B>	15.14	-0.77	-0.02	B<
12	21.07	-0.18	-0.01	B<	1.08	0.09	0.00	A	49.48	0.33	0.02	B>	93.2	0.90	0.07	B>	0.18	-0.06	0.00	A
13	114.82	0.51	0.03	B>	9.70	0.33	0.02	B>	2.28	0.08	0.00	A	2.25	-0.15	-0.01	A	3.87	0.34	0.01	A
14	28.69	0.31	0.01	B>	2.43	-0.19	-0.01	A	3.03	0.12	0.01	A	4.61	0.27	0.01	A	2.42	-0.33	-0.01	A
15	31.81	0.26	0.01	B>	0.17	0.04	0.00	A	0.08	0.02	0.00	A	9.59	0.33	0.02	B>	1.94	-0.20	-0.01	A
16	27.76	-0.21	-0.02	B<	4.33	-0.18	-0.01	A	25.55	-0.23	-0.02	B<	0	0.00	0.00	A	29.80	-0.69	-0.04	B<
17	7.81	0.11	0.01	B>	1.62	0.11	0.01	A	21.44	0.21	0.02	B>	36.5	0.55	0.05	B>	1.04	0.13	0.01	A
18	18.00	-0.20	-0.01	B<	18.53	-0.43	-0.03	B<	213.69	-0.80	-0.05	B<	41.66	-0.65	-0.05	B<	15.67	-0.64	-0.02	B<
19	87.41	0.36	0.03	B>	0.54	-0.06	0.00	A	4.34	0.09	0.01	A	31.02	-0.48	-0.04	B<	5.45	-0.29	-0.02	A
20	0.66	0.03	0.00	A	4.83	0.18	0.02	A	3.40	0.08	0.01	A	1.04	-0.09	-0.01	A	1.11	0.12	0.01	A
21	230.33	-0.62	-0.04	B<	23.46	-0.42	-0.03	B<	38.69	-0.30	-0.03	B<	22.39	-0.43	-0.04	B<	0.31	0.08	0.00	A
22	17.49	-0.15	-0.01	B<	0.25	-0.04	0.00	A	3.50	0.08	0.00	A	0.16	0.04	0.00	A	1.92	0.15	0.01	A
23	1.58	0.05	0.00	A	0.31	-0.05	0.00	A	0.57	-0.03	-0.01	A	17.74	-0.38	-0.03	B<	0.67	-0.09	-0.01	A
24	20.81	0.16	0.02	B>	1.02	0.08	0.01	A	0.28	0.02	0.00	A	5.87	-0.21	-0.02	A	0.84	-0.10	-0.01	A
25	231.89	0.53	0.05	B>	13.73	0.29	0.03	B>	26.00	0.21	0.02	B>	15.57	0.33	0.03	B>	1.25	-0.12	-0.01	A
26	192.30	0.49	0.05	B>	0.74	0.07	0.01	A	31.64	0.23	0.02	B>	14.21	0.32	0.03	B>	9.51	0.33	0.03	B>
27	12.12	0.13	0.01	B>	13.76	0.31	0.02	B>	17.45	0.18	0.01	B>	18.66	-0.41	-0.03	B<	15.76	0.41	0.04	B>
28	6.67	0.09	0.01	B>	7.20	0.22	0.02	B>	6.21	0.10	0.01	A	16.57	-0.36	-0.03	B<	7.62	0.30	0.03	B>
29	344.08	-0.80	-0.05	B<	26.88	-0.47	-0.03	B<	9.78	-0.16	-0.01	B<	0.69	-0.08	-0.01	A	2.59	0.24	0.01	A
30	111.26	0.57	0.02	B>	14.08	0.45	0.02	B>	5.58	-0.15	-0.01	A	14.8	-0.42	-0.02	B<	8.26	-0.56	-0.01	B<

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

(table continues)

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Table 9.2.1.16 (continued)
2009 Spring AIMS Differential Item Functioning Science CRT Grade 4

	Reference: Male N=41626 Focal: Female N=39843				Reference: White N=35138 Focal: African Amer N=4740				Reference: White N=35138 Focal: Hispanic N=34805				Reference: White N=35138 Focal: Native Amer N=4384				Reference: White N=35138 Focal: Asian N=2508			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
31	140.76	-0.69	-0.02	B<	39.08	-0.71	-0.03	B<	29.25	0.37	0.02	B>	25.77	0.64	0.03	B>	8.33	0.64	0.01	B>
32	8.07	-0.11	-0.01	B<	8.36	-0.25	-0.02	B<	66.50	-0.37	-0.03	B<	25.43	-0.44	-0.04	B<	4.45	-0.27	-0.02	A
33	56.68	0.34	0.02	B>	8.32	0.29	0.02	B>	60.51	0.41	0.03	B>	11.69	0.34	0.03	B>	1.77	0.20	0.01	A
34	225.37	0.58	0.05	B>	0.82	0.08	0.01	A	5.57	0.10	0.01	A	3.78	-0.17	-0.01	A	3.66	0.24	0.02	A
35	407.34	-0.74	-0.06	B<	2.90	0.14	0.01	A	18.70	0.18	0.01	B>	1.22	-0.09	-0.01	A	0.98	0.11	0.01	A
36	392.52	-0.76	-0.06	B<	38.33	-0.53	-0.04	B<	619.83	-1.08	-0.08	B<	97.87	-0.87	-0.07	B<	51.51	-0.86	-0.06	B<
37	104.36	0.38	0.03	B>	3.64	0.16	0.02	A	34.67	0.25	0.02	B>	12.12	0.30	0.03	B>	0.21	-0.05	0.00	A
38	216.94	-0.66	-0.04	B<	3.47	-0.18	-0.01	A	86.91	-0.49	-0.03	B<	53.06	-0.69	-0.05	B<	0.49	-0.12	0.00	A
39	0.15	-0.02	0.00	A	15.46	0.40	0.03	B>	17.39	0.23	0.02	B>	14.85	0.39	0.03	B>	1.48	0.20	0.01	A
40	66.86	0.31	0.03	B>	3.41	0.16	0.01	A	40.36	0.28	0.02	B>	6.87	-0.25	-0.02	B<	1.76	0.15	0.01	A
41	257.01	0.76	0.04	B>	10.88	0.34	0.02	B>	91.91	0.54	0.04	B>	10.09	0.33	0.02	B>	0.58	0.13	0.01	A
42	10.73	0.12	0.01	B>	0.00	-0.01	0.00	A	0.09	-0.01	0.00	A	2.45	0.13	0.01	A	4.59	0.24	0.02	A
43	328.70	0.80	0.05	B>	0.50	-0.07	-0.01	A	1.99	-0.07	-0.01	A	74.24	0.87	0.06	B>	0.00	-0.01	0.00	A
44	32.53	0.33	0.01	B>	0.03	-0.02	0.00	A	33.32	0.40	0.02	B>	64.63	1.06	0.05	B>	0.42	0.14	0.00	A
45	85.34	-0.39	-0.03	B<	14.60	-0.35	-0.03	B<	9.98	-0.15	-0.01	B<	120.7	1.07	0.08	B>	9.80	0.47	0.02	B>
46	217.07	0.51	0.05	B>	3.72	0.15	0.02	A	59.01	0.31	0.03	B>	50.9	0.59	0.06	B>	0.67	0.08	0.01	A
47	1.40	-0.04	0.00	A	4.35	-0.16	-0.02	A	12.05	-0.14	-0.02	B<	5.81	0.20	0.02	A	5.81	-0.25	-0.02	A
48	55.99	-0.27	-0.02	B<	0.41	-0.05	0.00	A	0.03	0.01	0.00	A	4.08	-0.18	-0.01	A	5.70	0.26	0.02	A
49	37.21	-0.22	-0.02	B<	13.92	-0.31	-0.02	B<	0.20	-0.02	0.01	A	9.26	0.26	0.02	B>	0.03	-0.02	0.00	A
50	20.88	-0.17	-0.01	B<	5.63	-0.20	-0.02	A	37.72	-0.26	-0.02	B<	12.88	-0.32	-0.03	B<	0.20	0.05	0.00	A
51	0.42	-0.02	0.00	A	1.10	-0.09	-0.01	A	0.51	-0.03	0.00	A	0.4	-0.06	-0.01	A	5.22	-0.24	-0.02	A
52	46.49	-0.27	-0.02	B<	2.77	-0.14	-0.01	A	18.49	-0.19	-0.02	B<	0.87	-0.08	-0.01	A	2.76	0.21	0.01	A
53	26.98	-0.19	-0.02	B<	0.70	-0.07	-0.01	A	56.84	-0.32	-0.02	B<	2.01	-0.13	-0.01	A	0.92	0.11	0.01	A
54	313.59	-0.63	-0.06	B<	5.12	-0.18	-0.02	A	8.46	-0.12	-0.01	B<	2.9	0.15	0.01	A	6.80	-0.28	-0.03	B<

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

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Table 9.2.1.17
2009 Spring AIMS Differential Item Functioning Science CRT Grade 8

	Reference: Male N=39869 Focal: Female N=38337				Reference: White N=35839 Focal: African Amer N=4637				Reference: White N=35839 Focal: Hispanic N=31352				Reference: White N=35839 Focal: Native Amer N=4006				Reference: White N=35839 Focal: Asian N=2468			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
1	112.35	0.68	0.02	B>	2.13	0.20	0.01	A	10.90	-0.25	-0.01	B<	0	0.00	0.00	A	5.92	-0.52	-0.01	A
2	91.15	-0.44	-0.03	B<	0.95	0.10	0.01	A	31.30	-0.29	-0.03	B<	3.57	-0.19	-0.02	A	11.48	-0.50	-0.02	B<
3	0.05	0.01	0.00	A	5.23	0.24	0.01	A	18.76	-0.25	-0.02	B<	55.95	-0.77	-0.06	B<	0.26	-0.10	0.00	A
4	4.53	0.17	0.00	A	0.42	0.12	0.00	A	23.63	-0.48	-0.01	B<	0.03	0.04	0.00	A	5.82	-0.71	-0.01	A
5	123.12	-0.63	-0.02	B<	102.29	-1.07	-0.05	B<	16.59	0.27	0.01	B>	1.47	0.16	0.01	A	42.64	-1.09	-0.04	B<
6	1211.21	-2.08	-0.07	C<	48.17	-0.89	-0.03	B<	857.50	-2.09	-0.09	C<	77.45	-1.09	-0.05	B<	65.70	-1.60	-0.03	C<
7	4.07	0.10	0.01	A	9.95	-0.31	-0.02	B<	1.89	0.08	0.00	A	0	-0.01	0.00	A	0.38	-0.10	0.00	A
8	0.03	-0.01	0.00	A	2.67	0.14	0.01	A	153.48	-0.55	-0.05	B<	16.38	-0.36	-0.04	B<	24.87	-0.59	-0.04	B<
9	3.35	0.07	0.01	A	0.91	0.08	0.01	A	0.00	0.00	0.00	A	0.48	0.06	0.01	A	1.52	0.15	0.01	A
10	108.88	0.37	0.04	B>	14.64	0.30	0.03	B>	44.61	0.27	0.02	B>	1.37	0.10	0.01	A	0.00	0.01	0.00	A
11	562.41	-1.34	-0.05	B<	76.47	-1.01	-0.05	B<	201.22	-0.96	-0.05	B<	219.66	-1.61	-0.10	C<	30.48	-1.06	-0.03	B<
12	631.39	0.93	0.08	B>	0.16	-0.03	0.00	A	20.05	0.19	0.02	B>	7.76	0.24	0.02	B>	0.85	-0.11	-0.01	A
13	24.09	-0.19	-0.02	B<	1.52	0.11	0.01	A	23.79	0.22	0.02	B>	6.76	0.24	0.02	B>	1.61	0.16	0.01	A
14	276.17	-0.65	-0.05	B<	1.93	-0.12	-0.01	A	0.91	-0.04	-0.01	A	14.97	-0.35	-0.03	B<	6.28	-0.31	-0.02	A
15	16.32	0.18	0.01	B>	12.07	0.34	0.02	B>	129.61	0.61	0.04	B>	67.09	0.86	0.06	B>	6.97	0.39	0.02	B>
16	41.00	-0.23	-0.02	B<	0.20	0.04	0.00	A	1.21	0.05	0.00	A	8.44	0.25	0.03	B>	2.37	-0.17	-0.01	A
17	152.85	-0.51	-0.04	B<	15.94	-0.35	-0.03	B<	185.81	-0.64	-0.05	B<	51.93	-0.65	-0.06	B<	63.78	-0.99	-0.06	B<
18	2.24	0.06	0.00	A	2.11	0.13	0.01	A	26.51	0.24	0.02	B>	0.09	0.03	0.00	A	16.76	0.57	0.03	B>
19	0.24	-0.02	0.00	A	0.10	0.03	0.00	A	19.25	-0.24	-0.01	B<	2.27	-0.16	-0.01	A	0.15	-0.07	0.00	A
20	88.51	-0.41	-0.03	B<	1.70	-0.12	-0.01	A	7.74	-0.14	-0.01	B<	0.24	-0.05	0.00	A	16.31	0.66	0.03	B>
21	554.71	-0.91	-0.08	B<	2.43	-0.13	-0.01	A	41.43	0.28	0.03	B>	10.96	0.29	0.03	B>	0.57	-0.09	-0.01	A
22	0.19	0.02	0.00	A	2.53	-0.14	-0.01	A	85.91	0.44	0.03	B>	4.77	0.21	0.02	A	0.03	0.03	0.00	A
23	22.37	-0.20	-0.01	B<	4.99	-0.20	-0.01	A	1.01	-0.05	0.00	A	11.63	-0.32	-0.02	B<	0.05	0.04	0.00	A
24	40.34	-0.26	-0.02	B<	1.96	0.12	0.01	A	37.39	0.29	0.03	B>	2.18	0.14	0.01	A	12.25	0.49	0.03	B>
25	29.84	-0.21	-0.02	B<	1.32	0.10	0.01	A	30.68	-0.24	-0.02	B<	1	0.09	0.01	A	6.20	-0.30	-0.02	A
26	106.51	0.38	0.03	B>	14.40	0.31	0.03	B>	7.96	0.12	0.02	B>	7.82	0.24	0.02	B>	23.59	0.57	0.04	B>
27	708.74	1.04	0.08	B>	22.71	0.41	0.04	B>	222.61	0.67	0.06	B>	87	0.85	0.08	B>	35.62	0.76	0.05	B>
28	2.64	0.06	0.01	A	0.86	0.08	0.01	A	119.31	-0.47	-0.04	B<	1.59	-0.12	-0.01	A	1.47	-0.13	-0.01	A
29	453.97	-0.99	-0.06	B<	13.65	-0.36	-0.02	B<	12.13	-0.19	-0.02	B<	36.23	0.65	0.04	B>	68.01	-1.10	-0.06	B<
30	193.39	0.60	0.04	B>	0.70	0.08	0.00	A	8.90	0.15	0.00	B>	24.82	-0.47	-0.04	B<	0.54	0.11	0.01	A

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

(table continues)

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Table 9.2.1.17 (continued)
2009 Spring AIMS Differential Item Functioning Science CRT Grade 8

	Reference: Male N=39869 Focal: Female N=38337				Reference: White N=35839 Focal: African Amer N=4637				Reference: White N=35839 Focal: Hispanic N=31352				Reference: White N=35839 Focal: Native Amer N=4006				Reference: White N=35839 Focal: Asian N=2468			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
31	14.20	0.14	0.01	B>	34.69	0.48	0.04	B>	56.15	0.32	0.02	B>	17.49	0.37	0.03	B>	24.23	0.54	0.05	B>
32	2.23	-0.07	0.00	A	0.88	0.10	0.00	A	23.60	0.26	0.01	B>	1.25	0.13	0.01	A	0.20	-0.06	0.00	A
33	495.71	0.86	0.07	B>	0.48	-0.06	-0.01	A	11.50	-0.15	-0.01	B<	5.19	0.21	0.02	A	44.24	-0.75	-0.06	B<
34	17.20	-0.16	-0.01	B<	17.45	-0.36	-0.03	B<	3.84	-0.09	0.00	A	3.05	-0.16	-0.01	A	21.27	-0.57	-0.04	B<
35	40.26	-0.23	-0.02	B<	0.77	0.07	0.01	A	17.14	-0.18	-0.01	B<	12.49	-0.31	-0.03	B<	0.83	-0.10	-0.01	A
36	3.34	0.07	0.01	A	6.31	0.22	0.02	A	11.94	0.15	0.02	B>	5.6	0.21	0.02	A	17.71	0.52	0.04	B>
37	414.41	-0.90	-0.06	B<	57.14	-0.70	-0.05	B<	539.92	-1.15	-0.08	B<	3.13	-0.18	-0.01	A	61.37	-1.11	-0.05	B<
38	94.28	0.39	0.03	B>	23.58	0.43	0.03	B>	92.41	0.44	0.03	B>	25.2	0.47	0.04	B>	3.47	0.23	0.02	A
39	123.17	0.40	0.04	B>	0.05	0.02	0.00	A	81.45	0.38	0.04	B>	28.18	0.47	0.05	B>	0.84	0.10	0.01	A
40	129.08	0.64	0.03	B>	0.04	-0.03	0.00	A	13.85	0.24	0.01	B>	8.34	0.33	0.02	B>	0.73	0.19	0.00	A
41	43.51	-0.26	-0.02	B<	0.73	0.07	0.01	A	8.70	0.13	0.01	B>	2.04	-0.13	-0.01	A	36.53	0.75	0.05	B>
42	6.71	-0.10	-0.01	B<	0.65	-0.07	-0.01	A	12.68	-0.16	-0.01	B<	1.6	-0.12	-0.01	A	4.64	0.27	0.02	A
43	12.20	0.14	0.01	B>	3.29	0.16	0.01	A	7.43	0.12	0.01	B>	5.13	0.22	0.02	A	28.31	0.65	0.04	B>
44	25.25	-0.19	-0.02	B<	27.61	-0.43	-0.04	B<	39.78	-0.27	-0.02	B<	84.37	-0.83	-0.07	B<	2.59	-0.19	-0.01	A
45	692.39	1.55	0.05	C>	18.44	0.51	0.02	B>	144.56	0.81	0.04	B>	30.1	0.66	0.04	B>	9.22	0.68	0.02	B>
46	87.72	-0.36	-0.03	B<	2.86	-0.15	-0.01	A	93.63	-0.43	-0.03	B<	50.95	-0.71	-0.05	B<	0.01	-0.01	0.00	A
47	807.23	1.39	0.07	B>	11.79	0.36	0.02	B>	2.83	0.09	0.01	A	1.39	-0.12	-0.01	A	0.12	0.07	0.00	A
48	512.83	-0.87	-0.07	B<	55.20	-0.63	-0.06	B<	65.76	-0.35	-0.03	B<	3.17	-0.16	-0.02	A	12.95	-0.43	-0.03	B<
49	240.69	0.56	0.05	B>	0.07	0.02	0.00	A	0.01	0.01	0.01	A	0.47	0.06	0.01	A	0.26	-0.06	-0.01	A
50	1015.86	-1.17	-0.11	B<	62.36	-0.63	-0.06	B<	135.51	-0.48	-0.05	B<	25.07	-0.44	-0.04	B<	54.65	-0.80	-0.07	B<
51	53.55	-0.28	-0.02	B<	6.80	0.22	0.02	B>	2.32	-0.07	0.00	A	0.2	0.04	0.00	A	14.37	0.45	0.03	B>
52	32.68	0.22	0.02	B>	1.48	0.11	0.01	A	3.27	0.08	0.00	A	27.02	-0.52	-0.04	B<	15.43	0.46	0.03	B>
53	1.36	0.05	0.00	A	1.95	-0.12	-0.01	A	76.74	-0.39	-0.03	B<	10.64	-0.30	-0.02	B<	0.38	-0.08	-0.01	A
54	1.72	-0.05	0.00	A	50.91	0.60	0.05	B>	35.21	0.26	0.02	B>	1.49	-0.12	-0.01	A	7.62	0.29	0.03	B>
55	405.02	0.79	0.06	B>	46.08	0.59	0.05	B>	195.98	0.63	0.05	B>	52.34	0.67	0.06	B>	59.04	0.99	0.06	B>
56	181.90	0.49	0.05	B>	16.22	0.33	0.03	B>	134.98	0.49	0.04	B>	11.02	0.29	0.03	B>	34.67	0.66	0.06	B>
57	393.32	0.81	0.06	B>	0.70	-0.08	-0.01	A	19.15	0.20	0.02	B>	0.7	0.08	0.01	A	0.06	0.03	0.00	A
58	3.75	-0.07	-0.01	A	8.50	-0.22	-0.02	B<	40.77	0.25	0.03	B>	55.31	0.62	0.06	B>	2.86	-0.17	-0.02	A

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item numb

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Table 9.2.1.18
2009 Spring AIMS Differential Item Functioning Science CRT High School

	Reference: Male N=25470 Focal: Female N=24727				Reference: White N=20900 Focal: African Amer N=3398				Reference: White N=20900 Focal: Hispanic N=21091				Reference: White N=20900 Focal: Native Amer N=3467				Reference: White N=20900 Focal: Asian N=1409			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
1	9.85	-0.22	-0.01	B<	38.01	-0.82	-0.04	B<	2.67	-0.14	-0.01	A	5.26	0.33	0.01	A	11.32	-0.79	-0.02	B<
2	187.53	-0.98	-0.04	B<	4.53	-0.30	-0.01	A	0.65	-0.07	0.00	A	8.01	-0.39	-0.02	B<	5.76	-0.57	-0.02	A
3	54.15	0.41	0.03	B>	1.58	0.15	0.01	A	0.72	-0.06	0.00	A	15.02	-0.42	-0.03	B<	0.21	-0.10	0.00	A
4	0.00	0.00	0.00	A	9.41	-0.45	-0.02	B<	10.12	-0.29	-0.01	B<	5.68	-0.34	-0.02	A	3.49	-0.55	-0.01	A
5	104.91	0.58	0.03	B>	25.69	-0.57	-0.04	B<	4.68	-0.15	0.00	A	4.83	-0.25	-0.02	A	26.14	-0.90	-0.05	B<
6	15.34	0.19	0.02	B>	0.00	0.00	0.00	A	1.00	0.06	0.01	A	0.12	-0.03	0.00	A	4.09	0.31	0.02	A
7	122.77	-0.62	-0.04	B<	2.36	-0.18	-0.01	A	1.71	0.09	0.01	A	0.94	0.11	0.01	A	14.86	-0.68	-0.04	B<
8	28.45	-0.31	-0.02	B<	16.56	-0.47	-0.03	B<	12.96	-0.24	-0.02	B<	0.15	-0.05	0.00	A	2.92	-0.35	-0.02	A
9	6.73	0.15	0.01	B>	1.95	-0.16	-0.01	A	6.55	0.17	0.01	A	10.92	-0.36	-0.03	B<	7.96	-0.55	-0.03	B<
10	109.51	0.51	0.04	B>	1.78	0.14	0.01	A	52.93	-0.41	-0.03	B<	28.05	-0.52	-0.05	B<	0.79	-0.15	-0.01	A
11	43.60	0.32	0.03	B>	2.33	0.16	0.01	A	10.41	0.18	0.01	B>	3.87	0.20	0.02	A	15.28	0.65	0.04	B>
12	2.00	-0.07	-0.01	A	1.02	0.10	0.01	A	49.52	0.38	0.03	B>	7.32	0.27	0.02	B>	12.93	-0.54	-0.04	B<
13	533.02	-1.24	-0.09	B<	45.52	-0.72	-0.05	B<	52.33	-0.44	-0.03	B<	1.19	0.12	0.01	A	0.81	-0.17	-0.01	A
14	1.30	-0.05	0.00	A	2.42	0.15	0.01	A	36.57	0.31	0.03	B>	24.15	0.47	0.04	B>	1.54	-0.17	-0.02	A
15	237.55	-0.80	-0.06	B<	0.97	0.11	0.01	A	20.77	0.27	0.02	B>	8.18	-0.30	-0.03	B<	0.24	-0.09	-0.01	A
16	110.97	0.51	0.04	B>	0.10	-0.03	0.00	A	14.00	0.21	0.02	B>	0.43	0.07	0.00	A	0.22	0.08	0.01	A
17	0.49	0.05	0.00	A	7.04	-0.36	-0.02	B<	4.63	0.17	0.01	A	3.94	-0.25	-0.02	A	5.14	-0.53	-0.02	A
18	3.10	-0.10	-0.01	A	0.07	-0.03	0.00	A	1.69	0.09	0.00	A	3.52	-0.21	-0.02	A	1.39	0.24	0.01	A
19	6.71	-0.15	-0.01	B<	12.28	0.45	0.03	B>	52.66	-0.50	-0.03	B<	17.58	-0.47	-0.03	B<	23.18	-0.98	-0.04	B<
20	51.77	0.34	0.03	B>	5.06	-0.22	-0.02	A	12.44	-0.19	-0.02	B<	20.83	-0.44	-0.04	B<	13.09	-0.53	-0.04	B<
21	25.93	0.24	0.02	B>	0.40	0.07	0.01	A	0.01	0.01	0.01	A	5.3	0.23	0.02	A	3.61	-0.27	-0.02	A
22	173.74	-0.67	-0.05	B<	5.17	-0.24	-0.02	A	169.79	-0.77	-0.06	B<	25.46	-0.53	-0.04	B<	16.81	-0.69	-0.04	B<
23	13.86	0.17	0.02	B>	18.23	0.41	0.04	B>	46.92	0.35	0.04	B>	32.4	0.55	0.05	B>	1.29	0.16	0.02	A
24	5.01	-0.10	-0.01	A	13.55	0.35	0.03	B>	2.46	0.08	0.00	A	0.1	-0.03	0.00	A	6.32	0.37	0.03	A
25	82.47	0.44	0.04	B>	4.28	0.21	0.02	A	43.81	0.38	0.03	B>	15.61	0.40	0.04	B>	0.83	0.15	0.01	A
26	73.92	0.41	0.04	B>	26.88	0.52	0.05	B>	93.89	0.54	0.05	B>	0.02	0.01	0.00	A	0.09	0.05	0.00	A
27	70.69	0.40	0.03	B>	11.08	0.33	0.03	B>	29.76	0.30	0.02	B>	9.14	0.30	0.03	B>	14.89	0.62	0.04	B>
28	61.82	-0.39	-0.03	B<	5.23	-0.23	-0.02	A	23.37	-0.27	-0.02	B<	0.01	0.01	0.00	A	4.30	-0.33	-0.02	A
29	53.72	-0.36	-0.03	B<	14.00	-0.40	-0.03	B<	13.85	-0.21	-0.02	B<	4.62	0.23	0.01	A	0.00	-0.01	0.00	A
30	24.56	0.22	0.02	B>	1.21	-0.11	-0.01	A	31.27	-0.29	-0.03	B<	14.38	-0.36	-0.03	B<	0.68	-0.12	-0.01	A

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

(table continues)

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Table 9.2.1.18 (continued)
2009 Spring AIMS Differential Item Functioning Science CRT High School

	Reference: Male N=25470 Focal: Female N=24727				Reference: White N=20900 Focal: African Amer N=3398				Reference: White N=20900 Focal: Hispanic N=21091				Reference: White N=20900 Focal: Native Amer N=3467				Reference: White N=20900 Focal: Asian N=1409			
Item	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag	MH χ2	ΔMH	SMD	Flag
31	32.18	0.26	0.02	B>	3.52	0.19	0.02	A	22.07	0.25	0.02	B>	3.07	0.17	0.02	A	12.91	0.52	0.04	B>
32	79.65	-0.42	-0.04	B<	1.32	-0.12	-0.01	A	75.19	-0.47	-0.04	B<	15.61	-0.40	-0.04	B<	3.24	0.28	0.02	A
33	61.25	0.36	0.03	B>	25.05	0.48	0.05	B>	37.08	0.32	0.03	B>	2.38	0.15	0.02	A	7.49	0.40	0.03	B>
34	98.11	0.46	0.04	B>	5.42	0.23	0.02	A	39.56	0.33	0.03	B>	0.04	-0.02	0.00	A	18.74	0.65	0.05	B>
35	149.63	-0.58	-0.05	B<	12.09	-0.35	-0.03	B<	337.87	-1.00	-0.08	B<	8.42	-0.29	-0.02	B<	13.59	-0.55	-0.04	B<
36	114.14	0.50	0.04	B>	2.82	0.17	0.01	A	32.59	0.31	0.03	B>	7.48	-0.27	-0.03	B<	27.36	0.78	0.06	B>
37	6.41	-0.12	-0.01	A	29.54	-0.54	-0.04	B<	277.63	-0.89	-0.07	B<	24.18	-0.50	-0.04	B<	33.90	-0.83	-0.07	B<
38	31.04	-0.25	-0.02	B<	7.96	-0.27	-0.02	B<	1.27	0.06	0.01	A	1.54	0.12	0.01	A	9.18	-0.43	-0.04	B<
39	5.64	-0.11	-0.01	A	7.98	-0.28	-0.02	B<	73.91	-0.46	-0.03	B<	8.19	-0.29	-0.02	B<	7.71	-0.39	-0.04	B<
40	13.53	0.16	0.02	B>	23.66	0.45	0.05	B>	67.43	0.42	0.04	B>	28.55	0.50	0.05	B>	1.57	0.17	0.02	A
41	130.34	0.69	0.04	B>	11.31	0.41	0.03	B>	84.31	0.65	0.04	B>	111.44	1.29	0.08	B>	14.18	0.85	0.03	B>
42	45.07	-0.32	-0.03	B<	0.68	-0.08	-0.01	A	3.89	-0.11	-0.01	A	1.95	-0.14	-0.01	A	2.14	0.23	0.02	A
43	11.16	0.16	0.01	B>	8.86	0.31	0.02	B>	44.17	0.37	0.03	B>	58.92	0.78	0.06	B>	12.39	0.50	0.04	B>
44	102.34	-0.47	-0.04	B<	4.60	-0.21	-0.02	A	16.94	-0.22	-0.02	B<	16.53	-0.41	-0.04	B<	0.39	-0.09	-0.01	A
45	25.49	0.25	0.02	B>	0.63	0.09	0.01	A	6.85	-0.15	-0.01	B<	1.48	0.14	0.01	A	20.25	-0.68	-0.05	B<
46	127.89	-0.55	-0.04	B<	0.12	-0.04	0.00	A	7.97	-0.16	-0.01	B<	0	-0.01	0.00	A	0.49	0.11	0.01	A
47	5.16	-0.11	-0.01	A	10.61	-0.33	-0.03	B<	1.07	0.06	0.01	A	0.02	0.01	0.00	A	4.99	-0.35	-0.03	A
48	28.38	0.26	0.02	B>	5.03	0.23	0.02	A	46.96	0.38	0.03	B>	125.12	1.15	0.10	B>	5.74	0.38	0.03	A
49	10.73	-0.16	-0.01	B<	25.78	-0.53	-0.04	B<	0.12	-0.02	0.00	A	0.23	-0.05	0.00	A	3.95	-0.32	-0.02	A
50	5.31	0.11	0.01	A	36.94	0.60	0.05	B>	7.76	0.15	0.01	B>	1.94	-0.15	-0.01	A	20.00	0.63	0.06	B>
51	34.46	-0.28	-0.02	B<	0.07	0.03	0.00	A	47.81	-0.37	-0.03	B<	27.79	-0.54	-0.05	B<	0.93	0.15	0.01	A
52	9.28	-0.15	-0.01	B<	30.52	-0.57	-0.04	B<	39.59	-0.36	-0.03	B<	70.71	-0.84	-0.07	B<	24.40	-0.79	-0.05	B<
53	0.08	-0.01	0.00	A	0.26	-0.05	0.00	A	11.56	0.18	0.01	B>	0.24	0.05	0.00	A	1.16	-0.15	-0.01	A
54	9.38	-0.14	-0.01	B<	0.12	0.04	0.00	A	1.78	0.07	0.00	A	0.01	-0.01	0.00	A	1.29	0.16	0.02	A
55	0.42	0.03	0.00	A	3.12	-0.17	-0.01	A	11.11	-0.18	-0.01	B<	10.74	-0.33	-0.03	B<	11.86	-0.49	-0.05	B<
56	0.88	0.04	0.00	A	13.09	-0.35	-0.03	B<	21.15	-0.25	-0.02	B<	11.4	-0.32	-0.03	B<	1.69	0.21	0.02	A
57	55.61	0.36	0.03	B>	0.73	-0.09	-0.01	A	1.86	0.08	0.01	A	0	0.01	0.00	A	3.46	0.30	0.02	A
58	22.53	-0.22	-0.02	B<	8.26	0.28	0.03	B>	18.26	0.23	0.02	B>	4.36	0.21	0.02	A	6.40	0.36	0.03	A
59	173.87	0.65	0.05	B>	36.66	0.63	0.05	B>	34.45	0.33	0.02	B>	15.37	0.42	0.03	B>	9.88	0.48	0.04	B>
60	8.47	0.14	0.01	B>	14.24	0.37	0.03	B>	34.86	0.32	0.02	B>	0.34	0.06	0.01	A	39.02	0.89	0.08	B>

Note. African Am. = African American, Native Am.= Native American, MH χ2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

(table continues)

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Table 9.2.1.18 (continued)
2009 Spring AIMS Differential Item Functioning Science CRT High School

	Reference: Male N=25470 Focal: Female N=24727				Reference: White N=20900 Focal: African Amer N=3398				Reference: White N=20900 Focal: Hispanic N=21091				Reference: White N=20900 Focal: Native Amer N=3467				Reference: White N=20900 Focal: Asian N=1409			
Item	MH ?2	?MH	SMD	Flag	MH ?2	?MH	SMD	Flag	MH ?2	?MH	SMD	Flag	MH ?2	?MH	SMD	Flag	MH ?2	?MH	SMD	Flag
61	0.10	0.01	0.00	A	0.10	-0.03	0.00	A	29.88	-0.29	-0.02	B<	0.43	-0.07	0.00	A	3.13	-0.25	-0.02	A
62	3.11	0.08	0.01	A	4.14	-0.20	-0.02	A	3.31	-0.10	-0.01	A	0	0.01	0.00	A	1.33	0.17	0.02	A
63	1.14	0.05	0.01	A	30.42	0.56	0.04	B>	61.51	0.45	0.03	B>	47.44	0.72	0.05	B>	35.19	0.83	0.07	B>
64	12.39	-0.19	-0.01	B<	0.17	-0.05	0.00	A	0.01	-0.01	0.00	A	0.95	0.12	0.01	A	0.00	0.01	0.00	A
65	36.35	-0.28	-0.02	B<	1.30	0.11	0.01	A	2.26	0.08	0.00	A	7.59	0.28	0.02	B>	0.05	-0.04	0.00	A

Note. African Am. = African American, Native Am.= Native American, MH ?2= Mantel-Haenszel Chi-Square, MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak, DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items and NRT items.

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Table 9.2.1.19
DIF Statistics for Items Exhibiting Strong DIF

Content	Grade	Item #	Item Type	In favor of / Against	Group	MH Delta	MH SMD
Mathematics	3	15	MC	Against	Native	316.13	-1.83	-0.12
Mathematics	3	4	MC	Against	Asian	10.54	-1.59	-0.01
Mathematics	5	39	MC	In favor of	Asian	80.10	1.79	0.05
Mathematics	8	66	MC	In favor of	Female	1095.18	1.77	0.08
Mathematics	8	51	MC	In favor of	Asian	36.43	1.64	0.03
Mathematics	HS	25	MC	In favor of	Native	98.63	1.80	0.05
Mathematics	HS	17	MC	Against	Asian	156.69	-1.77	-0.08
Reading	3	35	MC	Against	Hispanic	977.04	-1.52	-0.10
Reading	6	31	MC	Against	Female	1282.36	-1.55	-0.10
Reading	6	15	MC	Against	Hispanic	674.85	-1.71	-0.08
Reading	6	26	MC	Against	Hispanic	854.91	-1.68	-0.09
Reading	6	26	MC	Against	Asian	102.79	-1.63	-0.05
Reading	7	4	MC	Against	Native	273.45	-1.50	-0.12
Reading	7	40	MC	In favor of	Native	328.32	1.89	0.13
Reading	8	22	MC	Against	Native	285.72	-1.53	-0.12
Reading	8	19	MC	Against	Asian	155.93	-1.55	-0.09
Reading	HS	31	MC	Against	Female	3142.82	-2.47	-0.17
Science	4	10	MC	In favor of	Native	61.41	1.65	0.03
Science	8	6	MC	Against	Female	1211.21	-2.08	-0.07
Science	8	45	MC	In favor of	Female	692.39	1.55	0.05
Science	8	6	MC	Against	Hispanic	857.50	-2.09	-0.09
Science	8	11	MC	Against	Native	219.66	-1.61	-0.10
Science	8	6	MC	Against	Asian	65.70	-1.60	-0.03

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9.2.2 Correlations among AIMS Assessments

Correlations were examined between scale scores on 2009 Spring AIMS tests by grade level. Note that data used for the calculation of correlation included records with valid scale scores in all content areas and tests in each grade level. Sample sizes are therefore slightly lower than presented in other parts of this technical report.

In addition, because students in high school had different testing windows for the Reading, Writing, and Mathematics tests, data merging was necessary to match Reading and Writing records with Mathematics records. After Reading, Writing, and Mathematics were merged, each of the Science forms was merged with the other contents to compute correlations. Once valid records were selected for each of the high school content areas and records with duplicate student identification numbers were removed, data was merged based on student identification number. Table 9.2.2.1 presents the resulting reduction in N size for each step of the merge. Scale score means and distributions prior to and after the merge were compared to ensure that the match did not substantially alter the data. Only slight changes in mean and standard deviation occurred after the merge, and density plots illustrated that the shape of the distribution prior to and after merging matched reasonably well. Therefore, correlations presented for the high school Reading, Writing, and Mathematics and Science are based on the matched data, with a total N size of 47,017.

All correlations are presented in Tables 9.2.2.2 through 9.2.2.8. The patterns of correlation presented in the tables are consistent with expectations given the constructs measured. Correlations were consistently high between tests designed to measure the same or very similar constructs (i.e., CRT Math and NRT Math or CRT Reading and NRT Reading). Correlations were much lower between tests designed to measure dissimilar constructs such as Math and Writing. Correlations between CRT Writing with other tests are attenuated which might be due to lowered reliability of the Writing test scores. Since appropriate measures of test reliability for the AIMS Writing test scores cannot be determined, the disattenuated correlations cannot be computed.

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Table 9.2.2.1
Matching Process for High School Test Correlations Calculations

Content	N Total Valid	N with Missing or Duplicate SAIS	N Valid Prior to Merge	N Valid in Both Reading and Writing	N Valid RD,WR,MA with Matched SAIS	N Valid All Content with Matched SAIS
Reading	75524	299	75225	74682	71281	47017
Writing	75392	294	75098	--	--	--
Mathematics	75078	287	74791	NA	--	--
Science	51195	408	50787	NA	NA	--

Table 9.2.2.2
2009 Spring AIMS Correlations among Assessments
Grade 3

Test	1	2	3	4	5	6
1.RD CRT	--	0.57	0.81	0.84	0.79	0.73
2.WR CRT		--	0.52	0.54	0.54	0.49
3.MA CRT			--	0.7	0.71	0.84
4.RD NRT				--	0.73	0.64
5.LA NRT					--	0.66
6.MA NRT						--

Note: N size will be less than presented in other parts of this Technical Report due to missing or invalid test records in some, but not all, content areas. The N count for this table is 82587.

Table 9.2.2.3
2009 Spring AIMS Correlations among Assessments
Grade 4

Test	1	2	3	4	5	6	7
1.RD CRT	--	0.54	0.79	0.8	0.73	0.68	0.81
2.WR CRT		--	0.52	0.51	0.53	0.47	0.49
3.MA CRT			--	0.66	0.69	0.82	0.79
4.RD NRT				--	0.66	0.59	0.68
5.LA NRT					--	0.62	0.68
6.MA NRT						--	0.68
7.SC							--

Note: N size will be less than presented in other parts of this Technical Report due to missing or invalid test records in some, but not all, content areas. The N count for this table is 80623.

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Table 9.2.2.4
2009 Spring AIMS Correlations among Assessments
Grade 5

Test	1	2	3	4	5	6
1.RD CRT	--	0.61	0.78	0.84	0.74	0.71
2.WR CRT		--	0.57	0.56	0.55	0.52
3.MA CRT			--	0.67	0.68	0.83
4.RD NRT				--	0.66	0.62
5.LA NRT					--	0.62
6.MA NRT						--

Note: N size will be less than presented in other parts of this Technical Report due to missing or invalid test records in some, but not all, content areas. The N count for this table is 80849.

Table 9.2.2.5
2009 Spring AIMS Correlations among Assessments
Grade 6

Test	1	2	3	4	5	6
1.RD CRT	--	0.6	0.78	0.84	0.72	0.72
2.WR CRT		--	0.56	0.56	0.53	0.53
3.MA CRT			--	0.7	0.68	0.85
4.RD NRT				--	0.65	0.66
5.LA NRT					--	0.63
6.MA NRT						--

Note: N size will be less than presented in other parts of this Technical Report due to missing or invalid test records in some, but not all, content areas. The N count for this table is 80609.

Table 9.2.2.6
2009 Spring AIMS Correlations among Assessments
Grade 7

Test	1	2	3	4	5	6
1.RD CRT	--	0.63	0.78	0.85	0.73	0.71
2.WR CRT		--	0.61	0.59	0.58	0.57
3.MA CRT			--	0.69	0.68	0.85
4.RD NRT				--	0.66	0.64
5.LA NRT					--	0.63
6.MA NRT						--

Note: N size will be less than presented in other parts of this Technical Report due to missing or invalid test records in some, but not all, content areas. The N count for this table is 80933.

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Table 9.2.2.7
2009 Spring AIMS Correlations among Assessments
Grade 8

Test	1	2	3	4	5	6	7
1.RD CRT	--	0.64	0.78	0.87	0.75	0.71	0.82
2.WR CRT		--	0.59	0.6	0.59	0.57	0.6
3.MA CRT			--	0.7	0.7	0.87	0.8
4.RD NRT				--	0.7	0.65	0.74
5.LA NRT					--	0.65	0.71
6.MA NRT						--	0.74
7.SC							--

Note: N size will be less than presented in other parts of this Technical Report due to missing or invalid test records in some, but not all, content areas. The N count for this table is 77579.

Table 9.2.2.8
2009 Spring AIMS Correlations among Assessments
High School

Test	1	2	3	4
1.RD CRT	--	0.68	0.75	0.77
2.WR CRT		--	0.63	0.61
3.MA CRT			--	0.76
4.SC				--

Note: N size will be less than presented in other parts of this Technical Report due to 1) missing or invalid test records in some, but not all, content areas and 2) matching Reading, Writing, Mathematics and Science records according to student identification number. The N count for this table is 46809.

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Part 10: Classification

Part 10 of this technical report provides information regarding classifying students into proficiency categories. The following AERA/APA/NCME standards are covered in this part: 1.5, 1.7, 2.14, 2.15, 4.9, 4.19, 4.20, 4.21, and 6.5.

Scores from the 2009 Spring AIMS assessments are used to classify students into one of four performance categories: Falls Far Below the Standard, Approaches the Standard, Meets the Standard, and Exceeds the Standard. This part of the technical report provides information regarding classifying students into these four performance categories. Arizona educators made recommendations for cut scores for each category in standard setting workshops facilitated by CTB. Analyses were conducted to examine the consistency and accuracy with which students were assigned to performance categories.

10.1 Standard Setting Technical Documentation

Standard setting for the AIMS CRT Mathematics and Reading tests was conducted in early May, 2005, using the Bookmark Standard Setting Procedure. All technical documentation regarding the standard setting is available in the Bookmark Standard Setting Technical Report, submitted by CTB/McGraw-Hill to the ADE in June 2005.

Standard setting for the AIMS CRT Writing tests was also conducted in May, 2005. The Body of Work Standard Setting Procedure was used for this standard setting. Technical documentation is available in the Body of Work Standard Setting Technical Report, submitted by CTB/McGraw-Hill to the ADE in June 2005.

Standard setting for the AIMS Science was conducted in early June, 2008, using the Bookmark Standard Setting Procedure. All technical documentation regarding the standard setting is available in the Bookmark Standard Setting Technical Report, submitted by CTB/McGraw-Hill to the ADE in August 2008.

Final scale score ranges for each of the four performance level categories for the AIMS CRT tests are presented below in Table 10.1.1.

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Table 10.1.1
2009 Spring AIMS
Final Scale Score Ranges by Performance Level

Test		FFBS	AS	MS	ES
Mathematics					
	3	269-383	386-419	422-489	495-650
	4	302-411	414-447	450-517	523-675
	5	360-440	443-473	476-544	550-700
	6	270-462	465-493	496-569	576-725
	7	399-483	486-516	519-598	605-740
	8	300-502	505-536	540-618	626-800
	HS	561-667	669-681	683-749	753-900
Reading					
	3	279-375	379-428	431-511	520-640
	4	264-401	405-449	451-529	541-660
	5	322-423	427-465	468-548	558-675
	6	307-429	433-476	480-569	582-690
	7	319-441	445-485	489-580	591-720
	8	270-451	456-496	501-597	610-800
	HS	500-623	627-672	676-769	780-900
Writing					
	3	200-323	337-408	424-517	529-650
	4	230-349	366-446	461-565	575-700
	5	255-382	396-486	499-607	617-740
	6	275-389	402-489	504-613	630-760
	7	290-399	413-493	510-633	645-770
	8	300-404	419-507	524-655	663-800
	HS	500-605	610-673	678-752	756-900
Science					
	4	278-457	462-498	503-546	553-800
	8	313-471	475-498	502-529	534-800
	HS	226-473	477-496	500-535	541-800

Note: FFBS = Falls Far Belows the Standard; AS = Approaches the Standards; MS = Meets the Standard; ES = Exceeds the Standard

10.2 Classification Consistency and Accuracy

This section describes the analyses conducted to estimate classification consistency and accuracy for the 2009 AIMS DPA and high school test administrations. Classification consistency can be defined as the agreement between examinees' performance category classification from two independent administrations of the same test (or two parallel forms of the test). Classification accuracy can be defined as the agreement between the actual classifications using observed cut scores and true classifications based on known true cut scores (Livingston & Lewis, 1995).

In conjunction with internal consistency, classification consistency is an important type of reliability and is particularly relevant to high stakes pass/fail tests such as the AIMS high school tests. As a form of reliability, classification consistency represents how reliably students can be classified into performance categories. Please see Part 9 of this report for more information on the internal consistency of the AIMS assessments.

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For tests such as the AIMS high school assessments, classification consistency is most important for students whose ability is near the pass/fail cut score. Students whose ability is far above or far below the value established for passing are unlikely to be misclassified because repeated administration of the test will nearly always result in the same classification. Examinees whose true scores are close to the cut score are a more serious concern. These students' true scores will likely lie within the standard error of measurement of the cut score. For this reason, the measurement error at the cut scores should be considered when evaluating the classification consistency of a test. For convenience, the cut scores and their associated standard errors are presented in Table 10.2.3.1. Furthermore, the number of students near the cut scores should also be considered when evaluating classification consistency; these numbers show the number of students who are most likely to be misclassified. The number of students near the cut scores for each grade and content area can be found in the state scale score frequency distributions presented in Part 8 of this report.

Classification consistency and accuracy were estimated using the IRT procedure suggested by Lee, Hanson, and Brennan (2002) and Wang, Kolen, and Harris (2000) for the AIMS assessments in Reading, Mathematics, and Science. For the AIMS Writing assessment, procedures described by Livingston and Lewis (1995) were used to estimate classification consistency and accuracy. The following description of classification consistency and accuracy is based on the paper by Lee et al. (2002).

10.2.1 Classification Consistency

Assume that θ is a single latent trait measured by a test and denote Φ as a latent random variable. When a test X consists of K items and its maximum number-correct score is N, the marginal probability of the number-correct (NC) score *x* is

$$P(X = x) = \int P(X = x \mid \Phi = \theta) g(\theta) d\theta, \qquad x = 0,1,..., N.,$$

where $g(\theta)$ is the density of θ.

In this report, the marginal distribution $P(X = x)$ is denoted as $f(x)$, and the conditional error distribution $P(X = x \mid \Phi = \theta)$ is denoted as $f(x \mid \theta)$. It is assumed that examinees are classified into one of H mutually exclusive categories on the basis of predetermined H-1 observed score cutoffs, $C_1, C_2, \ldots, C_{H-1}$. Let L_h represent the hth category into which examinees with $C_{h-1} \le X \le C_h$ are classified. $C_0 = 0$ and $C_H =$ the maximum number-correct score. Then, the conditional and marginal probabilities of each category classification are as follows:

$$P(X \in L_h \mid \theta) = \sum_{x=C_{h-1}}^{C_{h-1}} f(x \mid \theta), \quad h = 1, 2, \ldots, \text{H}.$$

$$P(X \in L_h) = \int \sum_{x=C_{h-1}}^{C_{h-1}} f(x \mid \theta) g(\theta) d\theta, \quad h = 1, 2, \ldots, \text{H}.$$

Because obtaining test scores from two independent administrations of AIMS was not feasible due to security, logistic, and cost constraints, a psychometric model was used to obtain the estimated classification consistency indices using test scores from a single administration. Based on the

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psychometric model, a symmetric H*H contingency table can be constructed. The elements of H*H contingency table consist of the joint probabilities of the row and column observed category classifications.

That two administrations are independent implies that if X_1 and X_2 represent the raw score random variables on the two administrations, then, conditioned on θ, X_1 and X_2 are independent and identically distributed. Consequently, the conditional bivariate distribution of X_1 and X_2 is

$$f(x_1,\ x_2 \mid \theta) = f(x_1 \mid \theta) f(x_2 \mid \theta).$$

The marginal bivariate distribution of X_1 and X_2 can be expressed as follows:

$$f(x_1,\ x_2) = \int f(x_1, x_2 \mid \theta) f(\theta) d\theta.$$

Consistent classification means that both X_1 and X_2 fall in the same category. The conditional probability of falling in the same category on the two administrations is

$$P(X_1 \in L_h,\ X_2 \in L_h \mid \theta) = \left[\sum_{x_1 = C_{h-1}}^{C_{h-1}} f(x_1 \mid \theta) \right]^2, \qquad h = 1, 2, \ldots, \mathrm{H}.$$

The agreement index P, conditional on theta, is obtained by

$$P(\theta) = \sum_{h=1}^{H} P(X_1 \in L_h,\ X_2 \in L_h \mid \theta).$$

The agreement index (classification consistency) can be computed as

$$P = \int P(\theta) g(\theta) d(\theta).$$

The probability of consistent classification by chance, P_C, is the sum of squared marginal probabilities of each category classification.

$$P_C = \sum_{h=1}^{H} P(X_1 \in L_h) P(X_2 \in L_h) = \sum_{h=1}^{H} \left[P(X_1 \in L_h) \right]^2.$$

Then, the coefficient kappa (Cohen, 1960) is

$$k = \frac{P - P_C}{1 - P_C}$$

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10.2.2 Classification Accuracy

Let Γ_w denote true category. When an examinee has an observed score, $x \in L_h$ (h =1, 2,…, H), and a latent score , $\theta \in \Gamma_w$ (w=1, 2,…, H), an accurate classification is made when $h = w$. The conditional probability of accurate classification is

$$\gamma(\theta) = P(X \in L_w \mid \theta),$$

where w is the category such that $\theta \in \Gamma_w$.

10.2.3 Classification Consistency and Accuracy Results

For convenience, the cut scores and their associated standard errors are presented in Table 10.2.3.1. Table 10.2.3.2 presents results from the classification consistency and classification accuracy analyses. These results are for classifying students into four performance levels. Included in the table for each grade and content area are case counts (N), classification consistency (Agreement), classification inconsistency (Inconsistency), probability of consistent classification by chance (Chance), Cohen's Kappa (Kappa), and classification accuracy (Accuracy). Inconsistency is defined as 1-agreement.

The 2009 AIMS classification consistency and accuracy results are consistent with classification analyses from the previous AIMS administration. It is important to note that the classification results are dependent on the number of cut scores maintained in a testing program. Moreover, the acceptability of the classification results should be evaluated with respect to the associated stakes of the testing program. The results for the AIMS assessments are quite consistent with other testing programs with similar structure and purpose.

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Table 10.2.3.1
2009 Spring AIMS
Standard Error of Measurement at Cut Scores

Test		AS		MS		ES	
		Cut Score	SEM	Cut Score	SEM	Cut Score	SEM
Mathematics							
	3	386	11	420	11	492	16
	4	414	12	448	12	521	17
	5	442	11	476	11	550	16
	6	463	12	496	12	574	18
	7	484	11	517	12	599	17
	8	505	13	537	13	623	20
	HS	668	8	683	8	750	12
Reading							
	3	379	13	431	12	516	19
	4	402	11	450	11	536	22
	5	424	12	468	12	556	21
	6	433	12	478	12	571	22
	7	443	13	489	13	587	22
	8	452	14	499	14	602	24
	HS	627	13	674	13	773	21
Writing							
	3	337	14	424	16	529	13
	4	366	15	461	15	572	14
	5	394	17	497	16	615	14
	6	400	17	504	17	630	15
	7	407	17	510	17	645	12
	8	413	18	517	19	660	13
	HS	610	9	678	9	754	8
Science							
	4	462	15	500	15	547	18
	8	473	14	500	14	532	16
	HS	475	14	500	14	537	16

Note: FFBS = Falls Far Below the Standard; AS = Approaches the Standard; MS = Meets the Standard; ES = Exceeds the Standard

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Table 10.2.3.2
2000 Spring AIMS
Classification Consistency and Accuracy

Test		N	Agreement	Inconsistency	Chance	Kappa	Accuracy
Mathematics							
	3	82967	0.80	0.20	0.35	0.69	0.86
	4	82333	0.79	0.21	0.32	0.69	0.85
	5	81055	0.80	0.20	0.33	0.70	0.86
	6	80828	0.79	0.21	0.31	0.69	0.85
	7	81167	0.80	0.20	0.36	0.70	0.86
	8	79642	0.78	0.22	0.31	0.68	0.85
	HS	104825	0.81	0.19	0.32	0.72	0.86
Reading							
	3	83003	0.80	0.20	0.39	0.67	0.86
	4	82361	0.80	0.20	0.40	0.67	0.86
	5	81068	0.80	0.20	0.42	0.65	0.86
	6	80840	0.82	0.18	0.45	0.67	0.87
	7	81186	0.80	0.20	0.44	0.65	0.86
	8	79658	0.78	0.22	0.40	0.64	0.85
	HS	99970	0.80	0.20	0.40	0.66	0.86
Writing							
	3	83261	0.90	0.10	0.61	0.73	0.91
	4	82606	0.94	0.06	0.67	0.82	0.93
	5	81270	0.91	0.09	0.63	0.76	0.93
	6	81102	0.87	0.13	0.68	0.60	0.89
	7	81538	0.91	0.09	0.67	0.73	0.93
	8	80035	0.92	0.08	0.72	0.70	0.93
	HS-A	106693	0.89	0.11	0.44	0.80	0.92
	HS-T	3676	0.86	0.14	0.33	0.79	0.90
Science							
	4	81724	0.70	0.30	0.26	0.60	0.79
	8	78703	0.71	0.29	0.26	0.61	0.79
	HS	70568	0.73	0.27	0.30	0.62	0.80

Note: High school results include students in all cohorts. Results for Reading, Mathematics, and Science were computed with the IRT method suggested by Lee, Hanson and Brennan (2002) and Wang, Kolen and Harris (2000). Results for Writing were computed using the Livingston-Lewis procedure (1995), implemented with BB-CLASS (Brennan, 2004).

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APPENDIX A
Fall 2008 AIMS Administration

Overview:

The Fall 2008AIMS assessments were administered in Reading, Writing and Mathematics to students in high school who were in grades 11 and 12 and had not yet obtained a passing score on one or more of the content areas. These assessments were written to the Arizona content standards and were designed to measure student performance with respect to these standards. The Fall 2008 AIMS assessments in Reading and Mathematics were multiple-choice, criterion-referenced tests. The Fall 2008 AIMS Writing assessment consisted of a single extended response essay prompt.

Test Design, Development, and Administration:

The design and development of the Fall 2008 AIMS assessments reflect the same guiding principals that were followed for the Spring 2008 AIMS assessments. Arizona teachers, curriculum specialists and administrators from across the state were an integral part of the AIMS test development process. More information regarding the committee meetings, the test blueprints, and the test development process is contained in Parts 3 and 4 of this technical report.

The test design and structure of the Fall 2008 AIMS assessment mirrored the structure of the AIMS assessments administered in spring. That is, the Reading test consisted of 54 multiple choice items developed by Arizona teachers. Raw scores range from 0-54 and scale scores range from 500 to 900. Similarly, the Mathematics test consisted of 85 multiple choice items developed by Arizona teachers. Raw scores range from 0-85 and scale scores range from 500 to 900. Finally, the AIMS Writing assessment consisted of one extended response writing prompt. Responses to the prompt were scored on the 6-trait analytic rubric. Each trait received two ratings. Final scores for traits with adjacent ratings were derived by averaging the two ratings. The raw scores ranged from 0-36 and scale scores were designed to range from 500 to 900. There are no norm-referenced items included in the high school AIMS assessments.

The test selection process for the Fall 2008 AIMS was designed such that resulting tests matched the Spring 2008 AIMS in overall test difficulty and content coverage. The test selection process is described in Part 4 of this report.

Test administration procedures for the Fall 2008 AIMS are described in Part 5 of this report.

Scaling and Equating:

The Fall 2008 AIMS administration was designed for students who were retaking the assessment because they had not obtained a passing score on one or more of the content areas. The population of students that retake the AIMS assessments varies from administration to administration in terms of its composition and achievement. Moreover, expediency in the reporting of results to the population of students who are retaking the AIMS assessments was considered to be a priority. For these reasons, a pre-equating model was adopted for the Fall AIMS administration.

Pre-equating takes advantage of an existing bank of previously calibrated and scaled items such that an equated form and an associated number correct to scale score conversion table can be constructed prior to operational administration. The Fall 2008 assessment was constructed from

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items that had been previously administered in the Spring 2008 AIMS administration and had been calibrated and linked to the operational scale of measurement using the Rasch measurement model. Using the existing item parameters for the items selected to be on Fall 2008 AIMS assessment, the number correct to AIMS scale score conversion tables were created. The raw score to scale score conversions, including the standard error of measurement (SEM) for each scaled score, are presented in Tables A.1 through A.3.

Fall 2008 AIMS Test Results:

The results of the Fall 2008 AIMS are reported in Tables A.4 through A.6. Results presented below are based on population data contained within the final electronic data files. The results presented in this part of the technical report may differ slightly from final testing results presented on the Arizona Department of Education website due to slight differences in the application of exclusion rules. Official final results typically use more detailed school-level information than is used to conduct research analyses. The results in the following tables are presented as evidence of reliability and validity of the AIMS assessments and should not be used for state accountability purposes.

Results for AIMS high school assessments are reported by graduating cohort. Cohort 10 is defined as the group of students that will be graduating in 2010, and typically includes 11th grade students. Cohort 09 is defined as the group of students that will be graduating in 2009, and is typically comprised of seniors. Cohort 08 is defined as the group of students that were expected to have graduated in 2008 or prior. For each cohort, scale score means and standard deviations as well as the percentages of students in each performance level are presented for the state as a whole and disaggregated into various demographic groups. Disaggregated results were produced for the various groups by using demographic data on student answer documents.

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Table A.1
2008 Fall AIMS Raw Score to Scale Score Table
Mathematics CRT High School

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	500	37	43	674	8
1	505	35	44	676	8
2	530	25	45	678	8
3	545	21	46	680	8
4	556	18	47	682	8
5	565	17	48	684	8
6	573	15	49	686	8
7	579	14	50	687	8
8	585	13	51	689	8
9	590	13	52	691	8
10	594	12	53	693	8
11	598	12	54	695	8
12	602	11	55	697	8
13	606	11	56	699	8
14	609	11	57	701	8
15	613	10	58	703	8
16	616	10	59	705	9
17	619	10	60	708	9
18	621	10	61	710	9
19	624	10	62	712	9
20	627	9	63	714	9
21	629	9	64	717	9
22	632	9	65	719	9
23	634	9	66	722	9
24	636	9	67	724	10
25	639	9	68	727	10
26	641	9	69	730	10
27	643	9	70	733	10
28	645	9	71	736	10
29	647	8	72	739	11
30	649	8	73	742	11
31	651	8	74	746	11
32	653	8	75	750	12
33	655	8	76	754	12
34	657	8	77	759	13
35	659	8	78	764	14
36	661	8	79	770	15
37	663	8	80	777	16
38	665	8	81	785	18
39	667	8	82	796	20
40	669	8	83	810	25
41	671	8	84	835	35
42	673	8	85	900	88

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Table A.2
2008 Fall AIMS Raw Score to Scale Score Table
Reading CRT High School

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	500	34	28	668	13
1	500	34	29	672	13
2	507	32	30	676	13
3	526	26	31	680	13
4	540	23	32	683	13
5	551	21	33	687	13
6	561	19	34	691	13
7	569	18	35	695	13
8	577	17	36	699	13
9	583	17	37	704	14
10	590	16	38	708	14
11	595	16	39	713	14
12	601	15	40	717	14
13	606	15	41	722	15
14	611	14	42	727	15
15	616	14	43	732	15
16	620	14	44	738	16
17	625	14	45	744	17
18	629	13	46	751	17
19	633	13	47	758	18
20	637	13	48	766	19
21	641	13	49	776	21
22	645	13	50	787	23
23	649	13	51	801	26
24	653	13	52	820	31
25	657	13	53	851	44
26	661	13	54	900	76
27	664	13			

Note: SEM is the standard error of measurement for the scale score. High school Reading scale scores are not on the same vertical scale as grades 3-8.

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Table A.3
2008 Fall AIMS Raw Score to Scale Score Table
Writing CRT High School

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	500	24	18.5	655	10
0.5	500	24	19	662	10
1	500	24	19.5	668	9
1.5	500	24	20	673	9
2	500	24	20.5	678	9
2.5	500	24	21	683	9
3	500	24	21.5	688	9
3.5	500	24	22	693	9
4	500	24	22.5	699	10
4.5	500	24	23	705	10
5	500	24	23.5	712	11
5.5	500	24	24	720	11
6	501	23	24.5	728	11
6.5	513	17	25	735	10
7	526	12	25.5	741	10
7.5	534	11	26	747	9
8	540	10	26.5	752	9
8.5	546	9	27	756	8
9	551	9	27.5	760	8
9.5	556	9	28	765	8
10	561	9	28.5	769	8
10.5	566	9	29	773	8
11	571	9	29.5	777	8
11.5	577	10	30	781	8
12	583	10	30.5	786	8
12.5	589	10	31	790	8
13	595	9	31.5	794	8
13.5	600	9	32	798	8
14	605	9	32.5	803	8
14.5	610	9	33	807	9
15	615	9	33.5	812	9
15.5	620	9	34	817	9
16	625	9	34.5	823	10
16.5	630	9	35	831	12
17	636	10	35.5	844	17
17.5	642	10	36	900	90
18	649	10			

Note: SEM is the standard error of measurement for the scale score. High school Reading scale scores are not on the same vertical scale as grades 3-8.

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Table A.4
2008 Fall AIMS Results
Mathematics CRT High School

		Scale Score		% at Performance Level			
	N	M	SD	FFBS	AS	MS	ES
Cohort 10							
Total	27623	682.6	35.29	38	20	35	6
Ethnic Background							
White	9849	694.92	39.59	27	17	43	12
Black	2059	674.22	31.08	47	19	31	3
Hispanic	12837	675.49	29.54	44	23	31	3
American Indian	2212	670.35	26.65	51	23	25	1
Asian	609	707.02	43.37	22	13	48	18
Secial Program Membership							
Title1	787	664.63	25.24	60	21	19	1
English Learner Program	1011	661.26	22.97	67	18	15	0
Special Education	2987	655.1	21.49	76	14	10	0
Cohort 9							
Total	12016	669.92	25.84	49	25	25	1
Ethnic Background							
White	3288	672.98	29.66	46	23	29	2
Black	1092	664.72	24.65	55	24	20	1
Hispanic	6069	669.12	23.48	49	26	25	1
American Indian	1321	667.57	22.14	52	28	21	0
Asian	207	687.96	38.53	34	18	40	7
Secial Program Membership							
Title1	485	665.72	27.08	58	21	20	0
English Learner Program	596	662.42	22.48	63	20	16	0
Special Education	1928	652.22	19.1	81	13	6	0
Cohort 8							
Total	3005	661.07	20.08	64	23	12	0
Ethnic Background							
White	537	662.14	23.1	63	22	15	0
Black	242	655.07	19.55	73	19	7	0
Hispanic	1780	661.9	19.14	62	25	13	0
American Indian	388	659.56	17.77	69	23	9	0
Asian	45	663.02	29.62	73	11	13	2
Secial Program Membership							
Title1	167	658.7	20.28	71	16	13	0
English Learner Program	253	657.75	18.67	71	23	6	0
Special Education	438	648.3	17.33	86	11	3	0

Note: FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation or off-grade or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who already met expectations in a previous test administration are not included in this summary. The results are not final results and are presented here for purpose of addressing reliability and validity. These results should not be used for accountability purposes

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Table A.5
2008 Fall AIMS Results
Reading CRT High School

Group	N	Scale Score M	Scale Score SD	% at Performance Level FFBS	AS	MS	ES
Cohort 10							
Total	27598	692.68	53.77	10	30	51	9
Ethnic Background							
White	10277	718.4	55.5	6	17	60	17
Black	1822	679.44	49.36	13	34	48	4
Hispanic	12509	675.33	44.62	13	39	45	3
American Indian	2052	669.21	40.29	15	42	42	2
Asian	890	722.12	53.52	4	17	61	18
Special Program Membership							
Title1	728	660.95	41.2	21	41	38	0
English Learner Program	1110	645.67	32.31	28	54	18	0
Special Education	2772	646.31	34.98	32	48	20	0
Cohort 9							
Total	9072	664.59	41.99	17	46	35	2
Ethnic Background							
White	2123	677.38	51.41	16	36	44	4
Black	771	659.44	40.34	22	45	32	1
Hispanic	4884	660.17	36.91	17	50	32	1
American Indian	1041	660.1	36.98	18	49	33	1
Asian	221	679.76	44.95	12	34	52	2
Special Program Membership							
Title1	433	663.45	47.6	19	45	34	2
English Learner Program	655	646.8	30.95	26	56	18	0
Special Education	1569	640	30.56	35	51	14	0
Cohort 8							
Total	2200	654.16	36.53	22	50	27	0
Ethnic Background							
White	336	660.83	44.12	22	44	32	1
Black	182	644.43	37.3	34	43	23	0
Hispanic	1342	653.82	33.43	21	53	26	0
American Indian	282	653.42	37.85	23	49	28	0
Asian	49	652.9	35.04	20	53	27	0
Special Program Membership							
Title1	121	656.64	43	25	47	27	1
English Learner Program	265	644.75	27.65	28	57	15	0
Special Education	340	632.97	30.76	48	45	8	0

Note: FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation or off-grade or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who already met expectations in a previous test administration are not included in this summary. The results are not final results and are presented here for purpose of addressing reliability and validity. These results should not be used for accountability purposes.

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Table A.6
2008 Fall AIMS Results
Writing CRT High School

Group	N	Scale Score M	Scale Score SD	% at Performance Level FFBS	AS	MS	ES
Cohert 10							
Total	29754	688.37	49.74	5	35	51	9
Ethnic Background							
White	12236	705.63	49.13	3	23	58	16
Black	1802	678.09	48.2	7	41	48	5
Hispanic	12740	674.69	45.36	7	45	45	4
American Indian	2078	669.13	43.29	8	47	42	2
Asian	848	714.76	50.16	3	19	55	23
Special Program Membership							
Title1	721	661.08	48.85	12	48	39	0
English Learner Program	1028	640.54	46.76	20	61	19	1
Special Education	2856	644.29	45.07	18	60	22	0
Cohert 9							
Total	8178	662.51	47.04	11	52	35	2
Ethnic Background							
White	2232	670.48	51.91	11	43	41	4
Black	644	656.62	52.4	16	50	32	2
Hispanic	4203	658.95	42.99	10	57	32	1
American Indian	863	659.3	43.36	10	56	32	2
Asian	211	680.4	50.39	7	39	48	6
Special Program Membership							
Title1	389	663.34	54.54	13	45	40	3
English Learner Program	592	637.6	48.19	23	59	18	1
Special Education	1514	637.4	42.33	23	63	14	0
Cohert 8							
Total	1935	649.88	45.35	15	59	25	1
Ethnic Background							
White	344	653.56	47.49	15	53	31	1
Black	148	642.76	52	23	52	24	1
Hispanic	1151	649.32	42.48	14	63	23	0
American Indian	247	653.25	45.82	13	58	27	1
Asian	36	637.44	69.54	28	50	19	3
Special Program Membership							
Title1	116	655.63	47.15	12	55	31	2
English Learner Program	240	632.96	46.88	22	66	12	0
Special Education	329	627.85	45.62	28	61	11	0

Note: FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation or off-grade or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who already met expectations in a previous test administration are not included in this summary. The results are not final results and are presented here for purpose of addressing reliability and validity. These results should not be used for accountability purposes.

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APPENDIX B
Item Writer Selection Criteria

AIMS Committee Participant Selection Criteria

ARIZONA DEPARTMENT OF EDUCATION

PROCEDURE FOR SELECTION OF EDUCATOR COMMITTEES
ARIZONA ASSESSMENT SECTION

Although our database contains over 1000 educators, the Assessment Section is always recruiting new teachers to serve on the committees, and have prevailed upon veteran teachers to become Ambassadors of the Assessment by encouraging their colleagues to apply.

Once Arizona educators are identified and entered into the database, the Assessment Section uses the following procedures for selecting membership for a committee:

- Identify the purpose/function of the committee
- Establish the date and time of the committee
- Determine the criteria for membership on the committee:
    - Content area of expertise
    - Grade level experience
    - Specific skill or knowledge expertise for committee function
    - Prior experience on ADE committees—a minimum 50% of each committee will have prior experience
    - Location of district/school
        - Rural/urban/suburban
        - Approximately 50% of committee members from Maricopa County when appropriate for purpose of committee
    - Ethnicity of school population or committee member
    - SES of school population
    - Number of committees served on recently—a committee member cannot serve on a series of committees used to develop items. Otherwise, they would be passing judgment on their own prior work. (This is a change in procedure)*
- Review the database for educators that meet the criteria established
- Select committee members based on criteria for particular committee for primary and alternate list
- Invitations are sent to selected committee members on primary list **
- After decline and accept emails are received by established deadline, additional invitations issued to members on alternate list
- Committee meeting held
- Review performance of participants

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* ADE is concerned that utilizing the same committee members on a series of committees will reduce the input from a variety of educators and have requested that past committee participation be part of the selection process. As the pool of teachers expands, individual members will serve on fewer committees.

** It is not the policy to inform all members in our database of scheduled committee meetings, but only those invited to a particular meeting.

Beginning in April of 2006, all past participants have been invited to update their applications on a yearly basis in order to have the most current information in the database. Also, when Arizona educators participate on a committee, they are asked to review their information and note anything that might have changed. The application identifies the demographics of each committee member: geographic location in Arizona, ethnicity of school/district population and/or committee participant, and a detailed biographical background including participation on AIMS committees.

In order to replace past participants who have moved, changed positions, or no longer possess the time to serve, a recruitment letter was sent in October of 2006 to solicit recommendations from District Superintendents regarding prospective educators whose expertise and participation could be of great benefit. The ADE is constantly recruiting Arizona educators to serve on the various AIMS committees as well as encouraging retention of its veteran contributors and recognizing them as excellent Ambassadors of the Assessment.

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APPENDIX C
Item Writing / Editing Workshop to Support AIMS 2009

Following are the PowerPoint slides used during the AIMS Item Writing Workshop on April 29 and April 30, 2008.

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Item Writing/Editing Workshop

to Support AIMS 2009

April 29 and 30, 2008

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Welcome or Welcome Back!

Requirements:

- Content and assessment expertise
- Ability to be constructively critical
- Willingness to adhere to detailed guidelines
- Desire to be part of the AIMS development process

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CTB Reading Staff

Tanya Johnson
Facilitator for Grades 3, 4, & 5

Erika Faust
Facilitator for Grades 6, 7, & 8

Debbie Humm-Bremser
Facilitator for HS

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CTB Math Staff

Lynn Fitch
Facilitator for Grades 3, 4, & 5

Linda Chambers
Facilitator for Grades 6, 7, & 8

Mary Foster
Facilitator for HS

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CTB Support Staff

Nadia Greer
Program Management

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How did we get here?

- We usually do item writing in April. This workshop is the next step in the process.
- We identified good, usable passages and items.
- We conducted a Passage Review and a Math Item Review in March.
- We identified items to undergo group edits.
- We identified passages that still need items written.
- This a unique opportunity.

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Goal = To content edit previously written items for field testing in Spring 2009

Reading committees will . . .

- first edit all previously written items for all grade levels.
- then write new items for **grades 4 and 6**.
- finally write new items for other grades as time allows.

Math committees will . . .

- edit previously written items for all grade levels.

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Specifics—Reading

	Target		What We Have		
	Passages	Items	Passages with Items	Passages without Items	
Grade 3	2-3	30-45	2	1	Days 1 & 2
Grade 4	2-3	30-45	1	2	
Grade 5	2-3	30-45	2	1	
Grade 6	2-3	30-45	1	2	Days 1 & 2
Grade 7	2-3	30-45	2	1	
Grade 8	2-3	30-45	3	0	
HS	2-3	30-45	3	0	Day 1
TOTAL	**14-21**	**210-315**			
	~15 items per passage				

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Specifics—Math

	Target	What We Have	
Grade 3	~15	25	Days 1 & 2
Grade 4	~15	24	
Grade 5	~15	17	
Grade 6	~15	18	Days 1 & 2
Grade 7	~15	16	
Grade 8	~15	16	
HS	~15	24	Day 1
TOTAL	**~105**	140	

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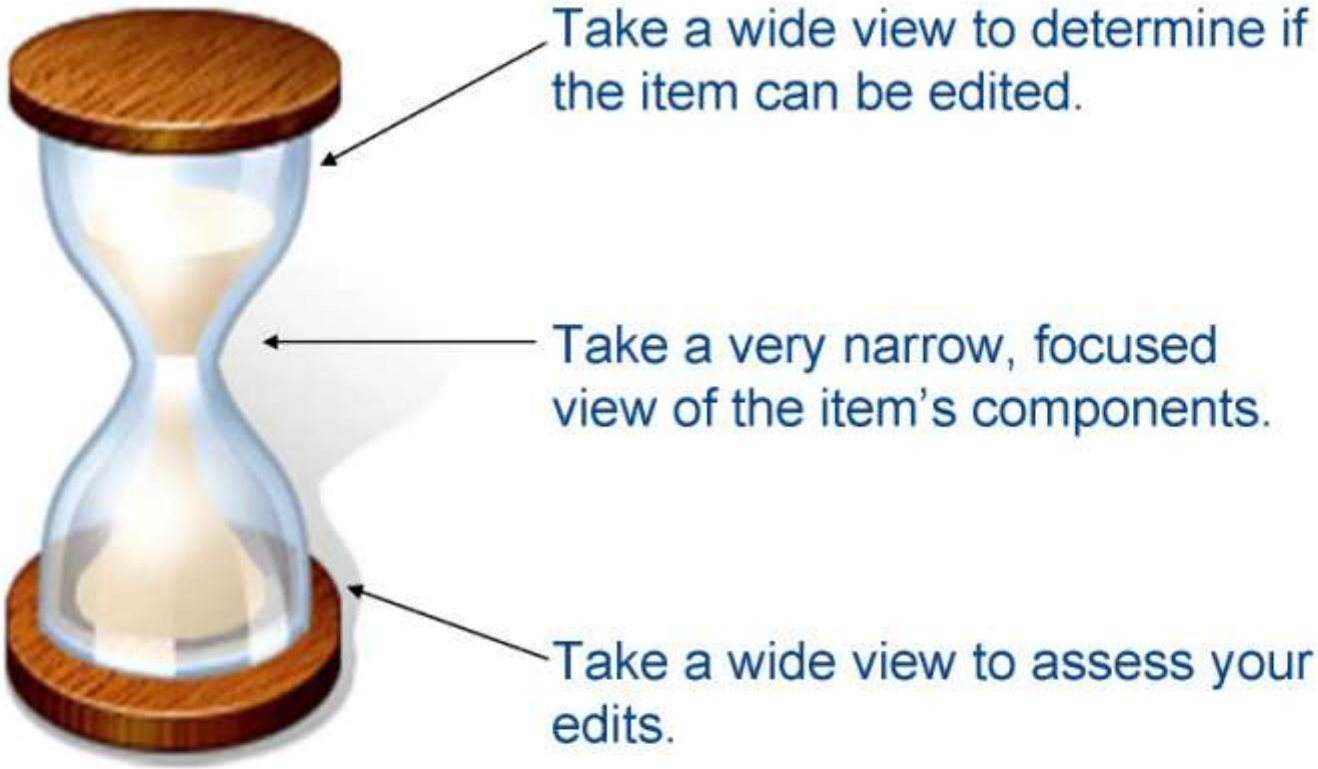
How to Content Edit – the Hour Glass Approach



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An Editing Activity

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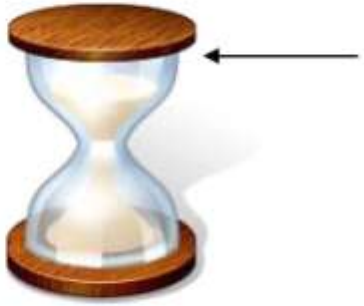
The First Wide View (one grade at a time)



Step 1 – Read each item.
Get a handle on the scope of your task.

Step 2 – Determine what the item is measuring.
Does the item measure the PO that it is supposed to measure?

Step 3 – Determine whether the item specifications are met.
Is the PO measured the way that it is supposed to be measured?

Step 4 – Determine if the item can be edited in the allotted time.
Are the answers to Steps 2 and 3 Yes or No?

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Narrowing the Focus (one grade at a time)

Step 5 – Focus on the Stem.

The Lead-in Information
The Graphics (if any)
The Question

Step 6 – Focus on the Answer Choices.

The Correct Answer
The Three Incorrect Choices (Distractors)

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Narrowing the Focus – the 4 C's

Content – Does the item measure the PO the way it's supposed to be measured? Do the distractors represent appropriate conceptual errors?

Context – Is the scenario logical for the intended audience? Do the individual parts of the item blend together into a seamless whole?

Clarity – Is the task clear? Does the item flow smoothly from stimulus to task to answer choices?

Construction – Have style conventions been implemented?

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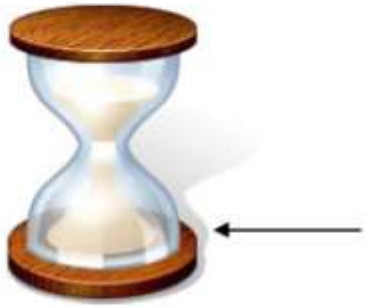
The Second Wide View



Step 7 – Set the items aside.

Step 8 – Look at each item again.

Individually
As a passage-related set
As a PO-related group

Repeat Steps if necessary.

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Teamwork

- Facilitators will provide items to be edited.
- Facilitators will offer ideas, assistance, feedback, and advice.
- Group will work through the editing steps together.
- Pace yourselves. If necessary, split into subgroups to get the job done.
- Reading – Edit and learn on Day 1. If needed, write new items on Day 2. Edit the newly written items.
- Enjoy the experience.

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Resources

Group Editing Booklets

Content Editing Handout

Item Specifications

Word Lists

New Style Guide

Item Stems for New Items

Facilitators

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Next Steps

- Another Content and Style Edit Review
- June 24 - Content/Bias Review Workshop
- A "final" Content Edit
- A "final" Style Edit
- Insert the FT items into the OP Spring 09 tests

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Security and Confidentiality

2 Feedback Forms

Questions?

Thank you

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APPENDIX D
AIMS Six Trait Analytic Writing Rubric

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AIMS Six Trait Analytic Writing Rubric–Official Scoring Guide

IDEAS and CONTENT

6	5	4
The writing is exceptionally clear, focused, and interesting. It holds the reader's attention throughout. Main ideas stand out and are developed by strong support and rich details suitable to audience and purpose. The writing is characterized by • clarity, focus, and control. • main idea(s) that stand out. • supporting, relevant, carefully selected details; when appropriate, use of resources provides strong, accurate, credible support. • a thorough, balanced, in-depth explanation/exploration of the topic; the writing makes connections and shares insights. • content and selected details that is well suited to audience and purpose.	The writing is clear, focused, and interesting. It holds the reader's attention. Main ideas stand out and are developed by supporting details suitable to audience and purpose. The writing is characterized by • clarity, focus, and control. • main idea(s) that stand out. • supporting, relevant, carefully selected details; when appropriate, use of resources provides strong, accurate, credible support. • a thorough, balanced explanation/exploration of the topic; the writing makes connections and shares insights. • content and selected details that is well suited to audience and purpose.	The writing is clear and focused. The reader can easily understand the main ideas. Support is present, although it may be limited or rather general. The writing is characterized by • an easily identifiable purpose. • clear main idea(s). • supporting details that are relevant, but may be overly general or limited in places; when appropriate, resources are used to provide accurate support. • a topic that is explored/explained, although developmental details may occasionally be out of balance with the main idea(s); some connections and insights may be present. • content and selected details that is relevant, but perhaps not consistently well chosen for audience and purpose.
3	**2**	**1**
The reader can understand the main ideas, although they may be overly broad or simplistic, and the results may not be effective. Supporting detail is often limited, insubstantial, overly general, or occasionally slightly off-topic. The writing is characterized by • an easily identifiable purpose and main idea(s). • predictable or overly-obvious main ideas or plot; conclusions or main points seem to echo observations heard elsewhere. • support that is attempted; but developmental details that are often limited in scope, uneven, somewhat off-topic, predictable, or overly general. • details that may not be well-grounded in credible resources; they may be based on clichés, stereotypes or questionable sources of information. • difficulties when moving from general observations to specifics.	Main ideas and purpose are somewhat unclear or development is attempted but minimal. The writing is characterized by • a purpose and main idea(s) that may require extensive inferences by the reader. • minimal development; insufficient details. • irrelevant details that clutter the text. • extensive repetition of detail.	The writing lacks a central idea or purpose. The writing is characterized by • ideas that is extremely limited or simply unclear. • attempts at development that are minimal or non-existent; the paper is too short to demonstrate the development of an idea.

Ideas/Content: This trait addresses the writer's theme along with the supporting details that develop and enrich that theme. Regardless of the type or purpose of writing, ideas should be clear, complete, and well-developed. One clear focus should be apparent, but development and details should be thorough, balanced, and well suited to audience and purpose.

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AIMS Six Trait Analytic Writing Rubric–Official Scoring Guide

ORGANIZATION

6	5	4
The organization enhances the central idea(s) and its development. The order and structure are compelling and move the reader through the text easily. The writing is characterized by • effective, perhaps creative, sequencing; the organizational structure fits the topic, and the writing is easy to follow. • a strong, inviting beginning that draws the reader in and a strong satisfying sense of resolution or closure. • smooth, effective transitions among all elements (sentences, paragraphs, and ideas). • details that fit where placed.	The organization enhances the central idea(s) and its development. The order and structure are strong and move the reader through the text. The writing is characterized by • effective sequencing; the organizational structure fits the topic, and the writing is easy to follow. • an inviting beginning that draws the reader in and a satisfying sense of resolution or closure. • smooth, effective transitions among all elements (sentences, paragraphs, and ideas). • details that fit where placed.	Organization is clear and coherent. Order and structure are present, but may seem formulaic. The writing is characterized by • clear sequencing. • an organization that may be predictable. • a recognizable, developed beginning that may not be particularly inviting; a developed conclusion that may lack subtlety. • a body that is easy to follow with details that fit where placed. • transitions that may be stilted or formulaic. • organization which helps the reader, despite some weaknesses.
3	**2**	**1**
An attempt has been made to organize the writing; however, the overall structure is inconsistent or skeletal. The writing is characterized by • attempts at sequencing, but the order or the relationship among ideas may occasionally be unclear. • a beginning and an ending which, although present, are either undeveloped or too obvious (e.g., "My topic is…", "These are the reasons that …"). • transitions that sometimes work. The same few transitional devices (e.g., coordinating conjunctions, numbering, etc.) may be overused. • a structure that is skeletal or too rigid. • placement of details that may not always be effective. • organization which lapses in some places, but helps the reader in others.	The writing lacks a clear organizational structure. An occasional organizational device is discernible; however, the writing is either difficult to follow and the reader has to reread substantial portions, or the piece is simply too short to demonstrate organizational skills. The writing is characterized by • some attempts at sequencing, but the order or the relationship among ideas is frequently unclear. • a missing or extremely undeveloped beginning, body, and/or ending. • a lack of transitions, or when present, ineffective or overused. • a lack of an effective organizational structure. • details that seem to be randomly placed, leaving the reader frequently confused.	The writing lacks coherence; organization seems haphazard and disjointed. Even after rereading, the reader remains confused. The writing is characterized by • a lack of effective sequencing. • a failure to provide an identifiable beginning, body and/or ending. • a lack of transitions. • pacing that is consistently awkward; the reader feels either mired down in trivia or rushed along too rapidly. • a lack of organization which ultimately obscures or distorts the main point.

Organization: This trait addresses the structure of a piece of writing including the thread of central meaning and the patterns that hold the piece together. Regardless of the type or purpose of writing, a well thought out order of ideas should be apparent. The structure should suit the topic, with a consciously planned opening and closing, each paragraph specific to one central idea, and transitions that tie the details

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AIMS Six Trait Analytic Writing Rubric–Official Scoring Guide
VOICE

6	5	4
The writer has chosen a voice appropriate for the topic, purpose, and audience. The writer seems deeply committed to the topic, and there is an exceptional sense of "writing to be read." The writing is expressive, engaging, or sincere. The writing is characterized by • an effective level of closeness to or distance from the audience (e.g., a narrative should have a strong personal voice, while an expository piece may require extensive use of outside resources and a more academic voice; nevertheless, both should be engaging, lively, or interesting. Technical writing may require greater distance.) • an exceptionally strong sense of audience; the writer seems to be aware of the reader and of how to communicate the message most effectively. The reader may discern the writer behind the worlds and feel a sense of interaction. • a sense that the topic has come to life; when appropriate, the writing may show originality, liveliness, honesty, conviction, excitement, humor, or suspense.	The writer has chosen a voice appropriate for the topic, purpose, and audience. The writer seems committed to the topic, and there is a sense of "writing to be read." The writing is expressive, engaging, or sincere. The writing is characterized by • an appropriate level of closeness to or distance from the audience (e.g., a narrative should have a strong personal voice while an expository piece may require extensive use of outside resources and a more academic voice; nevertheless, both should be engaging. lively or interesting. Technical writing may require greater distance.) • a strong sense of audience; the writer seems to be aware of the reader and of how to communicate the message most effectively. The reader may discern the writer behind the words and feel a sense of interaction. • a sense that the topic has come to life; when appropriate, the writing may show originality, liveliness, honesty, conviction, excitement, humor, or suspense.	A voice is present. The writer demonstrates commitment to the topic, and there may be a sense of "writing to be read." In places, the writing is expressive, engaging, or sincere. The writing is characterized by • a questionable or inconsistent level of closeness to or distance from the audience. • a sense of audience; the writer seems to be aware of the reader but has not consistently employed an appropriate voice. The reader may glimpse the writer behind the words and feels a sense of interaction in places. • liveliness, sincerity, or humor when appropriate; however, at times the writing may be either inappropriately casual or personal, or inappropriately formal and stiff.
3	**2**	**1**
A writer's commitment to the topic seems inconsistent. A sense of the writer may emerge at times; however, the voice is either inappropriately personal or inappropriately impersonal. The writing is characterized by • a limited sense of audience; the writer's awareness of the reader is unclear. • an occasional sense of the writer behind the words; however, the voice may shift or disappear a line or two later and the writing becomes somewhat mechanical. • a limited ability to shift to a more objective voice when necessary.	The writing provides little sense of involvement or commitment. There is no evidence that the writer has chosen a suitable voice. The writing is characterized by • little engagement of the writer; the writing tends to be largely flat, lifeless, stiff, or mechanical. • a voice that is likely to be overly informal and personal. • a lack of audience awareness; there is little sense of "writing to be read." • little or no hint of the writer behind the words. There is rarely a sense of interaction between reader and writer.	The writing seems to lack a sense of involvement or commitment. The writing is characterized by • no engagement of the writer; the writing is flat and lifeless. • a lack of audience awareness; there is no sense of "writing to be read." • no hint of the writer behind the words. There is no sense of interaction between writer and reader; the writing does not involve or engage the reader.

Voice: The type of voice will vary according to the purpose and type of piece, but it should be appropriately formal or casual, distant or intimate, depending on the audience and purpose.

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AIMS Six Trait Analytic Writing Rubric–Official Scoring Guide
WORD CHOICE

6	5	4
Words convey the intended message in an exceptionally interesting, precise, and natural way appropriate to audience and purpose. The writer employs a rich, broad range of words, which have been carefully chosen and thoughtfully placed for impact. The writing is characterized by • accurate, strong, specific words; powerful words energize the writing. • fresh, original expression; slang, if used, seems purposeful and is effective. • vocabulary that is striking and varied, but that is natural and not overdone. • ordinary words used in an unusual way. • words that evoke strong images; figurative language may be used.	Words convey the intended message in an interesting, precise, and natural way appropriate to audience and purpose. The writer employs a broad range of words which have been carefully chosen and thoughtfully placed for impact. The writing is characterized by • accurate, specific words; word choices energize the writing. • fresh, vivid expression; slang, if used, seems purposeful and is effective. • vocabulary that may be striking and varied, but that is natural and not overdone. • ordinary words used in an unusual way. • words that evoke clear images; figurative language may be used.	Words effectively convey the intended message. The writer employs a variety of words that are functional and appropriate to audience and purpose. The writing is characterized by • words that work but do not particularly energize the writing. • expression that is functional; however, slang, if used, does not seem purposeful and is not particularly effective. • attempts at colorful language that may occasionally seem overdone. • occasional overuse of technical language or jargon. • rare experiments with language; however, the writing may have some fine moments and generally avoids clichés.
3	**2**	**1**
Language is quite ordinary, lacking interest, precision and variety, or may be inappropriate to audience and purpose in places. The writer does not employ a variety of words, producing a sort of "generic" paper filled with familiar words and phrases. The writing is characterized by • words that work, but that rarely capture the reader's interest. • expression that seems mundane and general; slang, if used, does not seem purposeful and is not effective. • attempts at colorful language that seem overdone or forced. • words that are accurate for the most part, although misused words may occasionally appear, technical language or jargon may be overused or inappropriately used. • reliance on clichés and overused expressions.	Language is monotonous and/or misused, detracting from the meaning and impact. The writing is characterized by • words that are colorless, flat or imprecise. • monotonous repetition or overwhelming reliance on worn expressions that repeatedly distract from the message. • images that are fuzzy or absent altogether.	The writing shows an extremely limited vocabulary or is so filled with misused or words that the meaning is obscured. Only the most general kind of message is communicated because of vague or imprecise language. The writing is characterized by • general, vague words that fail to communicate. • an extremely limited range of words. • words that simply do not fit the text; they seem imprecise, inadequate, or just plain wrong.

Word Choice: This trait reflects the writer's use of specific words and phrases to convey the intended message in an interesting, precise, and natural way appropriate to audience and purpose.

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AIMS Six Trait Analytic Writing Rubric–Official Scoring Guide

SENTENCE FLUENCY

6	5	4
The writing has an effective flow and rhythm. Sentences show a high degree of craftsmanship, with consistently strong and varied structure that makes expressive oral reading easy and enjoyable. The writing is characterized by • a natural, fluent sound; it glides along with one sentence flowing effortlessly into the next. • extensive variation in sentence structure, length, and beginnings that add interest to the text. • sentence structure that enhances meaning by drawing attention to key ideas or reinforcing relationships among ideas. • varied sentence patterns that create an effective combination of power and grace. • strong control over sentence structure; fragments, if used at all, work well. • stylistic control; dialogue, if used, sounds natural.	The writing has an easy flow and rhythm. Sentences are carefully crafted, with strong and varied structure that makes expressive oral reading easy and enjoyable. The writing is characterized by • a natural, fluent sound; it glides along with one sentence flowing into the next. • variation in sentence structure, length, and beginnings that add interest to the text. • sentence structure that enhances meaning. • control over sentence structure; fragments, if used at all, work well. • stylistic control; dialogue, if used, sounds natural.	The writing flows; however, connections between phrases or sentences may be less than fluid. Sentence patterns are somewhat varied, contributing to ease in oral reading. The writing is characterized by • a natural sound; the reader can move easily through the piece, although it may lack a certain rhythm and grace. • some repeated patterns of sentence structure, length, and beginnings that may detract somewhat from overall impact. • strong control over simple sentence structures, but variable control over more complex sentences; fragments, if present, are usually effective. • occasional lapses in stylistic control; dialogue, if used, sounds natural for the most part, but may at times sound stilted or unnatural.
3	**2**	**1**
The writing tends to be mechanical rather than fluid. Occasional awkward constructions may force the reader to slow down or reread. The writing is characterized by • some passages that invite fluid oral reading; however, others do not. • some variety in sentences structure, length, and beginnings, although the writer falls into repetitive sentence patterns. • good control over simple sentence structures, but little control over more complex sentences; fragments, if present, may not be effective. • sentences which, although functional, lack energy. • lapses in stylistic control; dialogue, if used, may sound stilted or unnatural.	The writing tends to be either choppy or rambling. Awkward constructions often force the reader to slow down or reread. The writing is characterized by • significant portions of the text that is difficult to follow or read aloud. • sentence patterns that are monotonous (e.g., subject-verb or subject-verb-object). • a significant number of awkward, choppy, or rambling constructions.	The writing is difficult to follow or to read aloud. Sentences tend to be incomplete, rambling, or very awkward. The writing is characterized by • text that does not invite–and may not even permit–smooth oral reading. • confusing word order that is often jarring and irregular. • sentence structure that frequently obscures meaning. • sentences that is disjointed, confusing, or rambling.

Sentence Fluency: This trait addresses the rhythm and flow of language. Sentence structure should be strong and varied.

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AIMS Six Trait Analytic Writing Rubric–Official Scoring Guide

CONVENTIONS

6	5	4
The writing demonstrates exceptionally strong control of standard writing conventions (e.g., punctuation, spelling, capitalization, paragraph breaks, grammar and usage) and uses them effectively to enhance communication. Errors are so few and so minor that the reader can easily skim right over them unless specifically searching for them. The writing is characterized by • strong control of conventions; manipulation of conventions may occur for stylistic effect. • strong, effective use of punctuation that guides the reader through the text. • correct spelling, even of more difficult words. • paragraph breaks that reinforce the organizational structure. • correct grammar and usage that contribute to clarity and style. • skill in using a wide range of conventions in a sufficiently long and complex piece. • little or no need for editing.	The writing demonstrates strong control of standard writing conventions (e.g., punctuation, spelling, capitalization, paragraph breaks, grammar and usage) and uses them effectively to enhance communication. Errors are so few and so minor that they do not impede readability. The writing is characterized by • strong control of conventions. • effective use of punctuation that guides the reader through the text. • correct spelling, even of more difficult words. • paragraph breaks that reinforce the organizational structure. • correct capitalization; errors, if any, are minor. • correct grammar and usage that contribute to clarity and style. • skill in using a wide range of conventions in a sufficiently long and complex piece. • little need for editing.	The writing demonstrates control of standard writing conventions (e.g., punctuation, spelling, capitalization, paragraph breaks, grammar and usage). Minor errors, while perhaps noticeable, do not impede readability. The writing is characterized by • control over conventions used, although a wide range is not demonstrated. • correct end-of-sentence punctuation, internal punctuation may sometimes be incorrect. • spelling that is usually correct, especially on common words. • basically sound paragraph breaks that reinforce the organizational structure. • correct capitalization; errors, if any, are minor. • occasional lapses in correct grammar and usage; problems are not severe enough to distort meaning or confuse the reader. • moderate need for editing.
3	**2**	**1**
The writing demonstrates limited control of standard writing conventions (e.g., punctuation, spelling, capitalization, paragraph breaks, grammar and usage). Errors begin to impede readability. The writing is characterized by • some control over basic conventions; the text may be too simple to reveal mastery. • end-of-sentence punctuation that is usually correct; however, internal punctuation contains frequent errors. • spelling errors that distract the reader; misspelling of common words occurs. • paragraphs that sometimes run together or begin at ineffective places. • capitalization errors. • errors in grammar and usage that do not block meaning but do distract the reader. • significant need for editing.	The writing demonstrates little control of standard writing conventions. Frequent, significant errors impede readability. The writing is characterized by • little control over basic conventions. • many end-of-sentence punctuation errors; internal punctuation contains frequent errors. • spelling errors that frequently distract the reader; misspelling of common words often occurs. • paragraphs that often run together or begin in ineffective places. • capitalization that is inconsistent or often incorrect. • errors in grammar and usage that interfere with readability and meaning. • substantial need for editing.	Numerous errors in usage, spelling, capitalization, and punctuation repeatedly distract the reader and make the text difficult to read. In fact, the severity and frequency of errors are so overwhelming that the reader finds it difficult to focus on the message and must reread for meaning. The writing is characterized by • very limited skill in using conventions. • basic punctuation (including end-of-sentence punctuation) that tends to be omitted, haphazard, or incorrect. • frequent spelling errors that significantly impair readability. • paragraph breaks that may be highly irregular or so frequent (every sentence) that they bear no relation to the organization of the text. • capitalization that appears to be random. • a need for extensive editing.

Conventions: This trait addresses the mechanics of writing, spelling, capitalization, punctuation, and paragraph breaks. It can also include proper format.

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