Maryland Comprehensive Assessment Program

Maryland Comprehensive Assessment Program: 2023 Technical Manual for ELA, Mathematics, Science (MISA), and Social Studies Assessments

Prepared by Cognia and the Maryland State Department of Education

Foreword

The technical information included in this report 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 some 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, 2014).

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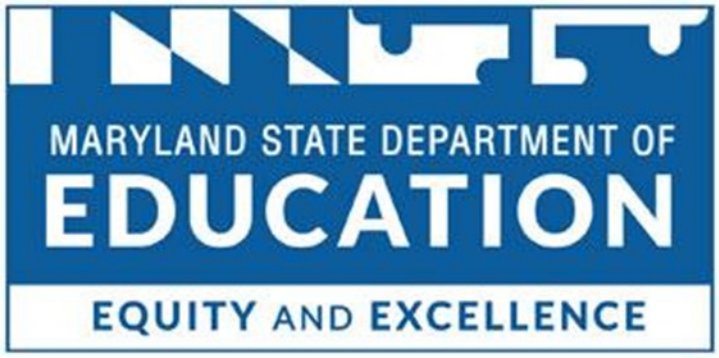

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Section 1. Introduction

Background of the Maryland Comprehensive Assessment Program

The Maryland Comprehensive Assessment Program (MCAP) provides information to educators, families, and the public on student progress towards proficiency on the Maryland state content standards. Through a strong assessment system, stakeholders gain an understanding of how schools are performing and where assistance can be directed to support student growth and achievement.

The Every Student Succeeds Act (ESSA) requires that states administer annual statewide assessments to all students in English language arts/Literacy (ELA/L) and mathematics in grades 3 through 8 and once in high school, as well as in science once in each grade band (3–5, 6–8, and high school). The Maryland Integrated Science Assessment (MISA) is the science assessment administered to Maryland students. Maryland State law (Md. Ed. Art 7-203) also requires a social studies assessment once in grade 8, as well as a high school American Government assessment.

English Language Arts and Literacy

The MCAP English Language Arts and Literacy assessments focus on the content outlined in the Maryland College and Career Ready Standards for each grade level. Students read literary and informational passages and may engage in multimedia such as video or audio pieces. Students demonstrate their reading comprehension and literacy skills by responding to text-based questions and writing prompts.

In Spring 2022, students in grades 3 through 8 and 10 were administered an operational field test. The first fully operational assessment was administered in Spring 2023.

For students in grades 3 through 8, the assessments are administered in the spring of each year. Assessments in grade 10 are administered after a student has completed most of the required course.

Mathematics

The MCAP Mathematics assessments focus on the content outlined in the Maryland College and Career Ready Standards for each grade level or course. Students are asked to demonstrate their understanding of mathematics by solving real-world problems, making sense of quantities and their relationships, and reasoning mathematically.

In Spring 2022, students in grades 3 through 8 and students enrolled in a high school course were administered an operational field test. The first fully operational assessment was administered in Spring 2023.

For students in grades 3 through 8, the assessments are given in the spring of each year. Assessments in high school Algebra I, Geometry, and Algebra II are administered after a student has completed most of the required course.

Science

The Maryland Integrated Science Assessment (MISA) is administered to all students in grades 5 and 8. In March 2018, all grade 5 and 8 students participated in a field-test assessment. The first operational assessment was administered in March 2019. The MISA is aligned to the Next Generation Science Standards (NGSS). The NGSS integrates three dimensions necessary to understand science. The dimensions are the Science and Engineering Practices, the Crosscutting Concepts, and the Disciplinary Core Ideas. To assess the three dimensions of the NGSS, a set of interrelated items is required. All items

on the MISA are part of an item set. Each item set on the MISA has a stimulus that focuses on a specific real-world context or phenomenon. The stimulus may include text, videos, charts, diagrams, or simulations. The stimulus may be divided up using tabs to focus on different details about the real-world context or phenomenon. Students interact with the stimulus and are given six items that assess scientific literacy by requiring students to demonstrate their understanding of the given information. Five items are a variety of selected-response items, multiple-select items, or technology-enhanced items such as drag-and-drop or hot spots. The final item in the set is a constructed-response item, which requires students to write a detailed response to a question or prompt.

The grade 5 MISA assesses the Elementary School NGSS for grades 3, 4, and 5. The grade 8 MISA assesses the Middle School NGSS for grades 6 through 8. The assessment includes disciplinary core ideas from Life Science, Physical Science, and Earth and Space Science.

Social Studies

The MCAP Social Studies 8 assessment measures student knowledge of United States history from 1754–1896, as well as students' ability to

- evaluate the credibility of source documents and other materials by considering the authority, origin, type, context, and corroborative value of each source;
- identify credible, relevant information contained in the sources; and
- construct arguments using claims and evidence from multiple sources.

In May 2022, all grade 8 students participated in a stand-alone field-test assessment in Social Studies. Since this was a stand-alone field test, there was no reporting for Spring 2022. The first fully operational assessment was administered in Spring 2023.

Purpose of This Report

While the preceding background information about the Maryland Comprehensive Assessment Program includes all applicable grades and content areas, this technical report focuses on the following General Education content areas and grades as covered by the program:

General Education	Mathematics	ELA/Literacy	Science	Social Studies	Administration Window
Grades 3–8	Grades 3–8	Grades 3–8	MISA–Grade 5 MISA–Grade 8	Grade 8	Spring
High School	Algebra I Algebra II Geometry	Grade 10			Fall / Winter & Spring

This technical report consists of ten sections and eight appendices:

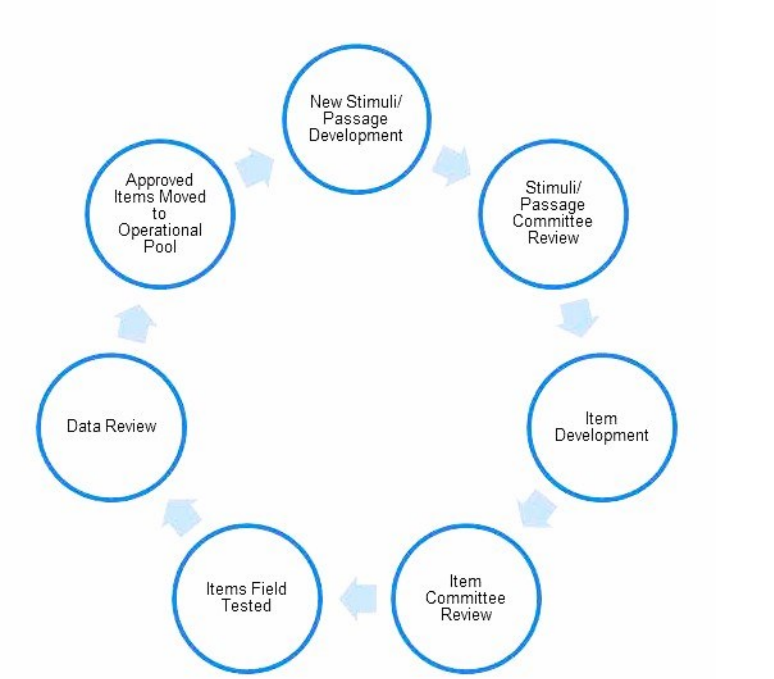
- **Section 1**—introduces the Maryland Comprehensive Assessment Program.
- **Section 2**—describes the procedures used for test design and development.
- **Section 3**—describes the procedures used for test administration.
- **Section 4**—delineates the scoring procedures and score types.

- **Section 5**—describes the score interpretations and reporting of each assessment.
- **Section 6**—describes the procedures used for data review and provides summary statistics and descriptive information about student characteristics.
- **Section 7**—provides information regarding item response theory, scaling, equating, and scoring.
- **Section 8**—gives the results of the analyses of the test data, including classical item analysis and field-test item calibration and scaling.
- **Section 9**—summarizes the results of the analyses of test reliability, decision consistency, and decision accuracy.
- **Section 10**—provides evidence of validity.
- **Appendix A**—provides information regarding content standards.
- **Appendix B**—provides information regarding test blueprints.
- **Appendix C**—provides a sample of the PSC Quality Management Extended Guide.
- **Appendix D**—provides classical item statistics for field-test items by administration for each content area.
- **Appendix E**—provides overall and subgroup reliability estimates by test form and administration for each content area.
- **Appendix F**—provides overall and subgroup decision accuracy and consistency (DAC) estimates by test form and administration for each content area.
- **Appendix G**—provides overall and subgroup scaled score summary statistics and performance level percentages by test form and administration for each content area.
- **Appendix H**—provides subscore correlations by administration for each content area.

Section 2. Test Design and Development

The following diagram depicts the high-level process for item and form development, which is described further in this section.

Figure 2-1. Assessment Development Process



ELA/L

Item Specifications

The MCAP Item Specifications provide the necessary information for Maryland item writers to develop new items in each content area and for the Maryland State Department of Education (MSDE) and Educational Testing Services (ETS) content teams to review those items. Where appropriate, the specifications also provide expectations for passages that ETS identifies and proposes for use in item development. (See Passage and Item Development below for additional explanation.)

The MCAP ELA/L Content Specifications is a comprehensive document that provides the following:

- acceptance criteria for the literary single passages, informational single passages, literary paired passages, and informational paired passages
- general guidelines for the development of ELA/L items, including common item flaws to avoid
- specific information on the assessed standards by passage type (see Appendix A for content standards information)
- types of items to be included within a passage or passage pair

- guidelines for standard coverage and expectations on item interaction within a set of items
- criteria for the various item types, including information about the number of correct answers, scoring, guidelines for development, applicable standards, and examples.

In addition, MSDE and ETS have developed Stem Guides by grade level as an ancillary to the item specifications. These are “living documents” and non-constraining; they are used as a tool by item writers in approaching assessment of the grade-level standards.

Passage and Item Development

Students are expected to read and respond to a variety of texts at a range of complexity by the end of the school year. Therefore, the assessments present a variety of texts across a range of genres and complexity levels at each grade. Apart from the Reading Foundational items at grade 3, all MCAP questions are passage-based, and all MCAP passages are from previously published texts that are licensed for use or are in the public domain.

Before item development began for the 2023 administration, reading passages were selected by ETS assessment specialists and were reviewed and approved by Maryland educators for grade-level appropriateness and alignment to the Maryland College and Career Ready Standards (MCCRS). Passages were reviewed for content, bias, and accessibility, and educators also provided their input regarding each passage’s text complexity level (easy-to-read, moderate, or high), considering both quantitative readability scores and qualitative criteria on a rubric. These evaluations helped to inform the development of the bank and were key considerations when constructing test forms.

After passages were approved, items were developed by teachers from the state of Maryland. Training for teachers was facilitated by ETS and MSDE assessment specialists and included instruction on the ELA/L test design, standards, selection of passages, and creation of effective and authentic items (selected response, multiple response, technology-enhanced, and constructed response). Additionally, item writers were given style information, item delivery schedules, and content resource suggestions.

Once the items were drafted and submitted, they were reviewed by ETS assessment specialists according to well-defined acceptance criteria approved by MSDE. Item writers were given feedback on items that were rejected due to not meeting those criteria, and in most cases, writers resubmitted acceptable items based upon that feedback. Once accepted, items and stimuli were vetted through the internal ETS item development process, reviewed by MSDE assessment specialists, and finally reviewed by a committee of Maryland educators to be accepted for field testing. Teachers who developed the items did not serve as reviewers at the final committee review.

Test Design and Blueprint

The basic test design was established by MSDE with input from ETS, Cognia, (psychometrics, scoring, reports) and Pearson to guide the test development process and administration. The test design was developed to support linear test forms as well as a Multi-Stage Adaptive Test (MST) that will be implemented in future administrations. Spring 2023 operational forms were constructed using item parameters from the Spring 2022 administration. To help discourage cheating behavior, two online base forms, Core A and Core B, were used for each grade. A paper form, which was also used as the base form for all accommodated formats, was also created using the same item parameters as the two online forms. Each student was administered one form.

Table 2-1 is the MCAP ELA/L blueprint for grade 3, and Table 2-2 is the MCAP ELA/L blueprint for grades 4 through 8 and 10. The blueprints are divided into timed sections and show the types of passages and how many items per passage are included in each section. In addition, the blueprints list the number of

potential points across the entirety of the test for the reading and writing claims and subclaims. Apart from the Reading Foundational items shown in section 1 and the field test of the grade 3 blueprint, all ELA/L items are based on a published stimulus or stimuli, and the stimuli support items in multiple subclaims. All sets contain multiple-choice and technology-enhanced items (TEI), including two-part items, with each item being worth 1 or 2 points. Only paper friendly items are included on the paper and accommodated forms. The literary and informational performance tasks, found in either section 2 or 3 of the test, also contain a constructed-response (CR) writing item worth 9 points in grade 3 and worth 11 points in all other grades. Table 2-3 provides additional information regarding trait scoring and weighting of the writing items. Test blueprints are available in Appendix B.

Table 2-1. MCAP ELA/L Blueprint Grade 3

A note on test-sequence variation: The assessment consists of four sections, three operational and one field test. The content in each test section may vary with field test content being presented in either Section 2, 3, or 4.

Section 1: 70 minutes	Section 2: 70 minutes	Section 3: 70 minutes	Section 4: 70 minutes
1 Informational Single Passage 6–8 RI items, EBSR/TEI RI.1–RI. 8 (includes 1–2 RI.4 or L.4–L.5 Vocabulary items) 10 Reading Foundational items 1 Literary Single Passage 6–8 RL items, EBSR/TEI RL.1–RL. 7 (includes 1–2 RL.4 or L.4–L.5 Vocabulary items)	Literary Performance Task Paired Literary Passages (linked by theme or topic) 4–6 RL items, EBSR/TEI RL.1–RL.9 2–3 Vocabulary items RL.4, L.4–L.5 1 CR W.1, 2, or 3 L.1–L.3	Informational Performance Task Paired Informational Passages (linked by topic) 4–6 RI items, EBSR/TEI RI.1–RI.9 2–3 Vocabulary items RI.4, L.4–L.5 1 CR W.1, 2, 3, L.1–L.3	1 Informational Single Passage 6-8 items + 1 Literary Single Passage 6-8 items -AND 5 Reading Foundational Items -OR 1 Literary Performance Task 7-10 Items (includes 1 CR) -OR 1 Informational Performance Task 7-10 Items (includes 1 CR)
Total Points for the Reading Claim: 54 **Points Per Reading Subclaim** Informational (RI): 14–20 Reading Literature (RL): 14–20 Vocabulary (RI.4, RL.4, L.4, L.5): 10–13 Reading Foundational: 10		**Total Points for the Writing Claim:** 18 **Points Per Writing Subclaim** Expression (W.1, 2, or 3): 12 Written Conventions (L.1–L.3): 6	

Evidence-Based Selected Response (EBSR) / Technology-Enhanced Item (TEI) / Constructed Response (CR) / Language Standards (L) /Writing Standards (W)

Table 2-2. MCAP ELA/L Blueprint Grades 4–8, 10

A note on test-sequence variation: The assessment consists of four sections, three operational and one field test. The content in each test section may vary with field test content being presented in either Section 2, 3, or 4.

Section 1: 70 minutes	Section 2: 70 minutes	Section 3: 70 minutes	Section 4: 70 minutes
1 Informational Single Passage 6–8 RI items, EBSR/TEI RI.1–RI. 8 (includes 1–2 RI.4 or L.4–L.5 Vocabulary items) 1 Literary Single Passage 6–8 RL items, EBSR/TEI RL.1–RL. 7 (includes 1–2 RL.4 or L.4–L.5 Vocabulary items)	Literary Performance Task Paired Literary Passages (linked by theme or topic) 4–6 RL items, EBSR/TEI RL.3.1–RL.3.9 2–3 Vocabulary items RL.4, L.4–L.5 1 CR W.1, 2, or 3 L.1–L.3	Informational Performance Task Paired Informational Passages (linked by topic) Includes video, graphics, maps, charts, text features. 4–6 RI items, EBSR/TEI RI.1–RI.9 2–3 Vocabulary items RI.4, L.4–L.5 1 CR W.1, 2, 3, L.1–L.3	1 Informational Single Passage 6-8 items + 1 Literary Single Passage 6-8 items -OR 1 Literary Performance Task 7-10 Items (includes 1 CR) -OR 1 Informational Performance Task 7-10 Items (includes 1 CR)
Total Points for the Reading Claim: 44 **Points Per Reading Subclaim** Informational (RI): 14–20 Reading Literature (RL): 14–20 Vocabulary (RI.4, RL.4, L.4, L.5): 10–13		**Total Points for the Writing Claim:** 22 **Points Per Writing Subclaim** Expression (W.1, 2, or 3): 16 Written Conventions (L.1–L.3): 6	

Evidence-Based Selected Response (EBSR) / Technology-Enhanced Item (TEI) / Constructed Response (CR) / Language Standards (L) /Writing Standards (W)

Table 2-3. MCAP ELA/L Writing Item Scoring Criteria

	Traits, Rubric Points, and Weighting*		
Grades	**Written Expression**	**Written Conventions**	**Total Points**
3	3 (2)	3 (1)	9
4–8 & 10	4 (2)	3 (1)	11

** The numbers in parentheses represent how rubric points for each trait are weighted to contribute to total points for writing items.*

Test Specifications and Development

Table 2-4 summarizes the MCAP summative test specifications. The MCAP summative assessment was administered as a linear fixed form in Spring 2023, with two online forms developed in each grade. A paper-pencil form (Core AP) that was the basis for accommodated forms was also provided for each grade and administered per student dependent on their Individualized Education Program (IEP). An online version of this form was also created to allow the scribing of student responses into the online delivery system. The ELA/L Braille, Human Reader, and ASL accommodated forms were the same as the paper-pencil form (Core AP).

Table 2-4. MCAP ELA/L Summative Test Specifications

Forms	Core A, Core B, Core AP
Test Administration	• Grade 10 Fall 2022 and Spring 2023 • Grades 3–8 and 10 Spring 2023 • Core A and B—Online forms with one or more field-test sets • Core AP—Paper-pencil form with one field-test set
Content Specifications	• Follow the blueprints • Machine-scored and hand-scored items
Psychometric Specifications	• Evaluate test characteristic curves and test information functions (TCCs and TIFs) to verify that the linear forms meet statistical targets.

Prior to form construction, ETS and MSDE staff reviewed the item pool with data from the Spring 2022 administration to determine which items should remain in the operational pool for future test construction. Using that pool, the test design, and blueprint documents, ETS created the initial version of the operational tests. The tests were then reviewed internally by ETS assessment specialists to ensure that the content met the criteria of the blueprint and test design documents. In addition, ETS psychometricians reviewed the test forms to ensure that they met the blueprint and statistical targets. This was an iterative, internal process that resulted in an ETS agreed-upon form that was presented to MSDE for review. MSDE reviewed the forms and either approved or suggested revisions. This was also an iterative process that ended with an approved form.

Mathematics

Item Specifications

The MCAP Mathematics Item Specifications were developed as unique documents for each grade/test by MSDE with input from ETS. They provide the following:

- an overview of the mathematics assessments
- information about the master claims and subclaims within the mathematics standards
- details on mathematics evidence claims, including coding by standard/evidence statement, explanation of evidence statements, and coding for reasoning and modeling
- general guidelines for the development of mathematics items, including terminology
- specific information on the assessed standards, including sample items
- criteria for the various item types, including information about the number of correct answers, scoring, guidelines for development, applicable standards, and examples

Item Development

Items were developed by teachers from the state of Maryland. Training for teachers was facilitated by ETS and MSDE assessment specialists and included instruction on the mathematics test design, evidence statements, and creation of effective and authentic items (selected response, multiple response, technology-enhanced, and constructed response). Additionally, item writers were given style information, item delivery schedules, and content resource suggestions.

Once the items were drafted and submitted, they were reviewed by ETS assessment specialists according to well-defined acceptance criteria approved by MSDE. Item writers were given feedback on items that were rejected due to not meeting those criteria, and in most cases, writers resubmitted

acceptable items based upon that feedback. Once accepted, items were vetted through the internal ETS item development process, reviewed by MSDE assessment specialists, and reviewed by a committee of Maryland educators to be accepted for field testing. Teachers who developed the items did not serve as reviewers at the final committee review.

Test Design and Blueprint

The basic test design was established by MSDE with input from ETS and Pearson to guide the test development and administration. The test design was developed to support linear test forms as well as Computer Adaptive Tests (CAT) that were implemented during Spring 2023. For Fall 2022, one linear online form and one linear paper form, which was used as the base form for all accommodated formats, were developed for Algebra I, Algebra II, and Geometry. The operational forms were constructed using data and item parameters from the Spring 2022 administration. For Spring 2023, a linear paper form, which was also used as the base form for all accommodated formats, was created for all math tests (grades 3-8, Algebra I, Algebra II, and Geometry) and two linear online forms were created for Algebra II and Geometry. These linear forms used the same item parameters as the Fall forms. In addition, grades 3-8 and Algebra I moved to Computer Adaptive Tests (CAT) for the first time in Spring 2023. Items accepted at data review were added to the CAT pools for each test.

Table 2-5 presents a condensed version of the mathematics blueprint and provides information about the measurement of knowledge and skills in each domain within a form, whether CAT or linear, and the number of items and points allocated to each domain or reporting category. Mathematics items measure the content defined by the evidence statements. Each content item is worth 1 point and is machine-scored. Item types include multiple-choice single select, multiple-choice multiple select, and technology enhanced. Reasoning and modeling items are either machine- or human-scored. The machine-scored items are worth 1 point. The human-scored items include at least one extended-response part with an embedded equation editor. The human-scored items are worth 3 or 4 points. Each section of the mathematics assessment should take approximately 40 minutes to complete.

Table 2-5. Numbers of Items and Points by Reporting Category for MCAP Mathematics

Assessment	Reporting Category	Number of Items	Number of Points
Grade 3 Mathematics Grade 4 Mathematics	Mathematical Content	23	23
	Mathematical Reasoning	6	10
	Mathematical Modeling	6	10
	TOTALS	**35**	**43**
Grade 5 Mathematics Grade 6 Mathematics Grade 7 Mathematics Grade 8 Mathematics	Mathematical Content	23	23
	Mathematical Reasoning	6	11
	Mathematical Modeling	6	11
	TOTALS	**35**	**45**
Algebra I	Mathematical Content	24	24
	Mathematical Reasoning	6	12
	Mathematical Modeling	6	12
	TOTALS	**36**	**48**
Geometry Algebra II	Mathematical Content	23	23
	Mathematical Reasoning	6	12
	Mathematical Modeling	6	12
	TOTALS	**35**	**47**

Test Specifications and Development

Table 2-6 summarizes the MCAP summative test specifications. The MCAP summative assessment was administered as a Computer Adaptive Test (CAT) and linear fixed paper forms in Spring 2023.

Table 2-6. MCAP Mathematics Summative Test Specifications

Forms	Core A, Core B, Core AP, Computer Adaptive Tests (CAT)
Test Administration	• Grades 3–8 and Algebra I CAT and linear paper/accommodated for Spring 2023 • Algebra II, Geometry linear paper/accommodated and online for Spring 2023 • Algebra I, Algebra II, Geometry linear paper/accommodated and online for Fall 2022 • CAT—Online forms with embedded field-test sets • Core A and B—Online forms with one or more field-test sets • Core AP—Paper-pencil form with one field-test set
Content Specifications	• Follow the blueprints • Machine-scored and hand-scored items
Psychometric Specifications	• Evaluate TCCs and TIFs to verify that the linear forms meet statistical targets. CAT pools consisted of approved items from data review.

Prior to linear form construction, ETS and MSDE staff reviewed the item pool with data from the Spring 2022 administration to determine which items should remain in the operational pool for future test construction. Using that pool, the test design, and blueprint documents, ETS created the initial version of the linear paper operational tests. The tests were then reviewed internally by ETS assessment specialists to ensure that the content met the criteria of the blueprint and test design documents. In addition, ETS psychometricians reviewed the linear test forms to ensure that they met the blueprint and psychometric requirements. This was an iterative internal process that resulted in an ETS agreed-upon form that was presented to MSDE for review. MSDE reviewed the forms and either approved or suggested revisions. This was also an iterative process that ended with an approved linear form.

A paper-pencil form (Core AP) that was the basis for accommodated forms was also provided for each grade and administered per student dependent on their Individualized Education Program (IEP). An online version of this form was created to allow the scribing of student responses into the online delivery system. The mathematics Spanish, Braille, Human Reader, and ASL accommodated forms were the same items.

For CAT, pools of operational-ready items were reviewed, and enemy items were identified and coded. Field-test items were reviewed and enemies were added against the operational pool. Field-test clusters were built. These operational and field-test sets were reviewed internally by ETS assessment specialists and ETS psychometricians to ensure that future operational CAT administrations would meet blueprint. This was an iterative internal process that resulted in ETS agreed-upon operational pool and field-test clusters that were presented to MSDE for review. MSDE reviewed the operational pool and the field-test clusters, as well as the identified enemies, and either approved or suggested revisions. This was also an iterative process that ended with an approved pool of operational items, an approved pool of field-test items, and approved field-test clusters.

Science (MISA) Grades 5 and 8

Item Specifications

The MCAP Science Item Specifications were developed by MSDE. The specifications provide the necessary information for Maryland item writers to develop new items and MSDE content teams to review those items. The specifications provide detailed information about the following:

- general guidelines on anchoring phenomenon, creating storylines/stimuli, developing simulations, and writing items
- specific information on Next Generation Science Standards (NGSS) Performance Expectations
- types of items appropriate for the assessment
- criteria for the various item types, including information about the number of correct answers, scoring, guidelines for development, applicable standards, and examples.

Cluster and Item Development

Students are expected to make sense of phenomena-based storylines that provide evidence of the three dimensions of the Next Generation Science Standards (NGSS). The performance expectations and associated evidence statements provide details on how students should use the Science and Engineering Practices (SEPs), Crosscutting Concepts (CCCs), and Disciplinary Core Ideas (DCIs) together to demonstrate proficiency in the NGSS Performance Expectations (PE).

Passages and associated items were written by Maryland educators of the appropriate grades and science background. Training for teachers was facilitated by ETS and MSDE assessment specialists and included instruction on the science test design (including item set types), NGSS, phenomena selection, storyline development, and the development of aligned selected-response, multiple-response, technology-enhanced, and constructed-response items. Training was also provided for grouping PEs in a "bundle" to support the development of item sets, grade-level considerations, Universal Design for Learning (UDL), as well as bias and sensitivity. For each technology-enhanced items (TEI) utilized in an online assessment, a replacement item is used on accommodated forms if needed.

Once the items and stimuli were drafted and submitted, ETS vetted materials through the internal item development process. Once accepted, items and stimuli were reviewed by MSDE assessment specialists, and, finally, reviewed by a committee of Maryland educators to be accepted for field testing. Teachers who developed the items did not serve as reviewers at the final committee review.

Test Design and Blueprint

The Maryland Integrated Science Assessments (MISA) are built to align with the Next Generation Science Standards (NGSS). The grades 5 and 8 science assessments were field tested in 2017 and first administered as operational tests in 2018. The scales and standards for grades 5 and 8 science assessments were established in 2018.

To assess the three dimensions of the performance expectations described in the standards, a set of interrelated items is required. The MISA uses the item set as the building block of the assessment. Individual items may focus on two of the dimensions, but together in a set, all three dimensions are covered, and inferences can be made about a student's three-dimensional learning. Each item set is based on a stimulus (*i.e.,* a scientific phenomenon) with six selected-response (SR), constructed-response (CR), and technology-enhanced items (TEI).

Each assessment session is one section and contains the following types of item sets per section:

- Section 1: two traditional and/or technical item sets
- Section 2: two traditional and/or technical item sets
- Section 3: two traditional and/or technical item sets
- Section 4: one field test traditional or technical item set, and one matrix simulation set that will be designated as either operational or field test

For the operational MISA tests, the item sets in sections 1, 2, and 3 are referred to as being a part of the core forms (see Table 2-7) and are used to produce individual student scores. Each core form consisted of three item sets that were unique to that form and three item sets that were common across two forms.

Table 2-7. Sections 1–3 Operational Blueprint for Grades 5 and 8

Science Content Domain	Number of Sets, Items, and Points per Domain*
Life Sciences	2 sets (one is common) 12 items 16 points
Physical Sciences	2 sets (one is common) 12 items 16 points
Earth and Space Sciences	2 sets (one is common) 12 items 16 points
Total	**6 sets (three common sets and three unique)** **36 items** **48 points**

**The item sets within each section of the test will be aligned to two different content domains.*

Section 4 contains a combination of two item sets as depicted in Table 2-8. Some students receive Option A, which contains a field test (FT) item set and a simulation FT set. Other students receive Option B, which contains one FT item set and one matrixed simulation operational (OP) set. The matrixed item set is used to provide additional content coverage for the reporting of school-level scores.

Table 2-8. Section 4 Field Test and Matrix Blueprint for Grades 5 and 8

Section 4 Option A	Section 4 Option B
2 FT sets aligned to any of the three content domains	1 FT and 1 OP matrix simulation aligned to any of the three content domains
1 traditional or technical FT item set 6 items 8 points	1 traditional or technical FT item set 6 items 8 points
1 simulation FT set 6 items 9 points	1 simulation OP set 6 items 9 points
Total **2 sets** **12 items** **17 points**	**Total** **2 sets** **12 items** **17 points**

Each type of item set provides a different scoring and reporting function for the overall assessment. In combination, the sets support additional scoring and reporting. Table 2-9 summarizes the contribution of the three types of sets. Table 2-10 provides the distribution of items and points by item type for the MCAP grades 5 and 8 science assessments.

Table 2-9. Summary of Reporting for the MCAP Science Summative Assessments

Specification	Assessment Segments to be Administered to All Students at Tested Grades	
	Traditional/Technical Item Set	Matrix Simulation Set
Reporting Level	Contributes to student- and group-level scores	Contributes only to group-level scores

Table 2-10. Distribution of Items and Points by Item Type for the MCAP Grades 5 and 8 Science Assessments

Science	7 Traditional/Technical Item sets per Form (6 Items and 8 Points per Set)				1 Simulation per Form (6 Items and 9 Points, Either Matrix or FT)	
	MC/TE	2-pt Composite*	2-pt CRs	3-pt CRs	MC/TE	4-pt CRs
Number of Items per Set	4–5	0 or 1	0 or 1	0 or 1	5	1
Total Number of Items	36 OP items from 6 OP sets (12 items in Sections 1, 2, and 3) 6 FT items from 1 FT set (6 items in Section 4)				6 OP items from matrix simulation or 6 FT items from FT simulation (6 items in Section 4)	
Number of Points per Set	4–5	0 or 2	0 or 2	0 or 3	5	4
Total Number of Points	48 OP points from 6 OP sets in Sections 1–3 8 FT points from 1 FT set in Section 4				9 points from matrix simulation or 9 points from FT simulation	

**Sets with a composite item must have four 1-pt. MC/TEI items, one 2-pt. MC/TEI item (Part A and Part B), and one 2-pt. CR. Sets without a composite item must have five 1-pt. MC/TEI items and one 3-pt. CR. Among both cores there should be one-third representation composite item sets if possible. There should be no more than one composite labset in any one section of the test.*

Test Specifications and Development

Table 2-11 summarizes the MISA summative test specifications. The MISA summative assessment was administered as a linear fixed form in Spring 2023. Each grade for science had two online core forms and one paper core, which all accommodated forms were based on, with overlapping item sets. The paper-pencil form (Core AP) that was the basis for accommodated forms was also provided and administered per student dependent on their Individualized Education Program (IEP). An online version of this form was also created to allow the scribing of student responses into the online delivery system. The science Spanish, Braille, Human Reader, and ASL accommodated forms were the same as the paper-pencil form (Core AP).

Table 2-11. MCAP Science (MISA) Summative Test Specifications

Forms	Core A, Core B, Core AP
Test Administration	• Grades 5 and 8 Spring 2023 • Core A and B—Online forms with one or more field-test sets • Core AP—Paper-pencil form with one field-test set
Content Specifications	• Follow the blueprints • Machine-scored and hand-scored items
Psychometric Specifications	• Use the summative item to assemble the linear forms • Evaluate TCCs and TIFs to verify that the linear forms meet the statistical targets

Using the test design and blueprint documents, ETS created the initial versions of the three operational tests – the two online forms and the paper form. The tests were then reviewed internally by ETS assessment specialists to ensure that the content met the criteria of the blueprint and test design documents. In addition, ETS psychometricians reviewed the test forms to ensure that they met the statistical requirements set forth in the test design and blueprints. This was an iterative internal process that resulted in an ETS agreed-upon form that was presented to MSDE for review. MSDE reviewed the forms and either approved or suggested revisions. This was also an iterative process that ended with an approved form.

Social Studies Grade 8

Item Specifications

The MCAP Grade 8 Social Studies Item Specifications were developed by MSDE. The specifications are used internally by ETS and MSDE. The specifications are not shared with teacher item writers. Instead, teachers receive training with pertinent information.

The MCAP Grade 8 Social Studies Item Specifications provide the following:

- acceptance criteria for evidence-based sets and historical artifacts
- general guidelines for the development of social studies items, including common item flaws to avoid
- specific information on the assessed standards
- types of items to be included within Evidence-Based Argument Sets (EBAS)
- guidelines for standard coverage and alignment, as well as cognitive complexity, accessibility, and bias and sensitivity
- criteria for the various item types, including information about the number of correct answers, scoring, guidelines for development, applicable standards, and stem examples

Stimuli and Item Development

Students are expected to respond to a variety of historical stimuli, including images, photographs, quotes, texts, and articles. Before item development began, stimuli were selected by ETS assessment specialists and were reviewed and approved by MSDE and Maryland educators for grade-level appropriateness and alignment to the standard topics and contexts. Stimuli were reviewed for content, bias, and accessibility.

Maryland educators wrote the items for the Grade 8 Social Studies tests, including developing some items that address the approved stimuli. Training for teachers was facilitated by ETS and MSDE

assessment specialists and included instruction on the test design, standards, selection of stimuli, and creation of effective and authentic items (selected response, multiple response, technology enhanced, and constructed response). Additionally, item writers were given style information, item delivery schedules, and content resource suggestions.

Once the items were drafted and submitted, they were reviewed by ETS assessment specialists according to well-defined acceptance criteria approved by MSDE. Item writers were given feedback on items that were rejected due to not meeting those criteria, and in most cases, writers resubmitted acceptable items based on that feedback. Once accepted, items and stimuli were vetted through the internal ETS item development process, reviewed by MSDE assessment specialists, and finally reviewed by a committee of Maryland educators to be accepted for field testing. Teachers who developed the items did not serve as reviewers at the final committee review.

Test Design and Blueprint

The Social Studies Grade 8 test is a new assessment for Maryland with the first operational administration in Spring 2023. The basic test design was established by MSDE with help from ETS, Cognia, and Pearson to guide test development and administration. Two online forms were developed for standard setting (Cores A and B). One paper form, which all accommodated forms were based on, was also developed and administered. The items on the paper form were either repeated in one of the online forms or used in a field-test version for an online form.

High-level descriptions of the operational test design by standard and by unit are provided in Tables 2-12 and 2-13, respectively. The current MCAP social studies assessment is designed to measure six main standards: Civics, Peoples of the Nations and World, Geography, Economics, History, and Skills and Processes. Items that test standards 1 through 5 measure students' knowledge in certain topics or units categorized by the Maryland middle school United States history framework. The skills to be assessed in standard 6 "Skills and Processes" are further divided into two dimensions, but items in this standard do not measure students' knowledge or skills at the unit level.

The types of items in the MCAP social studies assessment include selected-response (SR) items, 4-point constructed-response (CR) items, and technology-enhanced (TE) items. In addition, an Evidence-Based Argument Set (EBAS), was introduced as a performance-based item set in the new MCAP social studies assessment. An EBAS consists of 4 two-point constructed response items and 1 four-point constructed response item. Refer to Table 2-14 for details of item type distributions across standards. For the paper form, selected-response items take the place of technology-enhanced items.

Altogether, 47-52 operational items and 16 field-test items were administered to 8th grade students during 4 testing sessions. The sum of the operational items across all sessions constitutes the core form of the administration was used to produce individual student scores.

Table 2-12. Test Design of the Operational MCAP Social Studies Assessment by Standard

Standard		Number of Items	Number of Points
Standard 1: Civics		7–14	11–15
Standard 2: Peoples of the Nations and World		6–13	10–14
Standard 3: Geography		6–13	10–14
Standard 4: Economics		5–12	9–13
Standard 5: History		7–14	11–15
Standard 6: Skills and Processes	Standard 6.E	4	8
	Standard 6.A	1	4
Total		**47–52**	**67**

Table 2-13. Test Design of the Operational MCAP Social Studies Assessment by Unit

Unit	% of Items	Number of Items
Unit 1: Colonization	*Not Assessed*	*Not Assessed*
Unit 2: The American Revolution	17–23%	8–11
Unit 3: Founding of the New Government	17–23%	8–11
Unit 4: A New Nation	17–23%	8–11
Unit 5: Geographic Expansion and Political Division	17–23%	8–11
Unit 6: Civil War and Reunion	17–23%	8–11
Unit 7: Growth of Industrial America	*Not Assessed*	*Not Assessed*
Total		**42–47***

**The remaining 5 items will consist of the EBAS, which can cover content from units 2 to 6 as part of standard 6.*

Table 2-14. Distribution of Item Type by Standard for the Operational MCAP Social Studies Assessment

Standard	Total Number of Items*	Number of SR Items (1-point)	Number of TE Items (2-Point)	Number of CR Items** (4-Point)	Number of CR Items (2-point)	Total Number of Points	Percentage of points of overall blueprint ***
Standard 1	7–14	5–13	1–3		—	11–15	16–22%*
Standard 2	6–13	4–12	1–3	1	—	10–14	15–21%*
Standard 3	6–13	4–12	1–3	(0–1 item per	—	10–14	15–21%*
Standard 4	5–12	3–11	1–3	standard)	—	9–13	13–19%*
Standard 5	7–14	5–13	1–3		—	11–15	16–22%*
Standard 6	5	—	—	1	4	12	18%
Total	**47–52**	**31–41**	**5–10**	**2**	**4**	**67**	

**Minimum number of item scenario: One (1) 4-point CR item is selected for the standard and the number of points for this standard land on the lower limit of the range. Maximum number of item scenario: No 4-point CR items are selected for the standard and the number of points for this standard land on the higher limit of the range.*
***Content 4-pt CR standard will fluctuate.*
****Numbers were rounded.*

Test Specifications and Development

Table 2-15 summarizes the MCAP summative test specifications. The MCAP summative assessment was administered as a linear fixed form in Spring 2023. Two online forms (Cores A and B) were created and administered. A paper-pencil form (Core AP) that was the basis for accommodated forms was also provided and administered per student dependent on their Individualized Education Program (IEP). An online version of this form was also created to allow the scribing of student responses into the online delivery system. The social studies Spanish, Braille, Human Reader, and ASL accommodated forms were the same as the paper-pencil form (Core AP).

Table 2-15. MCAP Social Studies Summative Test Specifications

Forms	Core A, Core B, Core AP
Test Administration	• Grade 8 Spring 2023 • Core A and B—Online with field-test sets • Core AP—Paper-pencil form with one field-test set
Content Specifications	• Follow the blueprint • Machine-scored and hand-scored items
Psychometric Specifications	• Evaluate TCCs and TIFs to verify that the linear forms meet statistical targets

Using the test design and blueprint documents, ETS created the initial version of the tests, which were then reviewed internally by ETS assessment specialists to ensure that the content met the criteria of the blueprint, test design documents, and statistical targets. In addition, ETS psychometricians reviewed the test forms to ensure that they met the requirements set forth. MSDE reviewed the forms and approved or suggested revisions. This was an iterative process that ended with an approved form.

Test Development Processes

Operational Test Form Construction

Each content-area and grade-level assessment is based on a specific test blueprint that guides how each test is constructed. Test blueprints delineated the number of items or points from each reporting category appearing on a given test. Operational forms were constructed by ETS using blueprints and test specifications to ensure the forms had proper coverage of content and met statistical guidelines. All forms were reviewed by ETS psychometricians and MSDE content staff before they were considered final.

Several statistics based on classical test theory and item response theory (IRT) are used to evaluate the quality of individual items before selecting an item for the operational form during the test construction process. These statistics and corresponding thresholds are listed in Table 2-16 for dichotomous items and in Table 2-17 for polytomous items. (The statistical requirements used for test construction differ somewhat from the data review statistical and traffic signal flags listed in Section 6.)

Table 2-16. Statistical Requirements for Dichotomously Scored Items

Statistics	Criteria for Selecting Items
p-value for item difficulty	>0.2 and <0.9
point-biserial correlation for item discrimination	>0.2
Omit rate	<5%
Distractor point-biserial correlation	< item point-biserial correlation
standardized mean difference (SMD) DIF	*Not flagged for Category C DIF
IRT Item Difficulty	>-3 and <3

** See Table 6-1 and 6-2 for Description of DIF Categories*

Table 2-17. Statistical Requirements for Polytomously Scored Items

Statistics	Criteria for Selecting Items
p-value for item difficulty	>0.2 and <0.9
item-total correlation for item discrimination	>0.2
% of students at each score point	>0
Omit rate	<5%
standardized mean difference (SMD) DIF	*Not flagged for Category C DIF
IRT Item Difficulty	>-3 and <3

** See Table 6-1 and 6-2 for Description of DIF Categories*

Field Test Form Construction

MSDE conducts field tests of new items by embedding them in multiple forms of operational tests so that the field-test items are randomly distributed to students across the state. This results in a large representative sample of responses gathered on each item. Experience has shown that embedded field testing yields sufficient data for precise item evaluation and allows for the collection of statistical data on many field-test items in a realistic testing situation. Performance on field-test items is not part of the students' scores on the operational tests.

Alternative Presentations

MSDE offers several alternate presentations of forms, also referred to as accommodated forms, for students who need accommodation or students who need additional support during the exam. All alternate presentations of forms are based on Core AP. Core AP is built with items that are paper friendly and appropriate for all alternate formats. Scores on the paper-pencil and accommodated versions are considered qualitatively equivalent to the online assessments. The following list describes the forms that are offered to students in an alternate presentation:

- Spanish Online and Paper (mathematics, science, and social studies)
- American Sign Language
- Large Print
- English and Spanish Human Reader
- Text-to-Speech
- Assisted Technology Screen Reader and non-Screen Reader
- Closed Captioned
- Braille

Section 3. Test Administration

General Administration Information

The goal of the Maryland Comprehensive Assessment Program (MCAP) is to provide educators, students, and families with more timely results and a more comprehensive understanding of where students are on their learning journey. The MCAP assessments are aligned to the Maryland College and Career Ready Standards (MCCRS). Pearson provides an assessment delivery, scoring, and reporting platform for English language arts in grades 3 through 8 and grade 10 and mathematics in grades 3 through 8, Algebra I, Geometry, and Algebra II, as well as for science in grades 5 and 8 and social studies in grade 8.

The first operational assessment under Maryland's new MCAP umbrella of assessments was planned for Spring 2020. With the cancellation of assessments in Spring 2020, Fall 2020, and Spring 2021, the move to a computer adaptive test (CAT) was delayed to Spring 2023. Fall 2022 utilized linear forms for the assessment, including accommodated online forms and paper accommodated forms. Spring 2023 introduced CAT for Mathematics grades 3-8 and Algebra I. All other content areas including Science, ELA, and Social Studies as well as Algebra II and Geometry utilized linear forms for the assessment. Accommodated forms for all four content areas also utilized linear forms for both online forms and paper forms.

Online accommodated forms include Text-to-Speech, Closed Caption, Human Reader, Assistive Technology, ASL, and Spanish. Paper accommodations include a regular paper form, a large-print paper form, a Spanish paper form, and a Braille form.

Pearson was the primary contractor for the test administration, scoring, and reporting functions. They provided the administration materials, training, call center support, and technical guidance for the test administration system. The test administration system also offered practice tests for students as well as test administrator training and practice of uploading student data files. In addition, Pearson provided machine-scoring, hand-scoring, and Intelligent-Essay-Assessor scoring. Reporting included student data files with demographics, item-level responses, and raw/scaled scores. Reporting shells were designed with MSDE to provide information on individual student results, school results, LEA results, and aggregated state results. Field-test items were scored for data review, and item parameters were uploaded into the item bank system.

Cognia served as a subcontractor and was responsible for psychometric analyses, hand-scoring for ELA and social studies.

The 2022-2023 operational administration of MCAP included a fall block beginning in December 2022 as well as a spring administration starting in March for science and April for ELA and mathematics. Social Studies' first operational assessment was in May.

Table 3-1. 2022–23 Administration Schedule

Fall Block 2022	December 5, 2022, to February 20, 2023
Spring Science 2023	March 6, 2023, to March 24, 2024
Spring ELA/Math 2023	April 3, 2023, to May 26, 2023
Spring Social Studies 2023	May 1, 2023, to May 26, 2023

Administration Procedures

The test administration manual outlines the process and checklist for Test Administrators to complete prior to the test administration.

The steps include the following tasks one week before testing:

- Review the Test Administration Manual.
- Complete training with the School Test Coordinator.
- Complete recommended training at https://support.mdassessments.com/.
- Review and complete the required training and certification forms.
- Review all accommodations for students.
- Administer the practice tests and TestNav tutorial to students.

At least one day prior to testing, the following steps need to be completed:

- Confirm that Pearson Access sign-in works.
- Confirm accommodations for students in sessions.
- Confirm understanding of how students must complete each item in the mathematics assessment and may receive the Seal Code to enter their next Section apart from others in the class.

In addition, preparation of the testing environment is necessary to maintain test security.

During testing, the School Test Coordinator distributes test materials and collects materials from the Test Administrators each test administration day. Test materials are not stored in classrooms prior to or following the day of administration. Detailed lists of materials are also provided in the Test Administration Manual.

In addition, student rosters are verified, and then appropriate scripts are read to students outlining the testing process for each content area.

After the completion of each testing day, Test Administrators gather and return all materials to the School Test Coordinator.

Participation Requirements and Documentation

All students, including students with disabilities and English learners, are required to participate in MCAP and have their assessment results included in the State's accountability systems. Exceptions include English Learners (EL) in their first year in a U.S. school and certain students with disabilities who have been identified to take the state's alternate assessment.

All students were expected to participate in the 2022-2023 MCAP unless they completed an alternate assessment during the 2022-2023 school year. Additionally, students who received fewer than 12 months of consecutive instruction in a U.S. public school and were designated as English Learners (ELs) were required to take the mathematics, science, and social studies tests. Spanish versions of mathematics and science tests were provided for both paper-based and online assessments.

Participation levels are listed in Tables 3-2 through 3-6. These tables contain the number and percentage of students who tested in the 2022-2023 school year as a function of test content area/grade and subgroup. The subgroups by which the counts were disaggregated include race and ethnicity, economically disadvantaged status, gender, students with Limited English Proficiency (LEP), and special education services status.

Table 3-2. Number and Percentage of Students Tested in the Fall 2022 Administration of MCAP, as a Function of Test Content Area/Grade and Subgroup

Group	Subgroup	ELA 10	ALG I	ALG II	GEO I	ELA 10	ALG I	ALG II	GEO I
Overall	--	10,263	7,655	1,682	2,635	100.0	100.0	100.0	100.0
Race/Ethnicity	American Indian or Alaskan Native	30	22	5	4	0.3	0.3	0.3	0.2
	Asian	406	337	157	131	4.0	4.4	9.3	5.0
	Black or African American	4,004	3,070	278	496	39.0	40.1	16.5	18.8
	Hispanic or Latino	1,960	1,498	225	472	19.1	19.6	13.4	17.9
	Native Hawaiian or Pacific Islander	14	10	4	2	0.1	0.1	0.2	0.1
	White	3,377	2,371	909	1,358	32.9	31.0	54.0	51.5
	Multiracial	427	325	99	156	4.2	4.2	5.9	5.9
	Not Specified	45	22	5	16	0.4	0.3	0.3	0.6
Economically Disadvantaged	Yes	4,906	3,758	373	864	47.8	49.1	22.2	32.8
	No	4,715	3,406	1,187	1,583	45.9	44.5	70.6	60.1
	Not Specified	642	491	122	188	6.3	6.4	7.3	7.1
Gender	Female	4,926	3,583	865	1,295	48.0	46.8	51.4	49.1
	Male	5,327	4,058	817	1,340	51.9	53.0	48.6	50.9
	Non-Binary	9	14	0	0	0.1	0.2	0.0	0.0
	Not Specified	1	0	0	0	0.0	0.0	0.0	0.0
LEP	Exited	757	480	127	199	7.4	6.3	7.6	7.6
	No	8,585	6,471	1,536	2,282	83.7	84.5	91.3	86.6
	Yes	906	686	18	152	8.8	9.0	1.1	5.8
	Not Specified	15	18	1	2	0.1	0.2	0.1	0.1
Special Education Services	Yes	1,204	964	47	243	11.7	12.6	2.8	9.2
	No	7,303	5,428	1,469	2,092	71.2	70.9	87.3	79.4
	Exited	369	262	55	99	3.6	3.4	3.3	3.8
	Code 504 student	704	499	108	190	6.9	6.5	6.4	7.2
	Exited, But Enrolled in 504	65	59	2	2	0.6	0.8	0.1	0.1
	Not Specified	618	443	1	9	6.0	5.8	0.1	0.3

Table 3-3. Number and Percentage of Students Tested in the Spring 2023 Administration of MCAP ELA, as a Function of Test Grade and Subgroup

		Number of Students Tested in Grade							Percentage of Students Tested in Grade						
		3	4	5	6	7	8	10	3	4	5	6	7	8	10
Overall	--	63,702	63,940	64,147	63,599	63,565	65,479	63,613	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Race/Ethnicity	American Indian or Alaskan Native	153	165	145	163	167	151	161	0.2	0.3	0.2	0.3	0.3	0.2	0.3
	Asian	4,296	4,370	4,464	4,423	4,331	4,464	4,527	6.7	6.8	7.0	7.0	6.8	6.8	7.1
	Black or African American	20,236	20,649	20,760	20,971	21,130	22,064	21,387	31.8	32.3	32.4	33.0	33.2	33.7	33.6
	Hispanic or Latino	14,143	14,009	13,940	13,644	13,432	13,862	13,735	22.2	21.9	21.7	21.5	21.1	21.2	21.6
	Native Hawaiian or Pacific Islander	84	98	87	76	83	91	107	0.1	0.2	0.1	0.1	0.1	0.1	0.2
	White	21,079	21,061	21,119	20,972	21,046	21,494	20,797	33.1	32.9	32.9	33.0	33.1	32.8	32.7
	Multiracial	3,635	3,544	3,623	3,300	3,331	3,333	2,835	5.7	5.5	5.6	5.2	5.2	5.1	4.5
	Not Specified	76	44	9	50	45	20	64	0.1	0.1	0.0	0.1	0.1	0.0	0.1
Economically Disadvantaged	Yes	23,737	23,835	23,529	23,057	22,752	23,248	21,532	37.3	37.3	36.7	36.3	35.8	35.5	33.8
	No	25,316	25,567	26,025	25,854	26,324	27,614	29,002	39.7	40.0	40.6	40.7	41.4	42.2	45.6
	Not Specified	14,649	14,538	14,593	14,688	14,489	14,617	13,079	23.0	22.7	22.7	23.1	22.8	22.3	20.6
Gender	Female	30,907	31,250	31,418	31,089	30,935	32,078	30,902	48.5	48.9	49.0	48.9	48.7	49.0	48.6
	Male	32,751	32,676	32,712	32,488	32,579	33,323	32,590	51.4	51.1	51.0	51.1	51.3	50.9	51.2
	Non-Binary	7	7	11	16	48	72	96	0.0	0.0	0.0	0.0	0.1	0.1	0.2
	Not Specified	37	7	6	6	3	6	25	0.1	0.0	0.0	0.0	0.0	0.0	0.0
LEP	Exited	728	1,670	4,157	5,028	4,275	5,034	5,120	1.1	2.6	6.5	7.9	6.7	7.7	8.0
	No	52,997	52,389	52,206	52,119	53,076	55,208	52,929	83.2	81.9	81.4	81.9	83.5	84.3	83.2
	Yes	9,930	9,860	7,773	6,429	6,199	5,215	5,509	15.6	15.4	12.1	10.1	9.8	8.0	8.7
	Not Specified	47	21	11	23	15	22	55	0.1	0.0	0.0	0.0	0.0	0.0	0.1
Special Education Services	Yes	6,703	7,095	7,240	6,827	6,516	6,750	6,223	10.5	11.1	11.3	10.7	10.3	10.3	9.8
	No	52,923	52,109	51,508	50,913	51,248	52,262	50,501	83.1	81.5	80.3	80.1	80.6	79.8	79.4
	Exited	1,845	2,039	2,372	2,262	2,150	2,324	2,149	2.9	3.2	3.7	3.6	3.4	3.5	3.4
	Code 504 student	1,802	2,260	2,585	3,070	3,139	3,530	4,037	2.8	3.5	4.0	4.8	4.9	5.4	6.3
	Exited, But Enrolled in 504	204	236	290	342	362	450	470	0.3	0.4	0.5	0.5	0.6	0.7	0.7
	Not Specified	225	201	152	185	150	163	233	0.4	0.3	0.2	0.3	0.2	0.2	0.4

Table 3-4. Number and Percentage of Students Tested in the Spring 2023 Administration of MCAP Mathematics, as a Function of Test Grade/ Content Area and Subgroup

		Number of Students Tested									Percentage of Students Tested								
Group	**Subgroup**	**3**	**4**	**5**	**6**	**7**	**8**	**ALG I**	**ALG II**	**GEO I**	**3**	**4**	**5**	**6**	**7**	**8**	**ALG I**	**ALG II**	**GEO I**
Overall	--	64,275	64,520	64,667	63,644	56,106	41,741	67,136	11,743	19,907	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Race/Ethnicity	American Indian or Alaskan Native	154	165	145	160	143	106	188	24	34	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.2
	Asian	4,374	4,443	4,518	4,280	2,527	1,189	4,520	1,516	2,391	6.8	6.9	7.0	6.7	4.5	2.8	6.7	12.9	12.0
	Black or African American	20,261	20,690	20,796	20,911	19,745	16,628	22,596	2,646	4,074	31.5	32.1	32.2	32.9	35.2	39.8	33.7	22.5	20.5
	Hispanic or Latino	14,511	14,402	14,327	13,945	13,022	11,091	15,084	1,462	2,683	22.6	22.3	22.2	21.9	23.2	26.6	22.5	12.4	13.5
	Native Hawaiian or Pacific Islander	85	98	87	77	79	56	103	14	28	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1
	White	21,137	21,105	21,159	20,925	17,749	10,791	21,324	5,398	9,425	32.9	32.7	32.7	32.9	31.6	25.9	31.8	46.0	47.3
	Multiracial	3,637	3,544	3,616	3,279	2,772	1,860	3,234	675	1,267	5.7	5.5	5.6	5.2	4.9	4.5	4.8	5.7	6.4
	Not Specified	116	73	19	67	69	20	87	8	5	0.2	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0
Economically Disadvantaged	Yes	23,933	24,003	23,682	23,119	21,304	17,475	23,025	2,356	4,330	37.2	37.2	36.6	36.3	38.0	41.9	34.3	20.1	21.8
	No	25,518	25,758	26,219	25,715	20,314	12,101	28,229	7,173	11,234	39.7	39.9	40.5	40.4	36.2	29.0	42.0	61.1	56.4
	Not Specified	14,824	14,759	14,766	14,810	14,488	12,165	15,882	2,214	4,343	23.1	22.9	22.8	23.3	25.8	29.1	23.7	18.9	21.8
Gender	Female	31,182	31,508	31,674	31,165	27,539	20,215	32,256	5,841	9,711	48.5	48.8	49.0	49.0	49.1	48.4	48.0	49.7	48.8
	Male	33,043	32,989	32,974	32,456	28,525	21,492	34,782	5,878	10,163	51.4	51.1	51.0	51.0	50.8	51.5	51.8	50.1	51.1
	Non-Binary	7	7	11	16	34	30	73	17	28	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
	Not Specified	43	16	8	7	8	4	25	7	5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
LEP	Exited	728	1,669	4,158	4,988	3,362	2,532	4,750	347	1,446	1.1	2.6	6.4	7.8	6.0	6.1	7.1	3.0	7.3
	No	53,016	52,399	52,191	51,758	46,123	33,745	55,119	11,098	17,913	82.5	81.2	80.7	81.3	82.2	80.8	82.1	94.5	90.0
	Yes	10,475	10,422	8,303	6,874	6,598	5,445	7,209	287	542	16.3	16.2	12.8	10.8	11.8	13.0	10.7	2.4	2.7
	Not Specified	56	30	15	24	23	19	58	11	6	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Special Education Services	Yes	6,697	7,098	7,225	6,788	6,341	6,133	6,802	542	1,054	10.4	11.0	11.2	10.7	11.3	14.7	10.1	4.6	5.3
	No	53,438	52,616	51,989	50,961	44,524	31,427	53,785	9,976	16,711	83.1	81.5	80.4	80.1	79.4	75.3	80.1	85.0	83.9
	Exited	1,841	2,036	2,371	2,247	1,946	1,450	2,217	339	777	2.9	3.2	3.7	3.5	3.5	3.5	3.3	2.9	3.9
	Code 504 student	1,798	2,260	2,581	3,058	2,764	2,226	3,549	768	1,179	2.8	3.5	4.0	4.8	4.9	5.3	5.3	6.5	5.9
	Exited, But Enrolled in 504	204	235	290	343	313	288	429	100	169	0.3	0.4	0.4	0.5	0.6	0.7	0.6	0.9	0.8
	Not Specified	297	275	211	247	218	217	354	18	17	0.5	0.4	0.3	0.4	0.4	0.5	0.5	0.2	0.1

Table 3-5. Number and Percentage of Students Tested in the Spring 2023 Administration of MCAP Science, as a Function of Test Grade and Subgroup

Group	Subgroup	Number of Students Tested		Percentage of Students Tested	
		SCI 5	SCI 8	SCI 5	SCI 8
Overall	--	64,570	66,048	100.00	100.0
Race/Ethnicity	American Indian or Alaskan Native	148	152	0.2	0.2
	Asian	4,500	4,458	7.0	6.7
	Black or African American	20,737	22,086	32.1	33.4
	Hispanic or Latino	14,253	14,330	22.1	21.7
	Native Hawaiian or Pacific Islander	87	90	0.1	0.1
	White	21,158	21,561	32.8	32.6
	Multiracial	3,630	3,328	5.6	5.0
	Not Specified	57	43	0.1	0.1
Economically Disadvantaged	Yes	23,710	23,493	36.7	35.6
	No	26,125	27,703	40.5	41.9
	Not Specified	14,735	14,852	22.8	22.5
Gender	Female	31,636	32,341	49.0	49.0
	Male	32,906	33,627	51.0	50.9
	Non-Binary	12	72	0.0	0.1
	Not Specified	16	8	0.0	0.0
LEP	Exited	3,439	4,988	5.3	7.6
	No	45,787	47,542	70.9	72.0
	Yes	5,748	4,030	8.9	6.1
	Not Specified	9,596	9,488	14.9	14.4
Special Education Services	Yes	7,736	7,175	12.0	10.9
	No	51,671	52,400	80.0	79.3
	Exited	2,125	2,317	3.3	3.5
	Code 504 student	2,594	3,542	4.0	5.4
	Exited, But Enrolled in 504	290	458	0.4	0.7
	Not Specified	154	156	0.2	0.2

Table 3-6. Number and Percentage of Students Tested in the Spring 2023 Administration of MCAP Social Studies Grade 8, as a Function of Subgroup

Group	Subgroup	Number of Students Tested Social Studies 5	Percentage of Students Tested Social Studies 5
Overall	--	65,324	100.00
Race/Ethnicity	American Indian or Alaskan Native	148	0.2
	Asian	4,486	6.9
	Black or African American	21,706	33.2
	Hispanic or Latino	14,176	21.7
	Native Hawaiian or Pacific Islander	91	0.1
	White	21,386	32.7
	Multiracial	3,305	5.1
	Not Specified	26	0.0
Economically Disadvantaged	Yes	23,154	35.4
	No	27,566	42.2
	Not Specified	14,604	22.4
Gender	Female	32,000	49.0
	Male	33,248	50.9
	Non-Binary	70	0.1
	Not Specified	6	0.0
LEP	Exited	5,002	7.7
	No	54,611	83.6
	Yes	5,690	8.7
	Not Specified	21	0.0
Special Education Services	Yes	6,613	10.1
	No	52,225	79.9
	Exited	2,297	3.5
	Code 504 student	3,503	5.4
	Exited, But Enrolled in 504	453	0.7
	Not Specified	233	0.4

Administrator Training

Test Administrators met with their School Test Coordinator to prepare for the test administration and to review responsibilities associated with computer-based testing. In addition to reviewing the Test Administration Manual, they reviewed training modules, available at https://support.mdassessments.com/, which provide more detailed information on specific aspects of the MCAP administration.

Documentation of Accommodations

Accessibility Features

The Maryland Assessment, Accessibility, & Accommodations Manual (MAAAM) is available online at https://marylandpublicschools.org/programs/Documents/Special-Ed/IEP/Maryland-Assessment-Accessibility-Accommodations-Manual.pdf. Schools and LEAs must refer to this manual for full information about identifying and administering accessibility features and accommodations.

In general, accessibility features are tools or preferences that are either built into the assessment system or provided externally by Test Administrators and may be used by any student. Accessibility features are intended for all students; they are not classified as accommodations.

Practice tests that include accessibility features are available for teachers and students to use throughout the year. Practice tests are available at https://support.mdassessments.com/

Accommodations

Accommodations are adjustments to the testing conditions, test format, or test administration that provide equitable access during assessments for students with disabilities and students who are English learners. In general, the administration of the assessment should not be the first occasion on which an accommodation is introduced to the student. To the extent possible, accommodations should:

- provide equitable access during instruction and assessments,
- mitigate the effects of a student's disability,
- not reduce learning or performance expectations,
- not change the construct being assessed, and
- not compromise the integrity or validity of the assessment.

Test Administration/Security and Irregularities

Testing irregularities or security breaches that could compromise score validity are strictly prohibited and must be reported to the School Test Coordinator immediately. Detailed information on test security is documented in the Test Administration Manual.

These issues might include but are not limited to:

- students using a cellphone or other electronic device
- test administrators providing coaching or not providing the appropriate test security supervision
- test administrators losing student test booklets or answer documents

School Test Coordinators have a detailed list of testing irregularities and security breaches that must be reported and documented. If an incident must be reported according to MSDE policy, the protocol outlined below is followed:

- The incident must be reported to the School Test Coordinator immediately.
- If follow-up is required by the Local Accountability Coordinator or State Security Officer, additional documentation is required.

Section 4. Scoring

Human or Hand-scored Items

Constructed-response items were scored by human scorers in a process referred to as hand-scoring. Customer-approved training materials were used to train all supervisors and scorers. The training materials included prompts (items), passages, rubrics, anchors, training sets, and qualification sets. Scorers who successfully completed the training and qualified, demonstrating they could correctly score student responses based on the guidelines in the training materials, were permitted to score student responses using the ePEN2 (Electronic Performance Evaluation Network, second generation) scoring platform. All online and paper responses were scored with the ePEN2 system. Pearson and Cognia monitored quality throughout scoring.

Rangefinding Meetings

Rangefinding is the activity of identifying student responses to define the range of performance levels within each score point on a given scoring rubric. The purpose is to arrive at consensus scores according to the standards established by the rubric so that training sets can be built that accurately reflect those standards.

Pearson staff conducted rangefinding using Microsoft Teams. There were several rangefinding committees for each grade depending on content area and number of items undergoing the rangefinding process. The overall goal was to ensure that the foundational rangefinding decisions were consistent within each grade and across all grades for each content area. Each grade-level committee was comprised of several Maryland educators and two Pearson scoring staff. The Maryland State Department of Education (MSDE) along with Pearson began the meetings by providing a brief review of the purpose of rangefinding and the rubric, as well as other documentation of standard evaluation criteria that facilitate a strong understanding of the standards and intentions of MSDE.

Each rangefinding committee systematically reviewed student responses for the first item, determining and recording consensus scores. The goal was to reach consensus on scores and their scoring rationales on enough student responses to construct effective training materials for each item. These responses accurately represented the range of student performance levels described in the rubrics, as interpreted by the committee members and MSDE.

The general process for review of rangefinding materials was as follows:

1. First, an item was introduced, and the committee members were encouraged to create a short response. A brief discussion was held to gain further insight into the prompt and how students may have engaged with the item.
2. Next, the first set of student responses were assigned to the attendees to read individually. The committee members were tasked to read each response and assign scores within ePEN2, the Pearson scoring system. The system collected and recorded all committee members' scores on the consensus sheet/matrix before any discussion began.
3. Next, the committee discussed the merits of each response providing the scoring staff the opportunity to take notes to inform scorer training. More in-depth discussions were held on responses on which the committee did not reach immediate consensus. Meeting facilitators ensured the discussion on scoring rationale related to the rubric and that all scores were justified based on the rubric. A consensus score was reached by the Maryland educators that served on the

committee. The scoring staff made sure to note any discussion points during the review of each response.

4. The process is iterative for all items within the rangefinding set.

Scoring Location and Staff

All operational training and scoring for the Maryland Comprehensive Assessment Program (MCAP) was completed by applying remote synchronous and asynchronous methodologies. For training and synchronous scoring, scorers were logged into live meetings. Pearson (for math and science) used the Microsoft Teams platform, and Cognia (for ELA and social studies) used the Zoom platform. Both platforms allowed for the scoring leadership to implement additional full group retraining sessions or utilize breakout rooms or chats to meet individually with scorers or smaller groups. All field test training and scoring was completed by Pearson using the Microsoft Teams platform.

Leadership Training

Separate training was held for scoring leadership to prepare them for the training they provide to scorers on the items that are assigned to their respective teams. Content training for leadership followed the same steps as scorer training. However, leadership received additional training on backreading, providing feedback to scorers, scoring issue documentation, condition codes, resolution scoring, and scorer documentation. Leadership staff also received training on the specific tools available to them in the image-based scoring system.

Scorer Training

Each scoring leader trained a team of scorers by using one item per scoring group for operational scoring. When scoring an item was completed, the next item was trained. Scorers were required to qualify on each new item. Mathematics used prototype qualification, *i.e.,* qualifying on their first item and then training on anchors and practice responses on the subsequent items.

The training process for each item consisted of the following materials:

1. Scoring Guide (which included the rubric, the item, the item stimulus and/or technical passage if applicable for the constructed-response items, the anchor set, and anchor annotations)
2. Two practice sets
3. Two qualifying sets (science and mathematics may have three qualifying sets)

For both leadership and scorer training, scorers began by reviewing the Before You Score directions on their first item, then the anchor-set training material. Scorers then took the first practice set in the image-based scoring system and assigned scores to those sample responses. Scorer performance on practice set 1 was recorded in reports in the image-based scoring system. Once scorers completed the set, they then reviewed the true scores and annotations for the practice set; if they had any questions about the scores or annotations in the practice set, scoring leadership was available to answer those questions. The same process occurred for the second practice set. If scorer performance or discussion of practice sets indicated any need for review or retraining with scoring leadership, it occurred at that time. When all scorers completed the practice sets, everyone moved on to qualification sets.

Scorers completed the two or three qualification sets, each consisting of ten student responses. Scoring leadership staff monitored scorers' progress on each qualification set through online reports. If scorer performance on qualification set 1 indicated any need for review and discussion with scoring leadership, it occurred at that time. The scores achieved on these qualification sets determined if a trainee understood

and could apply the scoring criteria. Table 4-1 shows the qualification, inter-rater reliability (IRR), and validity thresholds.

Table 4-1. Qualification, IRR, and Validity Thresholds

Item Type	Qualification (Average on 2 of 3 sets)	IRR	Validity
Science SP 0-4	70%/100%	70%	70%
Science SP 0-3	80%/90%	75%	75%
Science SP 0-2	80%/90%	80%	80%
Item Type	**Qualification (Average on 2 of 2 sets)**	**IRR**	**Validity**
Mathematics SP 0-4	70%/90%	70%	70%
Mathematics SP 0-3	80%/90%	75%	75%
Item Type	**Qualification (Average on 2 of 2 sets)**	**IRR**	**Validity**
ELA Expression 0-3 or 0-4	70%/90%	65%	65%
ELA Conventions 0-3	70%/90%	65%	65%
Item Type	**Qualification (Average on 2 of 2 sets)**	**IRR**	**Validity**
Social Studies FT 0-4	70%/90%	70%	70%
Social Studies FT 0-2	70%/90%	80%	80%

Qualified scorers also received training on how to identify responses that need to be escalated to scoring leadership staff, including alerts and condition codes, and how to navigate and use the image-based scoring system. Training on the types of responses that may receive condition codes occurred after scorer qualification. Scorers were trained to recognize these types of responses and to forward them to leadership, but scorers do not assign condition codes themselves aside from blanks.

Scoring leadership was responsible for assigning condition codes. During scoring, scoring leadership was instructed to escalate any issues about condition codes as quickly as possible to MSDE. Scoring leadership staff, content specialists, and project managers closely monitored the frequency distribution of condition codes and notified MSDE if any percentage of responses receiving condition codes was greater than anticipated.

Scoring and Monitoring

All scoring was computer-based, with a 10% second scoring for operational and field-test items. Automated scoring performed by Pearson's Intelligent Essay Assessor (IEA) was the first score for all operational CR items in ELA, social studies, and science in Spring 2023. Field-test scoring consisted of approximately 2,500 responses per item. Scorers began scoring each item immediately after qualification. Scorers did not know if a response had received a previous score or what it was.

The following information highlights the quality measures that scoring services staff took to ensure accurate scoring of MCAP. A sample of the PSC Quality Management Extended Guide is presented in Appendix C, which includes validity, IRR, and frequency distribution results by item.

Backreading

Backreading is one of the primary responsibilities of scoring leadership staff and starts at the beginning of scoring. It is an immediate source of information on scoring accuracy. It alerts scoring leadership to misconceptions at the team level, allowing them to quickly calibrate or retrain scorers. Backreading

continues throughout the scoring of the project. Approximately 5% of the scored responses will be reviewed through backreading. To help ensure that students receive accurate scores, the scores assigned in the backreading queue override scores assigned in the first or second scoring queue.

Findings from backreading may result in any or all the following:

- Leadership staff clarifies the issue(s).
- Scorers review training materials.
- Leadership backreads the scorers' work more extensively.
- Supervisory staff members give scorers further training.
- Supervisory staff members monitor reports for improvement.

If a scorer's inter-rater reliability and/or validity statistics fall below the expected rate (see Table 4-1), scoring leadership increases backreading on the scorer. Leadership staff determines whether the same issue or trend is being experienced by several scorers and determines the need for a calibration set.

General Calibration

Calibration sets are administered as project leadership deems necessary. Calibration provides a way to proactively promote accuracy by exploring project- or item-specific issues, score boundaries, or types of responses particularly challenging to score consistently. Calibration sets consist of 2 or 3 papers, address a single issue, and are administered online.

Scorer Validation

Pre-scored validation responses are used to verify that scorers are applying the same standards throughout the project. Scoring leadership watches for early indications of reader drift from the standards. Validity papers are prepared by item and administered on a regular schedule (at least 1% of responses). Validity papers are interspersed with and indistinguishable from unscored student responses.

Inter-Rater Reliability

This reliability statistic allows scoring leadership to monitor individual and group scoring agreement. The statistic reflects a level of agreement between two scorers' scores on the same student response. Monitoring allows scoring supervisory staff to identify individuals for increased backreading, feedback, and—if necessary—retraining. Scorers with less than expected IRR (see Table 4-1) are monitored closely, and their work is backread at a higher rate.

Frequency Distribution

The frequency distribution is the number or percentage of scores assigned at each score point of a given rubric. This is calculated at the scorer and item levels. Anomalous scoring trends are evaluated with validity and other statistics, a practice that allows for intervention as needed with the individuals involved to ensure that individual drift has not occurred. Frequency distribution reports are monitored and available to MSDE. Items not performing as anticipated can result in further investigation or intervention.

Validity Reports

Validity reports are used to identify struggling scorers (scorers below the validity requirement and/or significantly below the group average) or room drift (as a group, the scorers are scoring an item incorrectly or inconsistently). These reports are also used to determine whether a scorer is misunderstanding a particular issue. The reports are an extension of the validity process whereby select

validity responses are annotated and used to provide feedback to scorers. If a validity response is scored incorrectly, it subsequently appears on the scorer's screen with the true score, the score he or she assigned, and an annotation explaining the true score. In this way, this quality monitoring tool serves an immediate, valuable secondary function: that of automated real-time feedback.

If struggling scorers or room drift is identified, scoring leadership follows the same procedure described in backreading. All reports are monitored daily by the scoring leadership staff, the content specialist, and the project manager.

Automated Scoring

As noted, automated scoring performed by Pearson's Intelligent Essay Assessor (IEA) is the default option for scoring the MCAP ELA, social studies, and science items. For 10% of responses, a second "reliability" score is assigned. The purpose of the reliability score is to provide data for evaluating the consistency of scoring, which is done by evaluating scoring agreement. All reliability scoring is done by human scorers.

Concepts Related to Automated Scoring

Continuous Flow

Continuous flow scoring results in an integrated connection between human scoring and automated scoring. It refers to a system of scoring where either an automated score, a human score, or both can be assigned based on a predetermined asynchronous operational flow.

Calibration of IEA using Operational Data

Continuous flow scoring facilitates training IEA using human scores assigned to operational online data collected early in the administration. Once IEA obtains sufficient data to train, it can be "turned on" and becomes the primary source of scoring (although human scoring continues for the 10% reliability sample and other responses that may be routed accordingly).

Smart Routing

Smart routing refers to the practice of using automated scoring results to detect responses that are likely to be challenging to score and applying automated routing rules to obtain one or more additional human scores. Smart routing can be applied item by item to the extent needed to meet scoring quality criteria for automated scoring.

Confidence Level

When IEA evaluates a response that should be smart routed to human scorers, it marks the response with a low-confidence flag, which signals the need for human scoring. Otherwise, the automated score is marked as high confidence.

Quality Criteria for Evaluating Automated Scoring

A variety of measures of inter-rater agreement for evaluating automated scoring have been proposed based on the research literature (Williamson, Xi, and Breyer, 2012). These measures are utilized in Pearson's automated scoring research and include Pearson correlation, quadratic-weighted kappa, exact agreement, and standardized mean difference. These measures are computed between pairs of human scores and between IEA and humans to evaluate how performance was the same or different. Criteria for evaluating the training of IEA given these measures include the following:

- Pearson correlation between IEA-human should be within 0.1 of human-human.

- Quadratic-weighted kappa between IEA-human should be within 0.1 of human-human.
- Absolute standardized mean difference (|SMD|) between IEA-human should be less than or equal to 0.15.
- IEA-human exact agreement should meet IRR requirements and be within 5.25% of human-human.

Hierarchy of Assigned Scores for Reporting

When multiple scores are assigned for a given response, the following hierarchy determines which score was reported operationally:

- If an IEA score is not assigned with high confidence and a single human score is assigned (as the 1st score), then the human 1st score is reported;
- If an IEA score is not assigned with high confidence and two human scores are assigned, the higher human score is reported;
- If an IEA score and a human score are assigned, the IEA score is reported if it was given with high confidence;
- If a backread score and human and/or IEA scores are assigned, the latest back read score is reported;
- If a resolution score is assigned and an adjudicated score is not assigned, the resolution score is reported (note that if nonadjacent scores are encountered, responses are automatically routed to resolution);
- If an adjudicated score is assigned, it is reported (note that if a resolution score is nonadjacent to the other scores assigned, responses are automatically routed to adjudication).

Training IEA

Pearson trained IEA on 13 science, 2 ELA, and 13 social studies prompts in 2023.

IEA was trained on all prompts prior to operational scoring using field-test data. One ELA prompt and three Social Studies prompts were further refined using early operational data.

Section 5. Reporting

Score Interpretation

To help provide appropriate interpretation of the 2022-2023 MCAP Science, ELA/L, and Mathematics assessments operational test scores, two types of scores were created: scale scores and performance levels with descriptions. The scale scores were reported on a scale ranging from 650 to 850, with 750 designating Proficient Learner.

In addition to the use of scale scores for reporting results, MCAP also reported on the following four performance levels:

- Level 4: Distinguished Learner
- Level 3: Proficient Learner
- Level 2: Developing Learner
- Level 1: Beginning Learner

Scale Scores

As explained above, the MCAP assessments yielded scale scores that range between 650 and 850. As a result of calibration and scaling, the scale scores from the two base forms are comparable within the same grade, but not across grade levels. Generally, the only inferences that can be appropriately drawn from scale scores are that higher scale scores represent higher performance on the MCAP tests.

Performance Levels and Descriptions

The MCAP tests were designed as criterion-referenced tests in that they offer indicators of student performance in relation to a set of performance descriptions for each content area. Performance level descriptions (PLDs) describe what students at each of the four levels generally know and can do. Scale score cutoff scores for each ELA/L and mathematics performance level were established during the standard setting in October 2022, and Social Studies cutoff scores for grade 8 in July 2023.

Table 5-1 provides scale score ranges for each of the MISA performance levels by grade. Table 5-2 provides scale score ranges for each of the mathematics performance levels by grade. Table 5-3 provides scale score ranges for each of the ELA/L performance levels by grade. Table 5-4 provides scale score ranges for social studies grade 8.

Table 5-1. MISA Scale Score Ranges by Performance Level and Grade

Grade	Performance Level	Scale Score Range
5	Exceeded Expectations	772–850
	Met Expectations	750–771
	Approaching Expectations	729–749
	Partially Met Expectations	650–728
8	Exceeded Expectations	773–850
	Met Expectations	750–772
	Approaching Expectations	726–749
	Partially Met Expectations	650–725

Table 5-2. Mathematics Scale Score Ranges by Performance Level and Grade

Grade/ Course	Performance Level	Scale Score Range
3	Distinguished Learner	790–850
	Proficient Learner	750–789
	Developing Learner	725–749
	Beginning Learner	650–724
4	Distinguished Learner	778–850
	Proficient Learner	750–777
	Developing Learner	725–749
	Beginning Learner	650–724
5	Distinguished Learner	781–850
	Proficient Learner	750–780
	Developing Learner	725–749
	Beginning Learner	650–724
6	Distinguished Learner	775–850
	Proficient Learner	750–774
	Developing Learner	725–749
	Beginning Learner	650–724
7	Distinguished Learner	776–850
	Proficient Learner	750–775
	Developing Learner	725–749
	Beginning Learner	650–724
8	Distinguished Learner	779–850
	Proficient Learner	750–778
	Developing Learner	725–749
	Beginning Learner	650–724
Algebra I	Distinguished Learner	775–850
	Proficient Learner	750–774
	Developing Learner	725–749
	Beginning Learner	650–724
Algebra II	Distinguished Learner	769–850
	Proficient Learner	750–768
	Developing Learner	725–749
	Beginning Learner	650–724
Geometry	Distinguished Learner	775–850
	Proficient Learner	750–774
	Developing Learner	725–749
	Beginning Learner	650–724

Table 5-3. ELA/L Scale Score Ranges by Performance Level and Grade

Grade	Performance Level	Scale Score Range
3	Distinguished Learner	790–850
	Proficient Learner	750–789
	Developing Learner	725–749
	Beginning Learner	650–724
4	Distinguished Learner	779–850
	Proficient Learner	750–778
	Developing Learner	725–749
	Beginning Learner	650–724
5	Distinguished Learner	777–850
	Proficient Learner	750–776
	Developing Learner	725–749
	Beginning Learner	650–724
6	Distinguished Learner	777–850
	Proficient Learner	750–776
	Developing Learner	725–749
	Beginning Learner	650–724
7	Distinguished Learner	778–850
	Proficient Learner	750–777
	Developing Learner	725–749
	Beginning Learner	650–724
8	Distinguished Learner	788–850
	Proficient Learner	750–787
	Developing Learner	725–749
	Beginning Learner	650–724
10	Distinguished Learner	776–850
	Proficient Learner	750–775
	Developing Learner	725–749
	Beginning Learner	650–724

Table 5-4. Social Studies Scale Score Ranges by Performance Level and Grade

Grade	Performance Level	Scale Score Range
8	Distinguished Learner	785–850
	Proficient Learner	750–784
	Developing Learner	725–749
	Beginning Learner	650–724

Section 6. Data Review

Process Overview

The data review process was a collaborative effort with Cognia and ETS. Cognia, as the psychometric vendor, performed the score analysis, calibration, and provided IRT statistics on items. ETS, as the item and form development vendor, facilitated the data review meetings that were held with MSDE staff. The meetings were held virtually, and any references to items or item-level statistics were viewed within the item bank system.

Items for data review were assigned one of three colored flags (green, yellow, red) by Cognia and loaded into the item bank system. ETS sequenced items in the item bank for flags to be grouped by color. MSDE, ETS, and Cognia met virtually and reviewed all red and yellow flagged items to determine if the items were accepted or rejected. Items that were flagged as green would be considered as accepted items and would be further reviewed during the test construction process and/or during weekly calls.

Item Statistics and Flagging Criteria

A data review was conducted after the Spring 2023 administration of MCAP. The data review provided an opportunity to quantitatively evaluate the statistical quality of items. The results from data review supplemented previous item reviews that focused on the item content.

Newly-administered MCAP items were evaluated as part of data review. For MCAP MISA grades 5 and 8, this meant that all field-test items were evaluated, but operational items were not. The operational items for MCAP MISA grades 5 and 8 were previously administered in a prior school year. For all other MCAP assessments, all operational and field-test items were evaluated.

The evaluation of items during data review began by calculating classical item statistics, differential item functioning (DIF) statistics, and item response theory (IRT) item parameters. These item statistics were flagged based on their value using the criteria listed in Table 6-1. Each item was classified as being one of three traffic-signal colors—green, yellow, or red—based on the number of flags for the given item. Table 6-2 lists the criteria for traffic signal classification.

Table 6-1. Descriptions and Flagging Criteria for Data Review Item Statistics

Statistic	Description	Flagging Criterion
Item *p*-value (p)	Average item score divided by the maximum possible item score. Item *p*-values range from 0 to 1. An item *p*-value that is small in value reflects a more difficult item. An item *p*-value that is large in value reflects an easier item.	$p > 0.90$ or $p < 0.20$
Omit Rate	Percentage of participating students who were administered, but did not respond to, an item.	$> 5.0\%$
Item-Total Correlation (r)	The Pearson correlation between item scores and total raw scores. An item-total correlation ranges from -1 to 1. An item-total correlation less than 0 indicates the possibility of a second key or correct response. An item with an item-total correlation less than 0 cannot be calibrated using IRT.	$r < 0.10$
Distractor Percentage	*Multiple-choice (MC) items only.* A distractor percentage is the participating students who endorsed a given incorrect option (*i.e.*, distractor) on an MC item.	$> 40\%$

continued

Statistic	Description	Flagging Criterion
Distractor Item-Total Correlation (r_{dis})	*Multiple-choice (MC) items only.* The Pearson correlation between item distractor scores and total raw scores. A distractor item-total correlation ranges from -1 to 1. A distractor item-total correlation greater than 0 indicates the possibility that the given distractor may be a second key or correct response.	$r_{dis} > 0.10$
IRT Item Discrimination (a) (Except for MISA 5 & 8)	An item whose IRT item discrimination parameter (a) is very low in value (< 0.20) poorly differentiates lower from higher scoring students.	$a < 0.20$
IRT Item Difficulty (b)	An item whose IRT item difficulty (b) is very large and negative in value (< -3.0) or very large and positive in value (> 3.0), reflects an item that is too easy or too hard, respectively.	$\|b\| > 3.0$
DIF Category (Per Reference/Focal Group Pairing)	Differential item functioning (DIF) category: Category A: no or negligible DIF Category B: slight or moderate DIF Category C: moderate to large values of DIF. Those items which exhibit significant DIF, are of primary concern.	Category C
INFIT (MISA 5 & 8 Only)	Rasch INFIT mean-square item fit statistic	INFIT < 0.5 Or INFIT > 1.5
OUTFIT (MISA 5 & 8 Only)	Rasch OUTFIT mean-square item fit statistic	OUTFIT < 0.5 Or OUTFIT > 1.5

Table 6-2. Traffic-Signal Color Classification Criteria of Items

Traffic Signal	Criteria
Green	• The item-total correlation is greater than 0 • The item's DIF category classifications are all "A" or "B" • The item has zero or one flag, otherwise
Yellow	• The item-total correlation is greater than 0 • The item's DIF category classifications are all "A" or "B" • The item has no more than two flags, otherwise
Red	• The item-total correlation is less than 0 • At least one of the item's DIF category classifications is a "C" • The item has two or more flags, otherwise

During a series of data review meetings, MSDE reviewed the content, item statistics, and item flags for those items classified as red. A consensus was reached on whether to accept, revise, or reject each item classified as red. The data review results are summarized in Tables 6-3 and 6-4. See also Table 8-1 in Section 8 for a summary of the items flagged for differential item functioning.

Table 6-3. Number of Items Flagged During Data Review, as a Function Subject, Grade, and Statistical Criterion

			Number of Items							
Subject	Grade	Reviewed	Low Item-Total *r*	Low P-Value	High P-Value	Distractor Item-Total *r*	IRT	High Distractor Pct.	INFIT	OUTFIT
Operational										
ELA	3	60	2	0	0	3	6	2	--	--
ELA	4	51	3	1	0	2	6	1	--	--
ELA	5	42	1	0	0	0	2	2	--	--
ELA	6	102	2	0	0	0	5	0	--	--
ELA	7	100	0	2	0	4	7	6	--	--
ELA	8	108	8	0	0	2	19	2	--	--
ELA	10	90	2	0	0	1	5	5	--	--
Mathematics	3	53	1	1	1	2	1	1	--	--
Mathematics	4	53	0	0	1	0	1	0	--	--
Mathematics	5	55	1	0	0	1	1	1	--	--
Mathematics	6	56	1	1	0	1	6	4	--	--
Mathematics	7	56	2	3	0	3	5	3	--	--
Mathematics	8	57	2	6	0	0	20	7	--	--
Algebra I	HS	55	2	10	0	2	5	6	--	--
Algebra II	HS	54	0	5	0	2	7	5	--	--
Geometry I	HS	53	0	3	0	1	6	2	--	--
MISA	5	--	--	--	--	--	--	--	--	--
MISA	8	--	--	--	--	--	--	--	--	--
Field-Test Items										
ELA	3	70	4	2	--	3	3	1	--	--
ELA	4	73	2	1	--	--	2	--	--	--
ELA	5	70	3	--	--	2	4	2	--	--
ELA	6	72	1	1	--	--	1	--	--	--
ELA	7	69	1	2	--	--	2	1	--	--
ELA	8	69	1	--	--	1	1	2	--	--
ELA	10	67	4	2	--	2	6	1	--	--
Mathematics	3	115	--	1	--	1	1	4	--	--
Mathematics	4	119	1	9	--	2	1	2	--	--
Mathematics	5	98	1	12	--	1	2	4	--	--

Subject	Grade	Number of Items Reviewed	Low Item-Total *r*	Low P-Value	High P-Value	Distractor Item-Total *r*	IRT	High Distractor Pct.	INFIT	OUTFIT
Mathematics	6	120	4	21	--	4	4	4	--	--
Mathematics	7	164	5	53	--	8	18	13	--	--
Mathematics	8	159	18	92	--	6	44	5	--	--
Algebra I	HS	215	18	67	--	18	33	9	--	--
Algebra II	HS	49	1	9	--	--	5	4	--	--
Geometry I	HS	49	3	16	--	2	2	2	--	--
MISA	5	108	11	7	1	4		3	0	0
MISA	8	96	7	9	--	4	1	4	0	0
Social Studies	8	194	5	11	--	10	10	1	--	--

Note. Social Studies Grade 8 was a stand-alone field test. Only classical item statistics and DIF statistics were reviewed, and no final accept/reject decisions were made.

Table 6-4. Number of Items Reviewed, Rejected, and Flagged During Data Review, as a Function Subject, Grade, and Traffic Signal

Subject	Grade	Number of Items Reviewed	Green	Yellow	Red	Rejected
Operational						
ELA	3	60	56	3	1	7
ELA	4	51	47	2	2	7
ELA	5	42	39	0	3	6
ELA	6	102	96	2	4	1
ELA	7	100	91	2	7	5
ELA	8	108	88	4	16	9
ELA	10	90	85	0	5	1
Mathematics	3	53	51	0	2	3
Mathematics	4	53	52	0	1	1
Mathematics	5	55	53	0	2	1
Mathematics	6	56	47	4	5	4
Mathematics	7	56	49	4	3	6
Mathematics	8	57	40	12	5	13
Algebra I	HS	55	45	6	4	8

Subject	Grade	Number of Items				
		Reviewed	Green	Yellow	Red	Rejected
Algebra II	HS	54	48	4	2	5
Geometry I	HS	53	49	2	2	3
MISA	5	--	--	--	--	--
MISA	8	--	--	--	--	--
Field-Test Items						
ELA	3	70	67	3	--	8
ELA	4	73	71	1	1	17
ELA	5	70	66	3	1	6
ELA	6	72	70	1	1	4
ELA	7	69	67	1	1	4
ELA	8	69	68	1	--	4
ELA	10	67	62	3	2	9
Mathematics	3	115	112	2	1	3
Mathematics	4	119	116	3	--	4
Mathematics	5	98	95	1	2	6
Mathematics	6	120	111	6	3	12
Mathematics	7	164	141	8	15	18
Mathematics	8	159	110	17	32	44
Algebra I	HS	215	178	21	16	36
Algebra II	HS	49	46	1	3	6
Geometry I	HS	49	44	2	3	4
MISA	5	108	100	6	2	18
MISA	8	96	90	5	1	7
Social Studies	8	194	191	2	10	16

Note. Social Studies Grade 8 was a stand-alone field test. Only classical item statistics and DIF statistics were reviewed, and no final accept/reject decisions were made.

Outcomes

Items that were accepted at data review were moved forward to an “operational ready” status that allowed the items to be selected for linear and/or adaptive test forms. Items that were accepted with edits need to be re-field tested after edits were made to the items. Items that were designated “accepted with edits” will not be used as operational items. Items that were rejected were marked as Do Not Use in the item bank but can be used for future test construction.

Section 7. Item Response Theory (IRT) Scaling, Equating, and Scoring

IRT Scaling and Equating

The 2022-2023 MCAP items were analyzed using item response theory (IRT). IRT analyses were used to place all items from all forms of a given MCAP assessment onto the same scale. The following provides details of the IRT calibration and equating procedures for the MCAP assessments, along with IRT calibration and equating results.

IRT Calibration

The 2022-2023 MCAP items were calibrated using IRT, which uses mathematical models to define a relationship between an unobserved measure of student performance, usually referred to as theta (θ), and the probability (*P*) of getting a dichotomous item correct or of getting a particular score on a polytomous item. In IRT, it is assumed that all items are independent measures of the same construct (*i.e.,* of the same θ). Another way to think of θ is as a mathematical representation of the latent trait of interest. Several common IRT models are used to specify the relationship between θ and *P* (Hambleton & van der Linden, 1997; Hambleton & Swaminathan, 1985). The process of determining the specific mathematical relationship between θ and *P* is called item calibration. After items are calibrated, they are defined by a set of parameters that specify a nonlinear, monotonically increasing relationship between θ and *P*. Once the item parameters are known, an estimate of θ for each student can be calculated. This estimate, $\hat{\theta}$, is an estimate of the student's true score or a general representation of student performance. It has characteristics that are preferable to those of raw scores for equating purposes.

IRT Models

All MCAP assessments, except for MISA grades 5 and 8, use the two-parameter logistic (2PL) model for dichotomous items and the rating-scale form of the generalized partial credit (GPC) model for polytomous items (Muraki, 1992), including polytomously scored multipart items and open-response items. MISA grades 5 and 8 use the Rasch model for dichotomous items and the rating-scale form of the partial credit (PC) model.

The 2PL model for dichotomous and 1-point items defines the probability of a correct response (or of obtaining a score point of 1) given θ as follows:

$$P_i(\theta_j) = \{1 + \exp[-Da_i(\theta_j - b_i)]\}^{-1}, \qquad \text{(Equation 1)}$$

where

i indexes the items,
j indexes the person,
a represents item discrimination,
b represents item difficulty, and
D is a scaling constant equal to 1.701.

The GPC model for polytomous items defines the probability of obtaining a score category of *k* (where *k* ranges from 0 to the number of score categories minus 1) given θ as follows:

$$P_{ik}(\theta_j) = \frac{\exp[\sum_{v=0}^{k} Da_i(\theta_j - b_i + d_{iv})]}{\sum_{c=0}^{m-1} \exp[\sum_{v=0}^{c} Da_i(\theta_j - b_i + d_{iv})]} \qquad \text{(Equation 2)}$$

where

i indexes the items,
j indexes the person,
a represents item discrimination,
b represents item difficulty,
d_{iv} is a category parameter for score category *v* on item *i*,
D is a scaling constant equal to 1.701, and
m is the number of score categories on item *i*.

Note that without any constraints, the GPC model item parameters are not identified. To resolve the indeterminacy, d sub 0 is fixed to 0 and the sum of the category parameters is fixed to 0.0.

The Rasch model is a special 2PL model, in which the *a*-parameter is fixed to 1.0. Similarly, the PC model is equivalent to a constrained GPC model, in which the *a*-parameter is fixed to 1.0.

Test characteristic curves (TCCs) display the expected raw score associated at each value of theta j. Mathematically, the TCC is computed by summing the item characteristic curves (ICCs) of all items that contribute to the raw score. The ICC for item *i* at a given value of theta j is denoted by P sub i times theta j and is equal to the following weighted sum of the P sub i k times theta j over the m sub i score categories for item *i*:

$$P_i(\theta_j) = \sum_{k=0}^{m_i - 1}[k * P_{ik}(\theta_j)] \qquad \text{(Equation 3)}$$

The TCC, *i.e.,* the expected raw score at a given value of θ, is calculated as the following:

$$TCC(\theta_j) = E(X|\theta_j) = \sum_{i=1}^{n} P_i(\theta_j) \qquad \text{(Equation 4)}$$

where

n is the number of items contributing to the raw score.

The expected raw score of the TCC monotonically increases with θ_j, consistent with the notion that students of high ability tend to earn higher raw scores than students of low ability.

The test information function (TIF) displays the amount of statistical information (precision) that the test provides at each value of θ_j across the entire latent trait continuum. The TIF is denoted as $I(\theta_j)$. There is an inverse relationship between the TIF and the conditional standard error of measurement (CSEM). The CSEM at a given θ_j is defined as the inverse of the square root of the TIF at θ_j (*e.g.*, Hambleton, Swaminathan, & Rogers, 1991):

$$CSEM(\theta) = \frac{1}{\sqrt{I(\theta_j)}}. \qquad \text{(Equation 5)}$$

TIFs are often higher near the middle of the θ_j distribution than near the tails. This is because test forms are often designed to have more items of medium difficulty and few items of very easy or very hard difficulty. Given that there are many more students toward the middle of the θ_j distribution than at the tails, it is sensible to design test forms with more test information—more precision—near the middle of the θ_j distribution.

IRT Calibrations

All MCAP assessments, except for MCAP MISA grades 5 and 8, were administered for the first time in the 2022-2023 school year. A concurrent calibration of the operational items across core forms on the Spring 2023 test forms, using the item response data from the online, non-accommodated test forms from the Spring 2023 administration, established the IRT scale for the MCAP assessments. The free calibrations were performed using PARSCALE (Muraki & Bock, 2003).

Every operational item on the Fall 2022 test forms was also included on at least one Spring 2023 test form. As such, the item parameters from the Spring 2023 IRT calibrations were applied to all Fall 2021 operational items. In a sense, test forms from Fall 2021 are “pre-equated”; that is, student responses to the Fall 2021 test forms are scored using IRT item parameters from another administration (in this case, Spring 2023).

Unlike the other MCAP assessments, MCAP MISA grades 5 and 8 were not brand new for the 2022-2023 school year. The operational items on the Spring 2023 administration of MCAP MISA grades 5 and 8 have existing IRT parameter values, which were estimated in a previous school year. MCAP MISA grades 5 and 8 test forms were pre-equated, using the existing IRT parameter values.

The Spring 2023 field-test items for each of the MCAP assessments, including MCAP MISA grades 5 and 8, were calibrated via fixed common item parameter (FCIP) calibrations. Under this approach, the IRT parameters for the field-test items were estimated conditional on the existing IRT parameters for the operational items. The FCIP calibrations were performed using PARSCALE for all MCAP assessments except for MCAP MISA grades 5 and 8, which were performed using Winsteps (Linacre, 2023; version 5.2.5.2). For more information about item calibration, see Baker and Kim (2004).

Performance Standards

The MCAP content standards for ELA grades 3 through 8, mathematics grades 3 through 8, Algebra 1, Algebra 2, Geometry 1, and MISA grades 5 and 8 were used to establish performance standards on the MCAP assessments. Details of the standard-setting procedures and process used to set the performance standards can be found in the *Maryland MCAP Standard Setting Report* (Pearson, 2022).

Each MCAP assessment has three cut scores that define four performance levels. The performance levels are as follows: Level 1, Beginning Learner; Level 2, Developing Learner; Level 3, Proficient Learner; and Level 4, Distinguished Leaner. The overall theta scale cut scores, reporting scale cut scores, lowest observable scaled score (LOSS), and highest observable scaled score (HOSS) are presented in Table 7-1. The claim and subclaim overall theta scale cut scores, reporting scale cut scores, LOSS, and HOSS are presented in Table 7-2. The cut score values stay fixed across administrations of MCAP; however, performance standards can be reset if and when MSDE deems necessary (***e.g.,*** in response to substantive changes to MCAP content standards).

Table 7-1. MCAP Overall Theta Cut Scores, Scaled Score Cut Scores, LOSS, HOSS, Slope, and Intercept, as a Function of Content Area and Grade

		Theta Cut Score				Scaled Score Cut Score					
Content Area	Grade	1	2	3	LOSS	1	2	3	HOSS	Slope	Intercept
ELA	3	-1.1840	0.0020	1.9040	650	725	750	790	850	21.0793	749.9578
	4	-1.2450	0.1190	1.7080	650	725	750	779	850	18.3284	747.8189
	5	-1.1840	0.2280	1.7540	650	725	750	777	850	17.7054	745.9632
	6	-1.4440	0.0630	1.7060	650	725	750	777	850	16.5893	748.9549
	7	-1.3740	0.1740	1.9030	650	725	750	778	850	16.1499	747.1899
	8	-1.0850	0.1440	2.0100	650	725	750	788	850	20.3417	747.0708
	10	-1.5240	-0.1095	1.3400	650	725	750	776	850	17.6741	751.9353
Mathematics	3	-0.9310	0.1300	1.8380	650	725	750	790	850	23.5627	746.9368
	4	-0.9340	0.4120	1.9040	650	725	750	778	850	18.5736	742.3477
	5	-0.9230	0.5420	2.3535	650	725	750	781	850	17.0648	740.7509
	6	-0.5340	0.9440	2.4010	650	725	750	775	850	16.9147	734.0325
	7	-0.1360	1.1980	2.5830	650	725	750	776	850	18.7406	727.5488
	8	-0.0060	1.5700	3.3720	650	725	750	779	850	15.8629	725.0952
Science	5	-1.2729	0.0763	1.4870	650	729	750	772	850	15.5000	748.8173
	8	-1.3236	0.1933	1.6716	650	726	750	773	850	15.5000	747.0039
Social Studies	8	-1.1285	0.2094	2.0719	650	725	750	785	850	18.6860	746.0872
Algebra 1	HS	-0.5440	1.0590	2.6400	650	725	750	775	850	15.5958	733.4840
Algebra 2	HS	-0.5910	1.4300	2.9660	650	725	750	769	850	12.3701	732.3108
Geometry 1	HS	-0.7810	0.7035	2.2165	650	725	750	775	850	16.8407	738.1526

Table 7-2. MCAP Claim and Subclaim Theta Cut Scores, Scaled Score Cut Scores, LOSS, HOSS, Slope, and Intercept, as a Function of Content Area and Grade

		Theta Cut Score			Scaled Score Cut Score				
Content Area	Grade	1	2	LOSS	1	2	HOSS	Slope	Intercept
ELA – Reading	3	-1.1840	0.0020	10	41	50	90	7.5000	49.9850
	4	-1.2450	0.1190	10	40	50	90	7.5000	49.1075
	5	-1.1840	0.2280	10	39	50	90	7.5000	48.2900
	6	-1.4440	0.0630	10	39	50	90	7.5000	49.5275
	7	-1.3740	0.1740	10	38	50	90	7.5000	48.6950
	8	-1.0850	0.1440	10	41	50	90	7.5000	48.9200
	10	-1.5240	-0.1095	10	39	50	90	7.5000	50.8212
ELA – Writing	3	-1.1840	0.0020	10	29	35	60	5.0000	34.9900
	4	-1.2450	0.1190	10	28	35	60	5.0000	34.4050
	5	-1.1840	0.2280	10	28	35	60	5.0000	33.8600
	6	-1.4440	0.0630	10	27	35	60	5.0000	34.6850
	7	-1.3740	0.1740	10	27	35	60	5.0000	34.1300
	8	-1.0850	0.1440	10	29	35	60	5.0000	34.2800
	10	-1.5240	-0.1095	10	28	35	60	5.0000	35.5475
ELA Subclaim	3	-1.1840	0.0020	650	725	750	850	21.0793	749.9578
	4	-1.2450	0.1190	650	725	750	850	18.3284	747.8189
	5	-1.1840	0.2280	650	725	750	850	17.7054	745.9632
	6	-1.4440	0.0630	650	725	750	850	16.5893	748.9549
	7	-1.3740	0.1740	650	725	750	850	16.1499	747.1899
	8	-1.0850	0.1440	650	725	750	850	20.3417	747.0708
	10	-1.5240	-0.1095	650	725	750	850	17.6741	751.9353
Mathematics	3	-0.9310	0.1300	650	725	750	850	23.5627	746.9368
	4	-0.9340	0.4120	650	725	750	850	18.5736	742.3477
	5	-0.9230	0.5420	650	725	750	850	17.0648	740.7509
	6	-0.5340	0.9440	650	725	750	850	16.9147	734.0325
	7	-0.1360	1.1980	650	725	750	850	18.7406	727.5488
	8	-0.0060	1.5700	650	725	750	850	15.8629	725.0952
Science	5	-1.2729	0.0763	10	41	50	90	6.5000	49.50405
	8	-1.3236	0.1933	10	40	50	90	6.5000	48.74355
Social Studies	8	-1.1285	0.2094	650	725	750	850	18.6860	746.0872
Algebra 1	HS	-0.5440	1.0590	650	725	750	850	15.5958	733.4840
Algebra 2	HS	-0.5910	1.4300	650	725	750	850	12.3701	732.3108
Geometry 1	HS	-0.7810	0.7035	650	725	750	850	16.8407	738.1526

Because the θ scale used in IRT calibrations is not readily understood by most stakeholders, a reporting scale was developed for each MCAP assessment. Each reporting scale is a linear transformation of the underlying θ scale. For a given MCAP assessment, the linear transformation of θ to scaled score is given by

$$ScaledScore = \beta_0 + \beta_1(\theta), \qquad \text{(Equation 6)}$$

where

β_0 and β_1 are the reporting scale intercept and slope constants, respectively.

A separate linear transformation is used for each content area and grade. Table 7-2 lists the slope and intercept constants used to calculate the overall scaled scores for each grade, content area, and performance level. Note that the values in Table 7-2 will not change unless the standards are reset.

Section 8. Classical Item Analysis

As noted in the *Principles of Educational and Psychological Testing* (Brown, 1983), "A test is only as good as the items it contains." A complete evaluation of a test's quality must include an evaluation of each item. Both *Standards for Educational and Psychological Testing* (AERA et al., 2014) and *Code of Fair Testing Practices in Education* (Joint Committee on Testing Practices, 2004) include standards for identifying quality items. Items should assess only knowledge or skills that are identified as part of the domain being tested and should avoid assessing irrelevant factors. Items should also be unambiguous and free of grammatical errors, potentially insensitive content or language, and other confounding characteristics. In addition, items must not unfairly disadvantage students in particular racial, ethnic, or gender groups.

Both qualitative and quantitative analyses have been conducted to ensure that MCAP items meet these standards. Qualitative analyses are described earlier in this report; the following section focuses on quantitative evaluations of classical item and differential item functioning (DIF) statistics. The item analyses presented here are based on the operational items (the items on which student scores are calculated) from the statewide administration of MCAP in Fall 2022 and Spring 2023, as well as the field-test items from the Spring 2023 statewide administration of MCAP. In a typical administrative year, only the classical item and DIF statistics of field-test items are part of an annual data review process. However, the 2022-2023 administration year was the first operational year of the administration. As such, the classical item and DIF statistics for the operational items from Spring 2023 were part of the yearly data review process. (Note: All operational items administered in Fall 2022 were also administered in Spring 2023; only the data and statistics from Spring 2023 were used during data review.)

Classical Difficulty and Discrimination Indices

All items were evaluated in terms of item difficulty according to standard classical test theory practices. The classical difficulty index is calculated as the item mean, which is the mean number of points achieved on an item across a sample of students. Classical difficulty can also be calculated as an item *p*-value, which is equal to the item mean divided by the maximum possible score for the item. Multiple-choice items are scored dichotomously (correct vs. incorrect); for these items, the difficulty index is simply the proportion of students who correctly answered the item. Although this index is traditionally described as a measure of difficulty, it is properly interpreted as an "easiness index", because larger values indicate easier items. An index of 0.0 indicates that all students received no credit for the item, and an index of 1.0 indicates that all students received full credit for the item.

Items that are answered correctly by almost all students provide little information about differences in student abilities, but they do indicate knowledge or skills that have been mastered by most students. Similarly, items that are correctly answered by very few students provide little information about differences in student abilities, but they may indicate knowledge or skills that have not yet been mastered by most students. In general, to provide adequate measurement, difficulty indices should range from near-chance performance (0.25 for four-option multiple-choice items) to 0.90, with the majority of items generally falling between around 0.4 to 0.7. However, on a standards-referenced assessment such as the MCAP, it is acceptable to include items with very low or very high item difficulty values to ensure sufficient content coverage.

A desirable characteristic of an item is for higher-ability students to perform better on the item than lower-ability students do. The correlation between student performance on a single item and total test score is a commonly used measure of this characteristic of the item. Within classical test theory, the item-test correlation is referred to as the item's discrimination because it indicates the extent to which successful performance on an item discriminates between high and low scores on the test. The theoretical range of

these statistics is –1.0 to 1.0, with a typical observed range from 0.2 to 0.6. Discrimination indices can be thought of as measures of how closely an item assesses the same knowledge and skills assessed by other items contributing to the criterion total score. That is, the discrimination index can be thought of as a measure of construct consistency.

Item-level classical statistics and item-level score distributions for field-test items are provided in Appendix D. The classical difficulty indices tended to be low, indicating that many items were a bit difficult for many students. This might partially be due to lingering after-effects of the COVID-19 pandemic.

Differential Item Functioning (DIF) Analysis

Code of Fair Testing Practices in Education (2004) explicitly states that subgroup differences in performance should be examined when sample sizes permit, and that actions should be taken to ensure that differences in performance are due to construct-relevant, rather than irrelevant, factors. *Standards for Educational and Psychological Testing* (AERA et al., 2014) includes similar guidelines. As part of the effort to identify such problems, operational and field-test MCAP items administered in Spring 2023 were evaluated in terms of differential item functioning (DIF) statistics.

For MCAP, a standardization DIF procedure (Dorans & Kulick, 1986) was employed to evaluate subgroup differences. This standardization DIF procedure is designed to identify items for which subgroups of interest perform differently, beyond the impact of differences in overall achievement. The DIF procedure calculates the difference in item performance for two groups of students (at a time) matched for achievement on the total test. Specifically, average item performance is calculated for students at every total score. Then an overall average is calculated, weighting the total score distribution so that it is the same for the two groups.

When differential performance between two groups occurs on an item (*i.e.*, a DIF index in the “low” or “high” categories, explained below), it may or may not be indicative of item bias. Course-taking patterns or differences in school curricula can lead to DIF, but for construct-relevant reasons. On the other hand, if subgroup differences in performance could be traced to differential experience (such as geographical living conditions or access to technology), the inclusion of such items should be reconsidered.

Computed DIF indices have a theoretical range from –1.0 to 1.0 for multiple-choice items. Dorans and Holland (1993) suggested that index values between –0.05 and 0.05 should be considered negligible. Dorans and Holland further stated that items with values between –0.10 and –0.05 or between 0.05 and 0.10 (*i.e.*, “low” DIF) should be inspected to ensure that no possible effect is overlooked and that items with values outside the [–0.10, 0.10] range (*i.e.*, “high” DIF) are more unusual and should be examined very carefully. DIF procedures are limited to subgroups with sufficiently large sample sizes (*e.g.*, 250 per subgroup). MCAP items were evaluated for DIF, based on the following demographic subgroup comparisons:

- Gender: Female, Male
- Race/Ethnicity: White, Hispanic
- Race/Ethnicity: White, Black/African American

DIF statistics were run on all operational and field-test items administered in Spring 2023, except for MISA 5 & 8. DIF statistics were only run on MISA field-test items. MISA 5 & 8 were fully pre-equated; as such, MISA operational items were already evaluated for DIF in a previous administration. Per the results presented in Table 8-1, a relatively small number of items were flagged for high DIF. Decisions were not made based on the DIF results in isolation. Rather, the DIF results were reviewed during the data review and the DIF results were included in the data review flagging criteria (see Tables 6-1 and 6-2).

Table 8-1. Number of Items Flagged for DIF, as a Function Subject, Grade, and Subgroup Comparison

			Number of Items					
			DIF: Gender (Female, Male)		DIF: Race (Black or African American, White)		DIF: Ethnicity (Hispanic, White)	
Subject	Grade	Reviewed	Female	Male	White	Black or African American	White	Hispanic
Operational								
ELA	3	60	0	0	0	0	0	0
	4	51	0	0	0	0	0	0
	5	42	0	1	0	0	1	0
	6	102	0	4	0	0	0	0
	7	100	0	0	2	0	2	0
	8	108	0	2	2	0	2	0
	10	90	0	2	0	0	0	0
Mathematics	3	53	0	0	1	0	1	0
	4	53	0	1	0	0	0	0
	5	55	0	1	1	0	0	0
	6	56	0	0	0	0	0	0
	7	56	0	0	0	0	0	0
	8	57	0	0	0	0	0	0
Algebra 1	HS	55	0	0	0	0	0	0
Algebra 2	HS	54	0	0	0	0	0	0
Geometry 1	HS	53	0	0	0	0	0	0
MISA	5	0	0	0	0	0	0	0
MISA	8	0	0	0	0	0	0	0
Field-Test Items								
ELA	3	213	0	0	0	0	1	0
	4	186	0	3	4	0	3	0
	5	175	0	1	1	0	4	0
	6	177	1	5	2	1	4	0
	7	178	0	1	0	0	2	0
	8	173	1	3	3	0	2	0
	10	167	1	1	0	0	1	0
Mathematics	3	228	0	2	2	1	0	0
	4	237	0	3	5	0	2	0
	5	245	0	5	0	0	0	0
	6	282	0	2	5	0	1	0
	7	258	0	2	11	0	11	0
	8	194	0	1	2	0	2	0
Algebra 1	HS	215	1	0	0	0	2	0
Algebra 2	HS	107	0	2	1	0	0	0
Geometry 1	HS	49	0	0	0	0	0	0
MISA	5	141	0	0	1	0	1	0
MISA	8	144	3	0	1	0	0	0
Social Studies	8	202	5	0	1	0	0	0

Note. Social Studies Grade 8 was a stand-alone field test. Only classical item statistics and DIF statistics were reviewed, and no final accept/reject decisions were made.

Section 9. Reliability

Although an individual item's performance is an important focus for evaluation, a complete evaluation of an assessment must also address the way items function together and complement one another. Tests that function well provide a dependable assessment of the student's level of ability. Unfortunately, no test can do this perfectly. A variety of factors can contribute to a given student's score being either higher or lower than his or her true ability. For example, a student may misread an item or mistakenly fill in the wrong bubble when he or she knew the answer. Collectively, extraneous factors that impact a student's score are referred to as measurement error. Any assessment includes some amount of measurement error; that is, no measurement is perfect. This is true of all academic assessments—some students will receive scores that underestimate their true ability, and other students will receive scores that overestimate their true ability.

When tests have a high amount of measurement error, student scores are very unstable. Students with high ability may get low scores or vice versa. Consequently, one cannot reliably measure a student's true level of ability with such a test. Assessments that have less measurement error (*i.e.*, errors made are small on average and student scores on such a test will consistently represent his or her ability) are described as more reliable.

IRT Marginal Reliability

Test score reliability was estimated using an IRT marginal reliability approach based on applying the standard classical test theory (CTT) formula, relating variances of true score, observed score, and measurement error, in the IRT setting. In CTT, the relationship between these variances is given by:

$$\sigma_X^2 = \sigma_T^2 + \sigma_E^2 \qquad \text{(Equation 7)}$$

where

σ_X^2 is the observed-score variance,
σ_T^2 is the true-score variance, and
σ_E^2 is the error variance.

Starting from this basic equation, it can be shown that the formula for reliability can be expressed as:

$$CTT\ Reliability = 1 - \frac{\sigma_E^2}{\sigma_X^2}. \qquad \text{(Equation 8)}$$

IRT marginal reliability is based on extending the CTT model to an IRT framework (Samejima, 1994) and provides an IRT-based estimate of the overall test reliability. Error variance is estimated as the mean squared conditional standard error of measurement (CSEM) of the theta estimates across students within a grade. Observed score variance is estimated as the variance of the theta estimates across students within a grade. Equivalently, the mean squared CSEM of the scale scores and the variance of the scale scores can be used in place of the CSEM of the theta estimates and the variance of the theta estimates, respectively. IRT marginal reliability is then given by the following formula:

$$IRT\ Marginal\ Reliability = 1 - \frac{\overline{CSEM(\theta)^2}}{Var(\hat{\theta})} = 1 - \frac{\overline{CSEM(SS)^2}}{Var(SS)} \qquad \text{(Equation 9)}$$

where

$\overline{CSEM(\theta)^2}$ is the mean squared CSEM,
$\overline{CSEM(SS)^2}$ is the mean squared scale CSEM,
$Var(\hat{\theta})$ is the variance of theta estimates, and
$Var(SS)$ is the scale score variance.

The classical standard error of measurement (SEM) is an unconditional SEM that estimates the level of imprecision (*i.e.*, measurement error) in test scores as

$$SEM = \sigma_x\sqrt{1 - r_{xx}}, \qquad \text{(Equation 10)}$$

where

σ_x is the total test score standard deviation, and
r_{xx} is an estimate of total test reliability.

Using this formula, an IRT unconditional SEM is obtained by setting σ_x equal to the standard deviation of total test scaled scores and r_{xx} equal to the IRT marginal reliability.

IRT marginal reliability and unconditional SEM estimates were calculated for the MCAP assessments using scale scores and the associated CSEMs. Overall and subgroup IRT marginal reliability results for them are presented in Appendix G.

For several reasons, the total and subgroup reliability results in Appendix G should be interpreted with caution. First, inherent differences between grades and content areas preclude making valid inferences about the quality of a test based on statistical comparisons with other tests. Second, reliabilities are dependent not only on the measurement properties of a test but also on the statistical distribution of the studied subgroup. For example, it can be readily seen that the subgroup sample sizes vary considerably, which results in natural variation in reliability coefficients. Additionally, coefficient α, a type of correlation coefficient, may be artificially depressed for subgroups with little variability (Draper & Smith, 1998). Third, there is no industry standard to interpret the strength of a reliability coefficient, and this is particularly true when the population of interest is a single subgroup.

Reliability of Performance Level Categorization

While related to reliability, the accuracy and consistency of classifying students into performance categories are even more important statistics in a standards-based reporting framework (Livingston and Lewis, 1995). After the performance levels were specified and students were classified into those levels, empirical analyses were conducted to determine the statistical accuracy and consistency of the classifications. For the MCAP assessments, students are classified into one of four performance levels: Beginning Learner, Developing Learner, Proficient Learner, or Distinguished Learner. This section of the report explains the methodologies used to assess the reliability of classification decisions.

Accuracy refers to the extent to which decisions based on test scores match decisions that would have been made if the scores did not contain any measurement error. Accuracy must be estimated because errorless test scores do not exist. Consistency measures the extent to which classification decisions based on test scores match the decisions based on scores from a second, parallel form of the same test. Consistency can be evaluated directly from actual responses to test items if two complete and parallel forms of the test are given to the same group of students. In operational test programs, however, such a design is usually impractical. Instead, techniques have been developed to estimate both the accuracy and

consistency of classification decisions based on a single administration of a test. The Livingston and Lewis (1995) technique was used for the 2022-2023 MCAP assessments because this technique is easily adaptable to all types of testing formats, including mixed-format tests.

The accuracy and consistency results reported in Appendix F make use of "true scores" in the classical test theory sense. A true score is the score that would be obtained if a test had no measurement error. Of course, true scores cannot be observed and so must be estimated. In the Livingston and Lewis (1995) method, estimated true scores are used to categorize students into their "true" classifications. After certain technical adjustments (as described in Livingston & Lewis, 1995), a four-by-four contingency table of accuracy was created for each content area and grade, where cell [*i,j*] represented the estimated proportion of students whose true score fell into classification *i* (where $i = 1 \text{ to } 4$) and observed score fell into classification *j* (where $j = 1 \text{ to } 4$). The sum of the diagonal entries (*i.e.*, the proportion of students whose true and observed classifications matched) represented overall accuracy.

To calculate consistency, true scores were used to estimate the joint distribution of classifications on two independent, parallel test forms. Following statistical adjustments per Livingston and Lewis (1995), a new four-by-four contingency table was created for each content area and grade and populated by the proportion of students who would be categorized into each combination of classifications according to the two (hypothetical) parallel test forms. Cell [*i,j*] of this table represented the estimated proportion of students whose observed score on the first form would fall into classification *i* (where $i = 1 \text{ to } 4$) and whose observed score on the second form would fall into classification *j* (where $j = 1 \text{ to } 4$). The sum of the diagonal entries (*i.e.*, the proportion of students categorized by the two forms into exactly the same classification) signified overall consistency. Note that accuracy, false positive, and false negative estimates add to 1, except for rounding errors.

The Livingston and Lewis (1995) estimates of decision accuracy and consistency were estimated using the computer program, BB-CLASS (Brennan, 2004). The decision accuracy and consistency results are presented in Appendix F. The tables in this appendix include overall accuracy and consistency indices, as well as accuracy and consistency values conditional on each cut score.

Section 10. Validity

Five sources of validity evidence that can be used in evaluating claims are outlined by *Standards for Educational and Psychological Testing* (AERA et al., 2014): test content, internal structure, response processes, relationships to other variables, and consequences of testing. Each source speaks to different aspects of validity but is not a distinct type of validity. Instead, each contributes to a body of evidence about the comprehensive validity of score interpretations. When validating test scores, these sources of evidence should be carefully considered.

Evidence Based on Test Content

Evidence based on test content validity is meant to determine how well the assessment tasks represent the curriculum and standards for each subject and align to the Maryland MCAP content standards.

Content validation is informed by the item development process, including how the test blueprints and test items align to the curriculum and standards. Viewed through this lens provided by the standards, evidence based on test content is described in Section 2 on item development. That section provided a description of the item development process, along with a description of the alignment process and test development. A detailed description of the test administration processes is found in Section 3 on test administration. All MCAP operational and field-test items administered in Fall 2022 and Spring 2023 were subjected to cycles of reviews by MSDE. All MCAP test items were aligned by two specific content standards and underwent several rounds of review for content fidelity and appropriateness.

Items were presented to students in different formats, *e.g.*, constructed-response, multiple-choice, multi-select, composite multiple-choice. The MCAP assessments were administered according to state-mandated standardized procedures, with allowable accommodations. All test proctors were trained in those procedures. All the machine- and human-scoring of student responses were subject to standardized and rigorous procedures to ensure the accuracy and validity of the results in capturing student performance. Section 4 describes the steps taken to train scorers and monitor the quality of scoring student responses for constructed-response items. Quality control procedures related to scanning and machine scoring are also described.

Evidence Based on Internal Structure

Evidence based on internal structure is presented in the discussions of item analyses, reliability, data review, and scaling and equating in Chapters 5–8. Technical characteristics of the internal structure of the assessments are presented in terms of classical item statistics (item difficulty, item-test correlation), differential item functioning (DIF) analyses, dimensionality analyses, score reliability, decision accuracy and consistency, classical standard errors of measurement (SEMs), and item response theory (IRT) parameters and procedures. Evidence based on internal structure is also reflected in the subscore correlation results in Appendix H. The subscore correlations were generally at or above 0.5. Some subscore correlations were above 0.9, attributable to cases where many items on the test form align to the particular subscore. There was substantial item overlap among subscores, and subscores did not conform to simple structure.

The Spring 2023 MCAP assessments, except for MISA grades 5 and 8, were established by IRT calibrations of operational items with all item parameters freely estimated. The IRT scale for MISA grades 5 and 8 were established in a previous academic year. Performance standards for all MCAP assessments (except MISA grades 5 and 8) were established at a standard setting after the Spring 2022 administration. Complete descriptions of the operational and field-test item analyses and the calibration,

scaling, and equating analysis are found in Sections 5–7. Summaries of reliability and decision accuracy and consistency are found in Section 8.

In general, item difficulty and discrimination indices were in acceptable and expected ranges. A small percentage of items were answered correctly at near-chance or near-perfect rates. Similarly, the positive discrimination indices indicate that most items were assessing consistent constructs, and students who performed well on individual items tended to perform well on the overall assessment.

Reliability coefficients for operational forms were in acceptable ranges. As discussed in Section 8, the reliability of student subgroups should be interpreted with caution, as reliabilities are dependent not only on the measurement properties of a test but also on the statistical distribution of the studied subgroup. When subgroup sample sizes vary considerably, they result in a variation in reliability coefficients.

The decision accuracy and consistency results were provided in Section 8. These results indicate accurate and consistent placement of students in overall performance levels. Further, accuracy and consistency values at each cut score were also adequate and indicated that the majority of students would be classified in the same performance level if administered a parallel test form.

Lastly, the results from the one-factor confirmatory factor analyses of the 2022-2023 MCAP assessments provide evidence in support of the MCAP assessments meeting the assumption of unidimensionality. Unidimensionality is an essential assumption that underlies the IRT models that were fit to the MCAP items.

Dimensionality Analysis

The general purpose of dimensionality analysis is to investigate whether violation of the assumption of test unidimensionality is statistically detectable. An item-level procedure, such as factor analysis, is easily employed when test forms are linear. However, most MCAP assessments are item-level or multi-stage adaptive, *i.e.*, are not linear test forms. The item response data matrix for an item-level adaptive test does not lend itself to item factor analysis, due to the sparseness throughout the item response data matrix. The item response data matrix across all paths of a multi-stage adaptive test is also sparse, though less than that from an item-level adaptive test. However, item-level factor analysis of a multi-stage adaptive test has an additional challenge due to range restriction in student scores within each path.

Accordingly, dimensionality of this year's assessments was not performed. In 2021–22, all MCAP test forms were linear. Please refer to the 2021–22 MCAP Technical Report for that year's dimensionality analysis results.

Evidence Based on Response Processes

Response process evidence for validity of the MCAP assessments is based on "the fit between the construct and the detailed nature of performance or response actually engaged in by examinees" (AERA et al., 2014). This type of evidence can be collected by surveying examinees about their performance strategies or responses to particular items. Because items are developed to measure particular constructs and intellectual processes, evidence that examinees have engaged in relevant performance strategies to correctly answer the items supports the validity of the test scores. Cognitive labs are a common approach to collecting evidence based on response processes. No results from cognitive labs were available at the time of drafting this report.

Evidence Based on Relationships to Other Variables

Evidence based on the relationship of MCAP assessments to external measures of mathematics, ELA, and science is an important contribution to ensuring the quality of the MCAP program. No results on the relationship of MCAP assessments to external measures were available at the time of drafting this report.

Evidence Based on Consequences of Testing

Evidence based on the consequences of testing can be obtained by analyzing data on how stakeholders, such as students and teachers, use the testing, results, and reporting tools available to them. Also, surveys and interviews of stakeholders on their use of the tools can be analyzed. Such analyses and surveys should be incorporated into future years of the MCAP program.

Summary of Evidence

The process of seeking and evaluating evidence for the validity of test score interpretation is an ongoing endeavor. Evidence for the validity of test score interpretations resulting from the MCAP assessments is strengthened as the evidence supporting test score interpretations accrue over time and administrations. Going forward, collection of evidence with respect to test content and internal structure continues to be needed. Also, it will be essential to collect validity evidence based on response processes, relationships to other variables, and consequences of testing, to document a more complete evaluation of the MCAP assessments.

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Appendices

Appendix A. Content Standards

The Content Standards define what students should understand and be able to do in their study of Mathematics, English Language Arts/Literacy, Science, and Social Studies.

Mathematics:
https://www.marylandpublicschools.org/about/Pages/DCAA/Math/MCCRSM.aspx

English Language Arts/Literacy:
https://www.marylandpublicschools.org/programs/Pages/ELA/standards.aspx

Science:
https://marylandpublicschools.org/about/Pages/DCAA/Science/index.aspx

Social Studies:
https://www.marylandpublicschools.org/about/Pages/DCAA/Social-Studies/MSSS.aspx

Appendix B. Test Blueprints

The test blueprints delineate the number of items or points from each content standard appearing on a given test.

Mathematics:
https://marylandpublicschools.org/about/Pages/DAAIT/Assessment/MCAP/Math.aspx

English Language Arts/Literacy:
https://marylandpublicschools.org/about/Pages/DAAIT/Assessment/MCAP/ELAL.aspx

Science:
https://marylandpublicschools.org/about/Pages/DAAIT/Assessment/MISA/index.aspx

Social Studies:
https://marylandpublicschools.org/about/Documents/DCAA/SocialStudies/8thGrade/MiddleSchoolUnitedStatesHistoryFramework.pdf

Appendix C. PSC Quality Management Extended Guide

PSC Quality Management Report Extended Guide

04/03/2023 CDT @ 12:00:00 AM - 11/29/2023 CST @ 11:59:59 PM

Grade	Site	RIB ID	Item/Trait	Item Description	Validity %				Reliability %				# of Resolutions		Distribution Current	Mean	Percent Complete
					Perfect Agreement		Total Non-Adj		Perfect Agreement		Total Non-Adj						
					Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	TBR*	Comp**			
10	Inte		E10_VR063049	attitude of author toward Abraham Lincoln											**0 1 2 3 4 BL OI**		
			E10_VR063049														
			Expression		88.6	88.6	0.0	0.0	75.3	75.3	1.4	1.4	0	98	35.0 44.3 10.0 0.7 0.0 4.7 5.2	0.664	0.0%
						84		0		77		1			34 45 12 1 0 5 4	0.707	
			Conventions		90.9	90.9	0.0	0.0	77.6	77.6	1.3	1.3	0	98	31.0 41.1 15.9 1.9 4.7 5.2	0.789	0.0%
						98		0		77		1			31 41 18 2 5 4	0.83	

Numbers in blue italics are previous final numbers

***TBR - To Be Resolved**

****Comp - Resolutions Completed**

Appendix D. Classical Item Statistics

Field Test Items

Table D-1. Classical Item Statistics—Spring 2023 Algebra 1 FT Items

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
MDMA121001	MC	1	0.1468	-0.0922	85.32	14.68	.	.	.
MDMA122064	MC	1	0.2531	0.1412	74.69	25.31	.	.	.
MDMA122066	MC	1	0.2606	0.5837	73.94	26.06	.	.	.
MDMA122067	MC	1	0.1209	0.4036	87.91	12.09	.	.	.
MDMA122068	MC	1	0.2191	0.1484	78.09	21.91	.	.	.
MDMA122105	MC	1	0.3701	0.1651	62.99	37.01	.	.	.
MDMA122106	XI	1	0.4131	0.4942	58.69	41.31	.	.	.
MDMA122107	XI	1	0.5586	0.3386	44.14	55.86	.	.	.
MDMA122108	XI	1	0.1492	0.4446	85.08	14.92	.	.	.
MDMA122109	XI	1	0.0879	0.2371	91.21	8.79	.	.	.
MDMA122110	MC	1	0.3177	0.3699	68.23	31.77	.	.	.
MDMA122112	MC	1	0.3841	0.0229	61.59	38.41	.	.	.
MDMA122113	MX	1	0.686	0.5083	31.4	68.6	.	.	.
MDMA122178	OE	4	0.8247	0.6043	57.69	21.62	9.71	2.5	8.48
MDMA122179	MC	1	0.4574	0.1084	54.26	45.74	.	.	.
MDMA122180	XI	1	0.0219	0.296	97.81	2.19	.	.	.
MDMA122181	XI	1	0.1232	0.312	87.68	12.32	.	.	.
MDMA122218	XI	1	0.1324	0.4962	86.76	13.24	.	.	.
MDMA122220	MC	1	0.3699	0.1902	63.01	36.99	.	.	.
MDMA122221	XI	1	0.0248	0.3067	97.52	2.48	.	.	.
MDMA122222	MC	1	0.3439	0.1762	65.61	34.39	.	.	.
MDMA122223	MC	1	0.4696	0.3905	53.04	46.96	.	.	.
MDMA122224	MX	1	0.1942	0.3152	80.58	19.42	.	.	.
MDMA122225	MC	1	0.4955	0.2033	50.45	49.55	.	.	.
MDMA122238	MX	1	0.1887	0.4052	81.13	18.87	.	.	.
MDMA122239	MC	1	0.6071	0.4958	39.29	60.71	.	.	.
MDMA122240	MX	1	0.6948	0.1196	30.52	69.48	.	.	.
MDMA122243	MC	1	0.0917	0.2679	90.83	9.17	.	.	.
MDMA122244	XI	1	0.2166	0.555	78.34	21.66	.	.	.
MDMA122245	MC	1	0.3984	0.4049	60.16	39.84	.	.	.
MDMA122247	MC	1	0.2779	0.0355	72.21	27.79	.	.	.
MDMA122248	XI	1	0.1852	0.1526	81.48	18.52	.	.	.
MDMA122274	OE	4	0.9632	0.6937	45.87	32.57	7.41	7.67	6.48
MDMA122275	XI	1	0.2865	0.5624	71.35	28.65	.	.	.
MDMA122301	MC	1	0.3714	0.1826	62.86	37.14	.	.	.
MDMA122346	MC	1	0.3064	0.5187	69.36	30.64	.	.	.
MDMA122347	MC	1	0.1682	0.3667	83.18	16.82	.	.	.
MDMA122354	MX	1	0.2457	0.473	75.43	24.57	.	.	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
MDMA122425	MC	1	0.3653	0.4625	63.47	36.53	.	.	.
MDMA122426	MC	1	0.3408	0.5863	65.92	34.08	.	.	.
MDMA122428	MC	1	0.3358	0.3104	66.42	33.58	.	.	.
MDMA122429	OE	4	0.9693	0.5753	55.82	16.74	10.48	8.61	8.35
MDMA122430	MC	1	0.4959	0.2804	50.41	49.59	.	.	.
MDMA122431	MX	4	0.8323	0.6163	59.4	18.16	9.9	4.89	7.65
MDMA122432	MX	1	0.0668	0.3378	93.32	6.68	.	.	.
MDMA122433	XI	1	0.3184	0.6305	68.16	31.84	.	.	.
MDMA122434	XI	1	0.0703	0.2692	92.97	7.03	.	.	.
MDMA122436	MX	1	0.2621	0.3849	73.79	26.21	.	.	.
MDMA122449	XI	1	0.2213	0.5068	77.87	22.13	.	.	.
MDMA122505	MC	1	0.1518	0.1133	84.82	15.18	.	.	.
MDMA122506	OE	4	0.5992	0.5704	65.28	20.71	6.01	4.8	3.2
MDMA122507	MX	1	0.1204	0.238	87.96	12.04	.	.	.
MDMA122516	MC	1	0.3189	0.3362	68.11	31.89	.	.	.
MDMA122519	XI	1	0.2877	0.5763	71.23	28.77	.	.	.
MDMA122520	MC	1	0.3172	0.1251	68.28	31.72	.	.	.
MDMA122521	MC	1	0.3306	0.1162	66.94	33.06	.	.	.
MDMA122534	MC	1	0.5189	0.4206	48.11	51.89	.	.	.
MDMA122535	MX	1	0.5749	0.5757	42.51	57.49	.	.	.
MDMA122536	MX	1	0.5103	0.3164	48.97	51.03	.	.	.
MDMA122537	MX	1	0.3271	0.0477	67.29	32.71	.	.	.
MDMA122540	MC	1	0.1195	0.3546	88.05	11.95	.	.	.
MDMA122548	MC	1	0.218	0.3459	78.2	21.8	.	.	.
MDMA122549	MC	1	0.6665	0.2864	33.35	66.65	.	.	.
MDMA122551	OE	4	0.4862	0.6171	75.69	9.9	8.22	2.47	3.72
MDMA122552	MC	1	0.5273	0.4794	47.27	52.73	.	.	.
MDMA122553	MC	1	0.1323	0.5006	86.77	13.23	.	.	.
MDMA122554	MX	1	0.2644	0.5785	73.56	26.44	.	.	.
MDMA122580	MC	1	0.4665	0.5629	53.35	46.65	.	.	.
MDMA122602	MC	1	0.306	0.3337	69.4	30.6	.	.	.
MDMA122603	MX	1	0.3189	0.5308	68.11	31.89	.	.	.
MDMA122604	MC	1	0.244	0.0005	75.6	24.4	.	.	.
MDMA122605	XI	1	0.0783	0.4095	92.17	7.83	.	.	.
MDMA122606	MX	1	0.1573	0.4806	84.27	15.73	.	.	.
MDMA122607	MC	1	0.4273	0.363	57.27	42.73	.	.	.
MDMA122608	MX	1	0.1136	0.2914	88.64	11.36	.	.	.
MDMA122613	MC	1	0.3355	0.197	66.45	33.55	.	.	.
MDMA122615	MC	1	0.1221	0.171	87.79	12.21	.	.	.
MDMA122616	XI	1	0.1316	0.4474	86.84	13.16	.	.	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
MDMA122617	MC	1	0.2608	0.0579	73.92	26.08	.	.	.
MDMA122618	OE	4	0.7939	0.6081	57.09	27.44	2.81	4.32	8.34
MDMA122619	OE	4	0.6569	0.6662	69.75	11.68	8.48	3.29	6.79
MDMA122620	MC	1	0.5017	0.3356	49.83	50.17	.	.	.
MDMA122621	MC	1	0.3316	0.318	66.84	33.16	.	.	.
MDMA122622	OE	4	0.3557	0.4931	82.3	8.66	3.4	2.45	3.19
MDMA122623	XI	1	0.2469	0.5809	75.31	24.69	.	.	.
MDMA122624	OE	4	0.844	0.5886	64.71	10.85	10.28	3.66	10.5
MDMA122625	MX	1	0.2156	0.1287	78.44	21.56	.	.	.
MDMA122626	XI	1	0.2072	0.5867	79.28	20.72	.	.	.
MDMA122627	MC	1	0.3038	0.3544	69.62	30.38	.	.	.
VR041924	MC	1	0.1512	0.4633	84.88	15.12	.	.	.
VR046247	MC	1	0.4525	0.2934	54.75	45.25	.	.	.
VR046833	MC	1	0.2612	0.3264	73.88	26.12	.	.	.
VR046985	XI	1	0.2218	0.4148	77.82	22.18	.	.	.
VR047217	MC	1	0.3099	-0.027	69.01	30.99	.	.	.
VR047832	XI	1	0.0468	0.3238	95.32	4.68	.	.	.
VR047843	MX	1	0.2389	0.5875	76.11	23.89	.	.	.
VR047846	MC	1	0.4224	0.2527	57.76	42.24	.	.	.
VR047850	MC	1	0.4046	0.3968	59.54	40.46	.	.	.
VR047927	XI	1	0.0326	0.0986	96.74	3.26	.	.	.
VR048023	MX	1	0.4773	0.2452	52.27	47.73	.	.	.
VR048256	MC	1	0.5276	0.4214	47.24	52.76	.	.	.
VR048386	MC	1	0.388	0.2587	61.2	38.8	.	.	.
VR050523	MC	1	0.4013	0.329	59.87	40.13	.	.	.
VR050649	MC	1	0.2068	0.4531	79.32	20.68	.	.	.
VR052122	MX	1	0.2584	0.449	74.16	25.84	.	.	.
VR052174	MC	1	0.2127	0.5591	78.73	21.27	.	.	.
VR052229	MC	1	0.2321	0.3785	76.79	23.21	.	.	.
VR052298	MX	1	0.3468	0.2714	65.32	34.68	.	.	.
VR054239	MX	4	0.8895	0.6396	53.08	20.44	14.35	8.7	3.43
VR055518	MC	1	0.5599	0.4423	44.01	55.99	.	.	.
VR055602	MC	1	0.3927	0.2722	60.73	39.27	.	.	.
VR055627	MC	1	0.4128	0.1988	58.72	41.28	.	.	.
VR057825	MC	1	0.3235	0.022	67.65	32.35	.	.	.
VR059230	XI	1	0.1812	0.2396	81.88	18.12	.	.	.
VR059419	MC	1	0.1461	0.2845	85.39	14.61	.	.	.
VR059874	MC	1	0.2228	0.4289	77.72	22.28	.	.	.
VR062099	MC	1	0.2229	0.3885	77.71	22.29	.	.	.
VR062148	MC	1	0.7314	0.4254	26.86	73.14	.	.	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
VR062162	MC	1	0.3937	0.2772	60.63	39.37	.	.	.
VR062399	MC	1	0.1506	0.4116	84.94	15.06	.	.	.
VR062454	MC	1	0.3793	0.3206	62.07	37.93	.	.	.
VR062996	MC	1	0.359	0.3673	64.1	35.9	.	.	.
VR062998	MC	1	0.378	0.3066	62.2	37.8	.	.	.
VR063003	MX	1	0.3076	0.5088	69.24	30.76	.	.	.
VR063244	XI	1	0.095	0.2215	90.5	9.5	.	.	.
VR064304	MC	1	0.4221	0.4305	57.79	42.21	.	.	.
VR064313	MC	1	0.3848	0.1841	61.52	38.48	.	.	.
VR064475	MX	4	0.3498	0.5817	81.17	7.27	8.53	1.47	1.56
VR064831	XI	1	0.2404	0.2818	75.96	24.04	.	.	.
VR065245	MX	4	0.7835	0.6057	64.69	13.97	7.98	5.03	8.33
VR066511	MC	1	0.3223	0.1843	67.77	32.23	.	.	.
VR066530	MC	1	0.2898	0.4912	71.02	28.98	.	.	.
VR066532	XI	1	0.3881	0.6741	61.19	38.81	.	.	.
VR066584	XI	1	0.1851	0.4219	81.49	18.51	.	.	.
VR066601	XI	1	0.2492	0.4768	75.08	24.92	.	.	.
VR066999	MC	1	0.6132	0.4696	38.68	61.32	.	.	.
VR067092	MX	1	0.5182	0.5116	48.18	51.82	.	.	.
VR067096	MX	1	0.2806	0.4855	71.94	28.06	.	.	.
VR067107	XI	1	0.1626	0.2769	83.74	16.26	.	.	.
VR067282	MC	1	0.2964	0.3665	70.36	29.64	.	.	.
VR067355	MX	4	0.4764	0.5857	66.73	23.16	7.29	1.41	1.41
VR164878	MC	1	0.3538	0.0836	64.62	35.38	.	.	.
VR164884	XI	1	0.2945	0.4591	70.55	29.45	.	.	.
VR164997	XI	1	0.0571	0.4149	94.29	5.71	.	.	.
VR165028	XI	1	0.8164	0.4705	18.36	81.64	.	.	.
VR165188	MX	1	0.078	0.4442	92.2	7.8	.	.	.
VR167401	MC	1	0.4323	0.3355	56.77	43.23	.	.	.
VR167465	MC	1	0.3586	0.2971	64.14	35.86	.	.	.
VR170478	MC	1	0.2913	0.5421	70.87	29.13	.	.	.
VR171833	MX	1	0.144	0.3146	85.6	14.4	.	.	.
VR171999	MC	1	0.1219	0.5206	87.81	12.19	.	.	.
VR172009	XI	1	0.1971	0.4657	80.29	19.71	.	.	.
VR172056	MC	1	0.3504	0.3816	64.96	35.04	.	.	.
VR172174	MC	1	0.2155	0.159	78.45	21.55	.	.	.
VR172310	MX	1	0.2457	0.3774	75.43	24.57	.	.	.
VR173211	MX	1	0.1722	0.1204	82.78	17.22	.	.	.
VR173375	MC	1	0.493	0.4031	50.7	49.3	.	.	.
VR173646	MC	1	0.5464	0.4578	45.36	54.64	.	.	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
VR177289	MC	1	0.1066	0.4104	89.34	10.66	.	.	.
VR177472	XI	1	0.2344	0.4895	76.56	23.44	.	.	.
VR177629	MC	1	0.3407	0.1624	65.93	34.07	.	.	.
VR177854	OE	4	0.7184	0.6349	62.33	12.76	18.69	3.2	3.03
VR177958	XI	1	0.0681	0.3438	93.19	6.81	.	.	.
VR177991	XI	1	0.3173	0.4157	68.27	31.73	.	.	.
VR178005	MC	1	0.3192	0.2059	68.08	31.92	.	.	.
VR178211	MC	1	0.2711	-0.0078	72.89	27.11	.	.	.
VR178257	MC	1	0.3061	0.2601	69.39	30.62	.	.	.
VR178323	MC	1	0.1495	-0.0412	85.05	14.95	.	.	.
VR180455	MC	1	0.5116	0.4215	48.84	51.16	.	.	.
VR180540	MC	1	0.1262	0.0785	87.38	12.62	.	.	.
VR180600	XI	1	0.5758	0.5555	42.42	57.58	.	.	.
VR180636	MC	1	0.4019	0.0088	59.81	40.19	.	.	.
VR180902	XI	1	0.2379	0.2949	76.21	23.79	.	.	.
VR180992	MC	1	0.3491	0.2431	65.09	34.91	.	.	.
VR181006	MC	1	0.2393	0.5635	76.07	23.93	.	.	.
VR181130	MC	1	0.4565	0.2765	54.35	45.65	.	.	.
VR181179	MC	1	0.4311	0.2363	56.89	43.11	.	.	.
VR181229	MC	1	0.3681	0.2251	63.19	36.81	.	.	.
VR181857	MC	1	0.2838	0.2993	71.62	28.38	.	.	.
VR182109	XI	1	0.3565	0.5572	64.35	35.65	.	.	.
VR182127	MC	1	0.5191	0.1014	48.09	51.91	.	.	.
VR182340	MC	1	0.1889	0.4295	81.11	18.89	.	.	.
VR182416	XI	1	0.06	0.2862	94	6	.	.	.
VR182418	MX	1	0.0356	-0.0243	96.44	3.56	.	.	.
VR182429	MC	1	0.2451	0.3582	75.49	24.51	.	.	.
VR182453	MC	1	0.0566	0.2395	94.34	5.66	.	.	.
VR182495	MC	1	0.0111	0.1364	98.89	1.11	.	.	.
VR182545	XI	1	0.4658	0.5452	53.42	46.58	.	.	.
VR182548	XI	1	0.1779	0.4571	82.21	17.79	.	.	.
VR184357	MC	1	0.3572	0.084	64.28	35.72	.	.	.
VR184372	MC	1	0.4699	0.5184	53.01	46.99	.	.	.
VR184907	MC	1	0.272	0.1351	72.8	27.2	.	.	.
VR184950	XI	1	0.2003	0.1056	79.97	20.03	.	.	.
VR185327	XI	1	0.2281	0.379	77.19	22.81	.	.	.
VR185484	MX	4	0.715	0.6229	58.77	21.52	11.4	6.05	2.25
VR185513	MX	1	0.2377	0.5213	76.23	23.77	.	.	.
VR186462	MX	4	0.9512	0.7097	52.14	19.05	14.43	10.32	4.07
VR186589	MX	4	0.6054	0.4813	56.05	28.6	14.12	1.23	0

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
VR186699	MC	1	0.1105	0.0617	88.95	11.05	.	.	.
VR186711	MC	1	0.5865	0.4255	41.35	58.65	.	.	.
VR186726	MC	1	0.5997	0.4506	40.03	59.97	.	.	.
VR186756	MC	1	0.3551	0.2263	64.49	35.51	.	.	.
VR186769	MC	1	0.0749	0.1033	92.51	7.49	.	.	.
VR186961	MC	1	0.4114	0.2902	58.86	41.14	.	.	.
VR187868	MC	1	0.0202	0.0088	97.98	2.02	.	.	.
VR187892	MC	1	0.5361	0.2034	46.39	53.61	.	.	.
VR187921	MC	1	0.0157	0.1127	98.43	1.57	.	.	.
VR188311	MC	1	0.7186	0.4424	28.14	71.86	.	.	.
VR189656	MX	4	0.3791	0.5557	77.04	13.38	5.97	1.87	1.74
VR190618	MC	1	0.3913	0.2761	60.87	39.13	.	.	.
VR190844	MC	1	0.3403	0.4516	65.97	34.03	.	.	.
VR191479	OE	4	1.0488	0.6234	44.73	27.89	11.1	10.33	5.96
VR213882	OE	4	0.7169	0.7134	60.53	19.56	10.47	6.55	2.89
VR213892	OE	4	0.8919	0.7517	51.26	26.1	10.64	6.19	5.81
VR216293	OE	4	0.3786	0.5577	68.09	27.47	3.28	0.82	0.35

Table D-2. Classical Item Statistics—Spring 2023 Algebra 2 FT Items

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
MDMA221007	MC	1	0.4392	0.3737	56.08	43.92	.	.	.
MDMA221008	XI	1	0.0671	0.4357	93.29	6.71	.	.	.
MDMA222043	XI	1	0.1022	0.2739	89.78	10.22	.	.	.
MDMA222207	MC	1	0.2726	0.3251	72.74	27.26	.	.	.
MDMA222209	XI	1	0.1549	0.3095	84.51	15.49	.	.	.
MDMA222217	MC	1	0.1986	0.4806	80.14	19.86	.	.	.
MDMA222253	MC	1	0.2061	0.2773	79.39	20.61	.	.	.
MDMA222283	MC	1	0.5018	0.3629	49.82	50.18	.	.	.
MDMA222307	MC	1	0.3622	0.4294	63.78	36.22	.	.	.
MDMA222409	MC	1	0.3321	0.2363	66.79	33.21	.	.	.
MDMA222529	MC	1	0.4915	0.3121	50.85	49.15	.	.	.
MDMA222542	MC	1	0.7019	0.3857	29.81	70.19	.	.	.
MDMA222567	MX	1	0.4876	0.4418	51.24	48.76	.	.	.
VR043891	MC	1	0.5208	0.4456	47.92	52.08	.	.	.
VR043990	MX	1	0.3107	0.4749	68.93	31.07	.	.	.
VR044127	MC	1	0.3735	0.0858	62.65	37.35	.	.	.
VR045203	MX	1	0.3831	0.4213	61.69	38.31	.	.	.
VR046532	MX	4	0.3391	0.5602	77	16.92	2.68	1.99	1.42

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
VR049533	MC	1	0.3907	0.2494	60.93	39.07	.	.	.
VR051868	MC	1	0.3032	0.3563	69.68	30.32	.	.	.
VR053064	MC	1	0.2617	0.1359	73.83	26.17	.	.	.
VR053298	MC	1	0.3259	0.2759	67.41	32.59	.	.	.
VR053951	XI	1	0.297	0.4241	70.3	29.7	.	.	.
VR054310	MC	1	0.4241	0.147	57.59	42.41	.	.	.
VR054355	XI	1	0.3836	0.5217	61.64	38.36	.	.	.
VR054547	MX	1	0.3127	0.3333	68.73	31.27	.	.	.
VR054621	MC	1	0.3355	0.3632	66.45	33.55	.	.	.
VR058256	MX	1	0.1055	0.4539	89.45	10.55	.	.	.
VR058726	MX	1	0.3245	0.6162	67.55	32.45	.	.	.
VR058740	MC	1	0.2682	0.5726	73.18	26.82	.	.	.
VR059077	MC	1	0.6112	0.3328	38.88	61.12	.	.	.
VR060013	XI	1	0.0256	0.302	97.44	2.56	.	.	.
VR066251	MX	1	0.1482	0.278	85.18	14.82	.	.	.
VR068047	MX	4	0.4073	0.6676	71.12	20.61	5.74	1.47	1.06
VR168779	MC	1	0.2409	0.3012	75.91	24.09	.	.	.
VR168948	XI	1	0.3298	0.4558	67.02	32.98	.	.	.
VR169019	XI	1	0.3252	0.3432	67.48	32.52	.	.	.
VR169670	MC	1	0.6289	0.4067	37.11	62.89	.	.	.
VR170733	MC	1	0.4272	0.4731	57.28	42.72	.	.	.
VR173816	MX	4	0.9056	0.6794	42.3	36.9	11.65	6.25	2.9
VR181045	MC	1	0.5906	0.2906	40.94	59.06	.	.	.
VR181100	XI	1	0.3907	0.4488	60.93	39.07	.	.	.
VR183890	MC	1	0.2997	0.4986	70.03	29.97	.	.	.
VR187464	MC	1	0.4846	0.2033	51.54	48.46	.	.	.
VR187646	XI	1	0.5398	0.4556	46.02	53.98	.	.	.
VR187653	MC	1	0.5236	0.4869	47.64	52.36	.	.	.
VR190148	MC	1	0.4036	0.1461	59.64	40.36	.	.	.
VR190308	XI	1	0.3385	0.4385	66.15	33.85	.	.	.

Table D-3. Classical Item Statistics—Spring 2023 ELA Grade 3 FT Items

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
MDE0322P11-1_01	MX	2	0.51	0.4318	60.39	28.23	11.38	.	.
MDE0322P11-1_02	MX	2	0.7804	0.459	39.9	42.16	17.94	.	.
MDE0322P11-1_03	XI	1	0.6871	0.4494	31.29	68.71	.	.	.
MDE0322P11-1_04	MX	2	0.3278	-0.0873	77.37	12.48	10.15	.	.
MDE0322P11-1_05	MC	1	0.3701	0.319	62.99	37.01	.	.	.
MDE0322P11-1_06	MX	2	0.6245	0.445	51.67	34.2	14.13	.	.
MDE0322P11-1_07	MX	2	0.5706	0.3145	50.15	42.63	7.22	.	.
MDE0322P11-2_01	MX	2	0.7557	0.3985	39.55	45.33	15.12	.	.
MDE0322P11-2_02	MX	2	0.6449	0.2948	53.36	28.79	17.85	.	.
MDE0322P11-2_03	MX	2	0.6576	0.3553	45.3	43.65	11.05	.	.
MDE0322P11-2_04	MC	1	0.3933	0.3215	60.67	39.33	.	.	.
MDE0322P11-2_05	MC	2	1.0809	0.4168	19.56	52.78	27.66	.	.
MDE0322P11-2_06	MC	1	0.2852	0.1544	71.48	28.52	.	.	.
MDE0322P11-X_01	XI	2	0.6174	0.6206	52.57	33.11	14.31	.	.
MDE0322P11-X_02	MX	2	0.5514	0.3662	66.47	11.92	21.61	.	.
MDE0322P11-X_03	MC	1	0.2633	0.2047	73.67	26.33	.	.	.
MDE0322P11-X_04	MC	1	0.514	0.3421	48.6	51.4	.	.	.
MDE0322P11-X_05	MC	1	0.3929	0.3401	60.71	39.29	.	.	.
MDE0322P11-X_06_Con	OE	3	0.9069	0.6983	35.55	40.93	20.79	2.73	.
MDE0322P11-X_06_Exp	OE	3	0.7231	0.6802	45.39	39.04	13.44	2.13	.
MDE0322P11-X_07_Con	OE	3	0.7812	0.6757	42.44	39.9	14.76	2.9	.
MDE0322P11-X_07_Exp	OE	3	0.5088	0.6037	60.66	28.92	9.29	1.13	.
MDE0322P16-1_01	MX	2	1.018	0.5666	39	20.2	40.8	.	.
MDE0322P16-1_02	XI	1	0.5251	0.3822	47.49	52.51	.	.	.
MDE0322P16-1_04	MX	2	0.4737	0.3912	60.42	31.8	7.78	.	.
MDE0322P16-1_05	XI	1	0.4339	0.3961	56.61	43.39	.	.	.
MDE0322P16-1_06	MC	2	0.8006	0.3661	36.75	46.43	16.81	.	.
MDE0322P16-1_07	MC	1	0.3398	0.0917	66.02	33.98	.	.	.
MDE0322P16-1_08	MX	2	1.1358	0.4816	22.85	40.73	36.43	.	.
MDE0322P16-1_09	MC	1	0.5785	0.4742	42.15	57.85	.	.	.
MDE0322P16-1_10	MX	2	0.7643	0.3672	46.55	30.48	22.97	.	.
MDE0322P16-2_01	MC	1	0.6968	0.4028	30.32	69.68	.	.	.
MDE0322P16-2_02	MC	1	0.4833	0.5027	51.67	48.33	.	.	.
MDE0322P16-2_03	MC	1	0.5314	0.385	46.86	53.14	.	.	.
MDE0322P16-2_04	MX	2	0.6624	0.4002	59.33	15.11	25.56	.	.
MDE0322P16-2_05	MX	2	0.8752	0.4604	47.88	16.73	35.39	.	.
MDE0322P16-2_06	MX	2	0.5951	0.3938	58.8	22.89	18.31	.	.
MDE0322P16-X_01	XI	1	0.2382	-0.1027	76.18	23.82	.	.	.
MDE0322P16-X_02	XI	2	0.8294	0.5183	42.38	32.3	25.32	.	.

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
MDE0322P16-X_03	MC	1	0.2413	-0.111	75.87	24.13	.	.	.
MDE0322P16-X_04_Con	OE	3	0.9114	0.7044	36.57	38.17	22.81	2.45	.
MDE0322P16-X_04_Exp	OE	3	0.6989	0.6963	43.79	43.42	11.91	0.88	.
MDE0322P16-X_05_Con	OE	3	0.6647	0.668	48.88	37.58	11.74	1.8	.
MDE0322P16-X_05_Exp	OE	3	0.6262	0.6711	49.56	39.78	9.13	1.52	.
VR052095	MC	2	0.8138	0.5319	42.04	34.54	23.42	.	.
VR061770	MC	1	0.4847	0.3738	51.53	48.47	.	.	.
VR061830	MC	1	0.4337	0.4186	56.63	43.37	.	.	.
VR061851	XI	1	0.6777	0.324	32.23	67.77	.	.	.
VR061968	MX	2	1.0752	0.5013	19.88	52.73	27.39	.	.
VR062024_Con	OE	3	0.4553	0.6311	60.69	33.57	5.25	0.48	.
VR062024_Exp	OE	3	0.3594	0.5671	68.71	27	3.93	0.36	.
VR062209	MC	1	0.4877	0.3005	51.23	48.77	.	.	.
VR065590	MX	2	1.1363	0.5357	38.07	10.23	51.7	.	.
VR127320	MC	1	0.5423	0.4171	45.77	54.23	.	.	.
VR187239	MC	1	0.5206	0.4168	47.94	52.06	.	.	.
VR187262	MC	1	0.4088	0.1871	59.12	40.88	.	.	.
VR187439	MX	2	0.5379	0.3703	60.6	25.01	14.39	.	.
VR187543	MX	2	0.5473	0.2954	58.96	27.36	13.68	.	.
VR187623	MX	2	0.3646	0.2498	74.08	15.39	10.54	.	.
VR187772	MX	2	0.5657	0.417	61.16	21.12	17.73	.	.
VR187806_Con	OE	3	0.6294	0.6969	50.42	36.94	11.91	0.72	.
VR187806_Exp	OE	3	0.4396	0.5833	61.41	33.69	4.41	0.48	.
VR190160	XI	1	0.5682	0.439	43.18	56.82	.	.	.
VR190282	MX	2	0.6696	0.3851	44.62	43.8	11.58	.	.
VR190306	MC	1	0.5943	0.3242	40.57	59.43	.	.	.
VR190315	MC	1	0.6554	0.4552	34.46	65.54	.	.	.
VR190355	XI	1	0.3197	0.3816	68.03	31.97	.	.	.
VR190408	XI	1	0.5803	0.4822	41.97	58.03	.	.	.
VR190474_Con	OE	3	0.5967	0.6757	49.74	41.93	7.25	1.08	.
VR190474_Exp	OE	3	0.4742	0.5958	58.99	35.64	4.33	1.04	.
VR190500	MX	2	0.8895	0.5456	42.19	26.66	31.14	.	.
VR190511	MC	1	0.5832	0.3614	41.68	58.32	.	.	.
VR190606	XI	2	1.0809	0.397	16.65	58.61	24.74	.	.
VR190627_Con	OE	3	0.5939	0.6969	49.9	41.13	8.65	0.32	.
VR190627_Exp	OE	3	0.4437	0.636	59.27	37.36	3.08	0.28	.
VR190854	MC	1	0.5326	0.4242	46.74	53.26	.	.	.
VR190879	MX	2	0.7423	0.4511	52.95	19.86	27.19	.	.
VR191002	MX	2	0.4983	0.3573	61.41	27.36	11.23	.	.

Note: ELA Open-Ended Hand-Scored items are divided into two parts

Table D-4. Classical Item Statistics—Spring 2023 ELA Grade 4 FT Items

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
MDE0422P11-1_01	MC	1	0.6827	0.5864	31.73	68.27	.	.	.
MDE0422P11-1_02	MC	1	0.4287	0.2581	57.13	42.87	.	.	.
MDE0422P11-1_03	MX	2	1.1582	0.2138	38.33	7.52	54.15	.	.
MDE0422P11-1_04	MX	2	1.0488	0.517	43.63	7.85	48.52	.	.
MDE0422P11-1_05	MX	2	0.7425	0.3204	58.86	8.03	33.11	.	.
MDE0422P11-1_06	MX	2	0.7843	0.2837	56.97	7.63	35.4	.	.
MDE0422P11-1_07	XI	2	0.4937	0.4185	60.96	28.71	10.33	.	.
MDE0422P11-2_01	XI	1	0.6929	0.5211	30.71	69.29	.	.	.
MDE0422P11-2_02	MX	2	0.6362	0.3744	66.1	4.17	29.73	.	.
MDE0422P11-2_03	MX	2	0.5232	0.3449	72.58	2.51	24.9	.	.
MDE0422P11-2_04	MX	2	1.2949	0.407	13.8	42.91	43.29	.	.
MDE0422P11-2_05	MX	2	0.5673	0.2304	62.73	17.81	19.46	.	.
MDE0422P11-2_06	MX	2	0.8228	0.0985	55.16	7.41	37.43	.	.
MDE0422P11-2_07	MC	1	0.6635	0.5166	33.65	66.35	.	.	.
MDE0422P11-X_01	MC	1	0.53	0.3345	47	53	.	.	.
MDE0422P11-X_02	MC	1	0.6479	0.4158	35.21	64.79	.	.	.
MDE0422P11-X_03	XI	2	0.6449	0.3	54.52	26.47	19.01	.	.
MDE0422P11-X_04	MX	2	0.8642	0.2784	33.26	47.07	19.68	.	.
MDE0422P11-X_05_Con	OE	3	0.8128	0.6782	41.88	38.96	15.15	4.01	.
MDE0422P11-X_05_Exp	OE	4	0.4693	0.5805	65.41	23.69	9.7	0.96	0.24
MDE0422P11-X_06_Con	OE	3	0.7189	0.6366	45.31	39.78	12.63	2.29	.
MDE0422P11-X_06_Exp	OE	4	0.5213	0.5765	55.09	38.49	5.61	0.8	0
MDE0422P13-1_01	MX	2	0.7302	0.3662	55.72	15.54	28.74	.	.
MDE0422P13-1_02	MC	1	0.4869	0.3972	51.31	48.69	.	.	.
MDE0422P13-1_03	MX	2	0.5783	0.3511	57.91	26.36	15.73	.	.
MDE0422P13-1_04	MX	2	0.6633	0.4945	58.14	17.39	24.47	.	.
MDE0422P13-1_05	MX	2	0.5515	0.4113	67	10.85	22.15	.	.
MDE0422P13-1_06	MC	2	1.0932	0.3066	18.51	53.66	27.83	.	.
MDE0422P13-1_08	MC	2	1.2306	0.4713	14.15	48.64	37.21	.	.
MDE0422P13-2_01	MX	2	0.6421	0.358	54.94	25.91	19.15	.	.
MDE0422P13-2_02	MC	1	0.6341	0.464	36.59	63.41	.	.	.
MDE0422P13-2_03	MC	1	0.4562	0.4349	54.38	45.62	.	.	.
MDE0422P13-2_04	MC	1	0.2353	0.0043	76.47	23.53	.	.	.
MDE0422P13-2_05	MC	1	0.3005	0.3546	69.95	30.05	.	.	.
MDE0422P13-2_06	MX	2	0.9754	0.4037	47.58	7.29	45.12	.	.
MDE0422P13-2_07	MX	2	0.4612	0.2097	62.54	28.79	8.67	.	.
MDE0422P13-X_01	MX	2	0.9426	0.5239	31.69	42.37	25.94	.	.
MDE0422P13-X_02	MX	2	0.3578	0.2853	72.9	18.42	8.68	.	.
MDE0422P13-X_03	XI	1	0.2182	0.2982	78.18	21.82	.	.	.

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
MDE0422P13-X_04	MC	1	0.4845	0.4158	51.55	48.45	.	.	.
MDE0422P13-X_05_Con	OE	3	0.8578	0.6923	35.34	47.12	13.98	3.57	.
MDE0422P13-X_05_Exp	OE	4	0.7744	0.6812	35.94	51.96	11.02	0.88	0.2
MDE0422P13-X_06_Con	OE	3	0.8045	0.6423	42.87	36.7	17.55	2.88	.
MDE0422P13-X_06_Exp	OE	4	0.6847	0.6266	43.39	45.71	10.02	0.8	0.08
VR048041	XI	1	0.6623	0.5513	33.77	66.23	.	.	.
VR060139	MC	1	0.4164	0.2987	58.36	41.64	.	.	.
VR060180	MX	2	0.9599	0.4814	48.4	7.2	44.39	.	.
VR060206	XI	2	0.8014	0.5901	41.77	36.32	21.91	.	.
VR060212	XI	1	0.488	0.2866	51.2	48.8	.	.	.
VR060216	XI	2	0.6606	0.3705	43.26	47.41	9.33	.	.
VR060261	MX	2	1.1929	0.5425	22.54	35.63	41.83	.	.
VR060276_Con	OE	3	0.7467	0.6556	40.9	45.22	12.2	1.68	.
VR060276_Exp	OE	4	0.8071	0.6524	33.89	52.94	11.8	1.28	0.08
VR060328	XI	2	0.4901	0.457	59.92	31.15	8.93	.	.
VR063273	MC	1	0.6855	0.3712	31.45	68.55	.	.	.
VR063280	MC	2	1.6291	0.5773	7.98	21.13	70.89	.	.
VR063286	MC	1	0.6603	0.4671	33.97	66.03	.	.	.
VR063450	MC	1	0.6953	0.5159	30.47	69.53	.	.	.
VR063470	XI	2	1.1895	0.583	25.82	29.42	44.77	.	.
VR063563	XI	1	0.4636	0.2444	53.64	46.36	.	.	.
VR063568	MC	2	1.3707	0.4859	12.01	38.91	49.08	.	.
VR063573	MC	1	0.7063	0.3709	29.38	70.63	.	.	.
VR063578_Con	OE	3	0.5725	0.6542	52.36	38.87	7.93	0.84	.
VR063578_Exp	OE	4	0.4283	0.5733	64.73	28.66	5.84	0.56	0.2
VR188440	MX	2	1.4631	0.6274	17.06	19.57	63.37	.	.
VR188502	MC	1	0.462	0.2203	53.8	46.2	.	.	.
VR188513	MX	2	0.6513	0.4539	53.03	28.82	18.16	.	.
VR188599	MX	2	1.0928	0.4848	37.54	15.63	46.83	.	.
VR188636	MC	2	0.8732	0.2501	25.59	61.51	12.9	.	.
VR188765	XI	2	1.1594	0.3434	29.43	25.2	45.37	.	.
VR188767_Con	OE	3	0.5062	0.6204	53.59	42.4	3.81	0.2	.
VR188767_Exp	OE	4	0.4373	0.5783	59.52	37.35	3.01	0.12	0
VR194392	MX	2	1.142	0.5217	36.09	13.62	50.29	.	.
VR194425	MC	1	0.4251	0.34	57.49	42.51	.	.	.
VR194585	MX	2	0.956	0.4557	48	8.39	43.61	.	.
VR194665	MX	2	0.531	0.3552	62.78	21.34	15.88	.	.
VR195094	MC	1	0.4331	0.3265	56.69	43.31	.	.	.
VR195497	MX	2	0.9037	0.367	38.7	32.23	29.07	.	.
VR195718	XI	2	0.9642	0.4697	38.8	25.98	35.22	.	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
VR195794_Con	OE	3	0.5216	0.6181	54.6	39.2	5.64	0.56	.
VR195794_Exp	OE	4	0.5424	0.5707	51.16	43.68	4.96	0.16	0.04

Note: ELA Open-Ended Hand-Scored items are divided into two parts

Table D-5. Classical Item Statistics—Spring 2023 ELA Grade 5 FT Items

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
MDE0521P07-1_01	MX	2	1.2993	0.5145	29.88	10.3	59.82	.	.
MDE0521P07-1_06	MC	2	1.0088	0.252	18.84	61.44	19.72	.	.
MDE0521P07-2_01	MC	1	0.3754	0.1761	62.46	37.54	.	.	.
MDE0521P07-2_04	MC	1	0.4536	0.2723	54.64	45.36	.	.	.
MDE0521P07-X_01	XI	2	0.9174	0.4522	29.73	48.81	21.46	.	.
MDE0521P07-X_02	MC	1	0.3699	0.3164	63.01	36.99	.	.	.
MDE0521P07-X_03	MX	2	1.0561	0.1825	16.3	61.8	21.9	.	.
MDE0521P07-X_04	MX	2	0.4416	0.4234	64.81	26.21	8.97	.	.
MDE0521P07-X_05_Con	OE	3	0.7807	0.6334	40.14	44.83	11.87	3.17	.
MDE0521P07-X_05_Exp	OE	4	0.2943	0.472	77.79	16.32	4.73	1	0.16
MDE0522P11-1_01	MC	1	0.8249	0.4205	17.51	82.49	.	.	.
MDE0522P11-1_02	MC	1	0.2652	0.1208	73.48	26.52	.	.	.
MDE0522P11-1_03	MX	2	0.6412	0.3098	56.13	23.61	20.25	.	.
MDE0522P11-1_04	MX	2	0.6973	0.4514	46.08	38.12	15.8	.	.
MDE0522P11-1_06	MC	1	0.4274	0.3146	57.26	42.74	.	.	.
MDE0522P11-1_07	MX	2	0.4991	0.2818	71.57	6.94	21.48	.	.
MDE0522P11-2_01	MC	1	0.73	0.4605	27	73	.	.	.
MDE0522P11-2_02	MC	1	0.355	0.0628	64.5	35.5	.	.	.
MDE0522P11-2_03	MX	2	0.6319	0.2889	53.36	30.08	16.55	.	.
MDE0522P11-2_04	MX	2	0.6425	0.3601	56.58	22.59	20.83	.	.
MDE0522P11-2_05	MC	1	0.4443	0.2999	55.57	44.43	.	.	.
MDE0522P11-2_06	MX	2	0.8744	0.423	31.71	49.13	19.16	.	.
MDE0522P11-X_01	MX	2	0.5295	0.2075	61.78	23.49	14.73	.	.
MDE0522P11-X_02	MX	2	1.477	0.5749	12.6	27.11	60.29	.	.
MDE0522P11-X_03	MX	2	0.5911	0.3374	56.03	28.84	15.14	.	.
MDE0522P11-X_04	XI	2	0.4924	0.3251	69.12	12.52	18.36	.	.
MDE0522P11-X_05_Con	OE	3	0.8342	0.7049	42.33	35.88	17.82	3.96	.
MDE0522P11-X_05_Exp	OE	4	0.7817	0.6803	40.45	43.61	13.5	2.2	0.24
MDE0522P11-X_06_Con	OE	3	0.8891	0.6753	40.59	36.21	16.88	6.31	.
MDE0522P11-X_06_Exp	OE	4	0.668	0.5786	57.11	24.44	13.79	3.86	0.8
MDE0522P14-1_02	MX	2	0.4346	0.3729	70.91	14.71	14.38	.	.
MDE0522P14-1_03	MX	2	1.1091	0.495	40.4	8.28	51.32	.	.
MDE0522P14-1_04	MC	2	0.9182	0.3435	28.84	50.49	20.66	.	.

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
MDE0522P14-1_05	MC	1	0.4469	0.3276	55.31	44.69	.	.	.
MDE0522P14-1_06	MX	2	1.2148	0.5476	30.95	16.61	52.44	.	.
MDE0522P14-2_01	MC	1	0.8351	0.438	16.49	83.51	.	.	.
MDE0522P14-2_02	MC	1	0.479	0.2971	52.1	47.9	.	.	.
MDE0522P14-2_03	MX	2	0.5422	0.4838	71.07	3.65	25.28	.	.
MDE0522P14-2_04	MC	1	0.2544	0.087	74.56	25.44	.	.	.
MDE0522P14-2_05	MC	2	1.1936	0.5154	17.62	45.4	36.98	.	.
MDE0522P14-2_06	MX	2	0.5945	0.3432	66.16	8.24	25.61	.	.
MDE0522P14-2_07	MC	2	0.9958	0.187	20.66	59.1	20.24	.	.
MDE0522P14-X_01	MC	1	0.2683	-0.0023	73.17	26.83	.	.	.
MDE0522P14-X_02	MX	2	0.8227	0.5533	43.16	31.41	25.43	.	.
MDE0522P14-X_03	XI	2	0.9578	0.5295	42.71	18.8	38.49	.	.
MDE0522P14-X_04	MC	1	0.5725	0.4088	42.75	57.25	.	.	.
MDE0522P14-X_05	MC	1	0.6104	0.449	38.96	61.04	.	.	.
MDE0522P14-X_06_Con	OE	3	0.9179	0.65	35.26	42.19	18.07	4.49	.
MDE0522P14-X_06_Exp	OE	4	0.8462	0.622	36.78	45.03	15.42	2.32	0.44
MDE0522P14-X_07_Con	OE	3	0.9398	0.6941	35.98	40.07	17.93	6.02	.
MDE0522P14-X_07_Exp	OE	4	0.927	0.6669	27.08	56.08	14.24	2.29	0.32
VR057534	MC	1	0.4788	0.2673	52.12	47.88	.	.	.
VR057587	XI	2	0.9174	0.6616	42.42	23.42	34.16	.	.
VR057594	XI	1	0.5467	0.3841	45.33	54.67	.	.	.
VR058032	MC	2	1.0904	0.2854	12.71	65.53	21.76	.	.
VR058080	XI	2	0.8675	0.27	45.21	22.82	31.96	.	.
VR058083_Con	OE	3	1.0862	0.6904	25.09	47.29	21.52	6.09	.
VR058083_Exp	OE	4	1.1082	0.6638	19.28	55.39	21.04	3.81	0.48
VR062724	MC	1	0.6472	0.3977	35.28	64.72	.	.	.
VR062859	MC	1	0.3923	0.3838	60.77	39.23	.	.	.
VR062884	MC	1	0.6741	0.459	32.59	67.41	.	.	.
VR063153	MX	2	1.0618	0.5941	38.04	17.74	44.22	.	.
VR063161	MC	2	0.9869	0.3316	19.87	61.58	18.55	.	.
VR063176	MC	2	1.1923	0.1913	8.96	62.86	28.18	.	.
VR063234	MX	2	1.1251	0.4067	18.25	50.98	30.76	.	.
VR063246_Con	OE	3	0.5941	0.6285	51.24	39.11	8.65	1	.
VR063246_Exp	OE	4	0.554	0.6226	52.68	40.39	5.96	0.76	0.2
VR066488	MX	2	1.365	0.519	14.4	34.7	50.9	.	.
VR069971	MC	1	0.754	0.4576	24.6	75.4	.	.	.
VR070183	MC	1	0.6371	0.4824	36.29	63.71	.	.	.
VR127707	MC	1	0.8516	0.4293	14.84	85.16	.	.	.
VR182838	MX	2	1.3912	0.5976	20.41	20.07	59.52	.	.
VR182994	MX	2	0.7861	0.3651	48.33	24.73	26.94	.	.

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
VR183610	MX	2	0.986	0.5237	33.11	35.18	31.71	.	.
VR183840	MX	2	1.1227	0.4107	37.54	12.65	49.81	.	.
VR183990	MX	2	0.774	0.4112	53.07	16.47	30.47	.	.
VR184090_Con	OE	3	0.9179	0.6592	34.6	42.77	18.86	3.76	.
VR184090_Exp	OE	4	0.9423	0.6435	27.95	52.66	16.78	2.4	0.2

Note: ELA Open-Ended Hand-Scored items are divided into two parts

Table D-6. Classical Item Statistics—Spring 2023 ELA Grade 6 FT Items

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
MDE0622P12-1_01	MC	1	0.6115	0.3219	38.85	61.15	.	.	.
MDE0622P12-1_02	MC	1	0.6422	0.4273	35.78	64.22	.	.	.
MDE0622P12-1_03	MC	1	0.5394	0.4444	46.06	53.94	.	.	.
MDE0622P12-1_04	MX	2	0.6792	0.3488	57	18.07	24.93	.	.
MDE0622P12-1_06	MC	1	0.6717	0.3595	32.83	67.17	.	.	.
MDE0622P12-1_07	XI	2	0.5343	0.3127	62.29	21.99	15.72	.	.
MDE0622P12-1_08	MX	2	0.5377	0.3567	66.58	13.07	20.35	.	.
MDE0622P12-2_01	MC	2	1.3111	0.4511	10.51	47.87	41.62	.	.
MDE0622P12-2_02	MX	2	1.1711	0.4204	36.87	9.14	53.99	.	.
MDE0622P12-2_03	MC	1	0.6094	0.3164	39.06	60.94	.	.	.
MDE0622P12-2_04	MC	1	0.6016	0.2736	39.84	60.16	.	.	.
MDE0622P12-2_05	MX	2	0.8255	0.4658	54.12	9.21	36.67	.	.
MDE0622P12-2_06	MC	1	0.7242	0.3805	27.58	72.42	.	.	.
MDE0622P12-2_07	MX	2	0.7719	0.1901	48.23	26.35	25.42	.	.
MDE0622P12-X_01	XI	2	0.7965	0.4337	30.2	59.95	9.85	.	.
MDE0622P12-X_02	MC	1	0.5001	0.3343	49.99	50.01	.	.	.
MDE0622P12-X_03	XI	2	1.2475	0.481	21.46	32.34	46.2	.	.
MDE0622P12-X_04	MX	2	0.7538	0.5224	53.61	17.4	28.99	.	.
MDE0622P12-X_05_Con	OE	3	1.3874	0.7232	22.52	31.05	31.61	14.82	.
MDE0622P12-X_05_Exp	OE	4	1.4159	0.7165	22.32	31.01	31.41	13.3	1.96
MDE0622P12-X_06_Con	OE	3	1.1848	0.7395	29.57	34.31	24.19	11.93	.
MDE0622P12-X_06_Exp	OE	4	0.9719	0.6965	43.83	27.28	19.2	7.23	2.45
MDE0622P14-1_01	MC	1	0.5833	0.3074	41.67	58.33	.	.	.
MDE0622P14-1_02	MX	2	0.9829	0.3459	45.6	10.52	43.89	.	.
MDE0622P14-1_03	XI	2	0.6213	0.465	63.95	9.98	26.08	.	.
MDE0622P14-1_04	MC	2	1.0507	0.2683	18.46	58.02	23.52	.	.
MDE0622P14-1_05	MC	1	0.6808	0.4429	31.92	68.08	.	.	.
MDE0622P14-1_06	MX	2	0.6503	0.3449	64.61	5.75	29.64	.	.
MDE0622P14-1_07	MC	1	0.612	0.3161	38.8	61.2	.	.	.

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
MDE0622P14-1_08	MX	2	0.8074	0.4496	40.33	38.61	21.06	.	.
MDE0622P14-2_01	MX	2	0.5076	0.4191	71.86	5.52	22.62	.	.
MDE0622P14-2_02	MC	1	0.6584	0.3815	34.16	65.84	.	.	.
MDE0622P14-2_03	MC	1	0.8365	0.4287	16.35	83.65	.	.	.
MDE0622P14-2_04	MC	1	0.4162	0.1947	58.38	41.62	.	.	.
MDE0622P14-2_06	MC	1	0.6204	0.3713	37.96	62.04	.	.	.
MDE0622P14-2_07	XI	2	1.3715	0.485	8.51	45.82	45.66	.	.
MDE0622P14-X_01	MX	2	1.0762	0.4696	36.58	19.22	44.2	.	.
MDE0622P14-X_02	XI	2	1.1689	0.4504	13.71	55.69	30.6	.	.
MDE0622P14-X_04	MX	2	0.4414	0.2498	70.19	15.48	14.33	.	.
MDE0622P14-X_05_Con	OE	3	1.3387	0.7558	27.77	27.17	28.49	16.57	.
MDE0622P14-X_05_Exp	OE	4	1.2243	0.7323	25.6	36.24	29.7	7.06	1.4
MDE0622P14-X_06_Con	OE	3	0.9091	0.7351	36.94	39.3	19.67	4.09	.
MDE0622P14-X_06_Exp	OE	4	0.8421	0.7216	41.95	35.94	18.47	3.25	0.4
MDE0622P16-1_01	MC	1	0.4537	0.1561	54.63	45.37	.	.	.
MDE0622P16-1_03	MC	1	0.8941	0.326	10.59	89.41	.	.	.
MDE0622P16-1_04	MC	1	0.6652	0.3276	33.48	66.52	.	.	.
MDE0622P16-1_05	MC	1	0.6244	0.3171	37.56	62.44	.	.	.
MDE0622P16-1_06	MC	1	0.5526	0.3541	44.74	55.26	.	.	.
MDE0622P16-1_07	MX	2	0.5352	0.2396	67.39	11.69	20.92	.	.
MDE0622P16-1_08	MX	2	0.8197	0.2136	51.58	14.87	33.55	.	.
MDE0622P16-2_01	MX	2	0.842	0.2945	47.81	20.18	32.01	.	.
MDE0622P16-2_02	MC	1	0.4551	0.4657	54.49	45.51	.	.	.
MDE0622P16-2_03	MX	2	1.4411	0.5004	14.13	27.63	58.24	.	.
MDE0622P16-2_04	MX	2	0.7004	0.4716	55.13	19.71	25.17	.	.
MDE0622P16-2_05	MX	2	0.48	0.0943	68.18	15.64	16.18	.	.
MDE0622P16-2_06	MC	2	1.4076	0.4778	6.27	46.69	47.03	.	.
MDE0622P16-X_01	MX	2	0.7429	0.3661	49.42	26.88	23.71	.	.
MDE0622P16-X_02	XI	2	1.1298	0.4805	36.1	14.83	49.08	.	.
MDE0622P16-X_03	MX	2	0.3865	0.2009	73.26	14.83	11.91	.	.
MDE0622P16-X_04	MX	2	0.5274	0.2844	63.75	19.76	16.49	.	.
MDE0622P16-X_05_Con	OE	3	0.8855	0.7295	39.4	37.51	18.23	4.86	.
MDE0622P16-X_05_Exp	OE	4	0.8378	0.706	41.08	38.67	16.43	3.01	0.8
MDE0622P16-X_06_Con	OE	3	1.0902	0.747	39.17	26.7	20.05	14.07	.
MDE0622P16-X_06_Exp	OE	4	1.0734	0.7136	44.31	22.77	18.32	10.47	4.13
VR059418	MX	2	1.3603	0.582	30.06	3.86	66.08	.	.
VR059488	MC	2	1.149	0.3777	15.49	54.12	30.39	.	.
VR060022	XI	2	0.9817	0.4567	23.51	54.82	21.67	.	.
VR060028_Con	OE	3	1.2531	0.7456	27.91	31.32	28.31	12.45	.
VR060028_Exp	OE	4	1.2579	0.7376	28.75	30.8	28.75	9.29	2.4

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
VR061219	MC	1	0.599	0.3807	40.1	59.9	.	.	.
VR061225	MX	2	0.8609	0.4304	48.99	15.93	35.08	.	.
VR061395	MX	2	1.2362	0.4674	17.45	41.47	41.07	.	.
VR061445	MX	2	0.9857	0.4168	45.54	10.35	44.11	.	.
VR061524	XI	2	0.9157	0.4836	25.08	58.27	16.65	.	.
VR061536	MX	2	0.9398	0.3346	30.75	44.52	24.73	.	.
VR061589_Con	OE	3	0.9169	0.7243	35.57	42.27	17.06	5.1	.
VR061589_Exp	OE	4	0.6042	0.6313	62.14	20.47	12.73	4.13	0.52

Note: ELA Open-Ended Hand-Scored items are divided into two parts

Table D-7. Classical Item Statistics—Spring 2023 ELA Grade 7 FT Items

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
MDE0722P11-1_01	MX	2	0.6836	0.4414	61.09	9.46	29.45	.	.
MDE0722P11-1_02	MX	2	1.2747	0.5104	26.93	18.66	54.41	.	.
MDE0722P11-1_04	MC	1	0.5229	0.3885	47.71	52.29	.	.	.
MDE0722P11-1_05	MX	2	1.0068	0.4493	32.24	34.84	32.92	.	.
MDE0722P11-1_06	MX	2	0.466	0.3233	67.83	17.74	14.43	.	.
MDE0722P11-1_07	XI	2	0.7247	0.3645	48.54	30.44	21.01	.	.
MDE0722P11-1_08	MC	1	0.5938	0.2778	40.62	59.38	.	.	.
MDE0722P11-2_01	MC	1	0.2568	0.265	74.32	25.68	.	.	.
MDE0722P11-2_02	MX	2	0.3896	0.0872	65.13	30.78	4.09	.	.
MDE0722P11-2_03	MX	2	0.8794	0.5705	41.29	29.49	29.22	.	.
MDE0722P11-2_04	MX	2	0.3572	0.1337	72.34	19.6	8.06	.	.
MDE0722P11-2_05	MX	2	0.4274	0.1994	73.24	10.79	15.98	.	.
MDE0722P11-2_06	MC	1	0.6052	0.3873	39.48	60.52	.	.	.
MDE0722P11-X_01	MX	2	0.7909	0.1991	33.27	54.37	12.36	.	.
MDE0722P11-X_02	MX	2	0.5083	0.3419	58.99	31.2	9.82	.	.
MDE0722P11-X_03	MX	2	0.5764	0.2971	63.69	14.98	21.33	.	.
MDE0722P11-X_04	XI	2	0.9665	0.4583	28.82	45.72	25.46	.	.
MDE0722P11-X_05	MC	2	0.9856	0.3067	23.24	54.96	21.8	.	.
MDE0722P11-X_06_Con	OE	3	1.2419	0.7038	19.6	42.78	31.47	6.16	.
MDE0722P11-X_06_Exp	OE	4	1.2101	0.6784	17.18	51.35	25.27	5.67	0.52
MDE0722P11-X_07_Con	OE	3	1.3803	0.728	16.78	38.99	33.64	10.58	.
MDE0722P11-X_07_Exp	OE	4	1.2986	0.7357	22.13	36.98	30.95	8.77	1.17
MDE0722P14-1_01	MX	2	0.8019	0.4885	43.44	32.94	23.63	.	.
MDE0722P14-1_02	MC	1	0.3529	0.2025	64.71	35.29	.	.	.
MDE0722P14-1_03	MX	2	1.1101	0.4692	42.4	4.19	53.41	.	.
MDE0722P14-1_04	MX	2	0.9663	0.5614	44.97	13.42	41.61	.	.
MDE0722P14-1_05	MC	1	0.5322	0.3458	46.78	53.22	.	.	.

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
MDE0722P14-1_06	MC	1	0.6751	0.4191	32.49	67.51	.	.	.
MDE0722P14-1_07	MX	2	0.9861	0.5014	44.4	12.58	43.02	.	.
MDE0722P14-2_01	MX	2	1.0107	0.5214	45.04	8.84	46.12	.	.
MDE0722P14-2_02	MC	1	0.4803	0.3133	51.97	48.03	.	.	.
MDE0722P14-2_03	MC	1	0.6261	0.4873	37.39	62.61	.	.	.
MDE0722P14-2_04	MX	2	0.9051	0.4202	49.07	11.35	39.58	.	.
MDE0722P14-2_05	MX	2	0.5588	0.2189	51.92	40.29	7.79	.	.
MDE0722P14-2_06	MX	2	0.6843	0.2744	52.37	26.83	20.8	.	.
MDE0722P14-2_07	XI	2	0.5397	0.4664	50.2	45.64	4.16	.	.
MDE0722P14-X_01	MX	2	0.9486	0.4716	27.75	49.65	22.6	.	.
MDE0722P14-X_02	XI	2	0.7533	0.3795	37.73	49.21	13.06	.	.
MDE0722P14-X_03	MC	1	0.4756	0.2519	52.44	47.56	.	.	.
MDE0722P14-X_04	XI	2	0.8196	0.3376	29.71	58.63	11.66	.	.
MDE0722P14-X_05_Con	OE	3	1.4405	0.7248	13.56	39.5	36.28	10.66	.
MDE0722P14-X_05_Exp	OE	4	1.1267	0.7289	32.14	32.7	26.71	7.24	1.21
MDE0722P14-X_06_Con	OE	3	1.5561	0.7223	13.36	34.87	34.58	17.19	.
MDE0722P14-X_06_Exp	OE	4	1.2143	0.7144	34.06	28.05	23.97	10.25	3.67
VR063038	MC	1	0.7276	0.4427	27.24	72.76	.	.	.
VR063043	MC	1	0.7886	0.339	21.14	78.86	.	.	.
VR063050	MX	2	1.1296	0.4847	40.53	5.98	53.49	.	.
VR063056	MX	2	1.3274	0.4017	15.69	35.87	48.44	.	.
VR063060	MC	1	0.5206	0.4269	47.94	52.06	.	.	.
VR063065	MC	2	1.258	0.4133	10.4	53.39	36.21	.	.
VR063077_Con	OE	3	1.2802	0.7016	17.53	45.88	27.62	8.97	.
VR063077_Exp	OE	4	1.1257	0.6952	27.62	41.23	23.26	6.73	1.16
VR180653	MC	1	0.5207	0.3384	47.93	52.07	.	.	.
VR181407	MX	2	0.4371	0.2376	70.28	15.73	13.99	.	.
VR181476	MC	1	0.4548	0.4322	54.52	45.48	.	.	.
VR181623	MX	2	0.8843	0.5517	47.47	16.63	35.9	.	.
VR181878	XI	2	0.602	0.4327	49	41.8	9.2	.	.
VR181935	MX	2	0.5307	0.3729	58.68	29.56	11.76	.	.
VR181949_Con	OE	3	1.0481	0.7051	35.94	32.25	22.86	8.95	.
VR181949_Exp	OE	4	0.9992	0.6912	38.95	33.37	18.93	6.3	2.45
VR186206	MC	1	0.4236	0.3849	57.64	42.36	.	.	.
VR186233	MX	2	1.1082	0.5165	31.73	25.72	42.55	.	.
VR186267	MX	2	1.0619	0.4983	25.65	42.51	31.84	.	.
VR186437	MX	2	0.8692	0.2096	47.35	18.38	34.27	.	.
VR186478	MX	2	0.5985	0.2119	67.52	5.12	27.37	.	.
VR186511	MX	2	0.9698	0.3963	25.63	51.76	22.61	.	.
VR186632_Con	OE	3	1.1161	0.6861	28.85	39.53	22.78	8.84	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
VR186632_Exp	OE	4	1.0952	0.6721	29.77	42.63	19.04	5.42	3.13
VR195392	MC	1	0.5171	0.3507	48.29	51.71	.	.	.
VR195576	MC	1	0.6343	0.3867	36.57	63.43	.	.	.
VR195738	MC	1	0.7549	0.4148	24.51	75.49	.	.	.
VR195755	MX	2	1.2439	0.4916	31.01	13.59	55.4	.	.
VR195765	MC	1	0.4012	0.194	59.88	40.12	.	.	.
VR195799	MX	2	0.6511	0.2547	65.23	4.43	30.34	.	.
VR195800	MX	2	1.3979	0.3108	6.41	47.39	46.2	.	.
VR195932_Con	OE	3	1.0865	0.7001	31.18	37.63	22.54	8.65	.
VR195932_Exp	OE	4	1.0352	0.6763	34.39	37.95	19.46	6.16	2.04

Note: ELA Open-Ended Hand-Scored items are divided into two parts

Table D-8. Classical Item Statistics—Spring 2023 ELA Grade 8 FT Items

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
MDE0822P10-1_01	MC	1	0.7298	0.3707	27.02	72.98	.	.	.
MDE0822P10-1_02	MX	2	1.3166	0.5069	30.95	6.44	62.61	.	.
MDE0822P10-1_03	MX	2	1.2072	0.5084	31.66	15.96	52.38	.	.
MDE0822P10-1_04	MX	2	1.464	0.5489	12.86	27.88	59.26	.	.
MDE0822P10-1_05	MC	1	0.5052	0.247	49.48	50.52	.	.	.
MDE0822P10-1_06	XI	2	0.8366	0.5325	38.07	40.21	21.73	.	.
MDE0822P10-1_07	MX	2	1.1655	0.3671	32.07	19.31	48.62	.	.
MDE0822P10-2_01	MX	2	0.7564	0.4845	58.73	6.9	34.37	.	.
MDE0822P10-2_02	MC	1	0.8355	0.4587	16.45	83.55	.	.	.
MDE0822P10-2_03	MX	2	0.9344	0.4083	45.97	14.62	39.41	.	.
MDE0822P10-2_04	MC	1	0.3614	0.3218	63.86	36.14	.	.	.
MDE0822P10-2_05	MX	2	1.1467	0.4411	20.54	44.26	35.21	.	.
MDE0822P10-2_06	XI	2	0.791	0.5706	42.78	35.35	21.88	.	.
MDE0822P10-X_01	MX	2	0.7839	0.4756	45.51	30.59	23.9	.	.
MDE0822P10-X_02	XI	2	1.0578	0.6412	26.62	40.99	32.39	.	.
MDE0822P10-X_03	MX	2	1.0355	0.4523	33.47	29.51	37.02	.	.
MDE0822P10-X_04	MX	2	0.4457	0.2092	68.93	17.58	13.5	.	.
MDE0822P10-X_05	MC	1	0.6125	0.5251	38.75	61.25	.	.	.
MDE0822P10-X_06_Con	OE	3	1.3261	0.7688	21.19	34.74	34.34	9.73	.
MDE0822P10-X_06_Exp	OE	4	1.1902	0.7292	24.13	41.38	27.46	5.43	1.61
MDE0822P10-X_07_Con	OE	3	1.2681	0.7443	27.69	31.21	27.69	13.4	.
MDE0822P10-X_07_Exp	OE	4	0.6395	0.5701	66.69	12.52	13.24	5.25	2.3
MDE0822P14-1_01	MC	1	0.5713	0.4815	42.87	57.13	.	.	.
MDE0822P14-1_02	MX	2	1.108	0.4608	40.28	8.63	51.08	.	.
MDE0822P14-1_03	MX	2	0.6773	0.3571	57.01	18.25	24.74	.	.

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
MDE0822P14-1_04	MC	1	0.6188	0.3813	38.12	61.88	.	.	.
MDE0822P14-1_05	MX	2	1.4198	0.3512	17.51	23	59.49	.	.
MDE0822P14-1_06	MC	1	0.4921	0.2938	50.79	49.21	.	.	.
MDE0822P14-2_01	MC	1	0.5416	0.3508	45.84	54.16	.	.	.
MDE0822P14-2_02	MC	1	0.5974	0.3589	40.26	59.74	.	.	.
MDE0822P14-2_03	MX	2	0.7557	0.3907	53.3	17.83	28.87	.	.
MDE0822P14-2_04	MX	2	0.8484	0.3948	42.37	30.41	27.21	.	.
MDE0822P14-2_05	MX	2	0.9547	0.4839	34.9	34.72	30.37	.	.
MDE0822P14-2_06	MX	2	0.8302	0.4965	52.27	12.45	35.28	.	.
MDE0822P14-2_07	MX	2	0.6237	0.2206	59.09	19.45	21.46	.	.
MDE0822P14-2_08	MX	2	1.2962	0.3597	14.43	41.52	44.05	.	.
MDE0822P14-X_01	XI	2	1.0851	0.5014	17.98	55.54	26.48	.	.
MDE0822P14-X_02	MC	1	0.626	0.5384	37.4	62.6	.	.	.
MDE0822P14-X_03	XI	2	1.0607	0.4944	18.98	55.97	25.05	.	.
MDE0822P14-X_04	MC	1	0.269	0.039	73.1	26.9	.	.	.
MDE0822P14-X_05_Con	OE	3	1.1598	0.7516	29.14	33.88	28.82	8.15	.
MDE0822P14-X_05_Exp	OE	4	1.0373	0.7131	27.46	46.85	21.28	3.33	1.08
MDE0822P14-X_06_Con	OE	3	1.1918	0.7423	27.14	35.86	27.67	9.33	.
MDE0822P14-X_06_Exp	OE	4	1.0101	0.7066	29.08	47.09	18.74	3.92	1.17
VR063356	MC	2	1.4458	0.4431	13.5	28.43	58.08	.	.
VR063374	MX	2	1.0272	0.3991	40.41	16.46	43.13	.	.
VR063385	MC	1	0.4235	0.3824	57.65	42.35	.	.	.
VR063408	MX	2	0.8603	0.3404	54.38	5.23	40.4	.	.
VR063474	MX	2	0.6063	0.3279	55.06	29.24	15.69	.	.
VR063518	MC	1	0.5561	0.4877	44.39	55.61	.	.	.
VR063522_Con	OE	3	1.1217	0.7341	27.68	39.73	25.31	7.27	.
VR063522_Exp	OE	4	0.9574	0.6887	29.21	51.55	14.58	3.62	1.04
VR145705	MC	1	0.5295	0.321	47.05	52.95	.	.	.
VR188601	MX	2	0.618	0.2811	58.69	20.82	20.49	.	.
VR188631	MX	2	0.8035	0.3627	53.13	13.4	33.48	.	.
VR188653	XI	2	0.5983	0.4616	51.76	36.65	11.59	.	.
VR189278	MX	2	1.3098	0.5891	28.99	11.03	59.98	.	.
VR189323	MC	1	0.514	0.3308	48.6	51.4	.	.	.
VR189337	XI	2	0.8471	0.3987	51.67	11.95	36.38	.	.
VR189360_Con	OE	3	0.9928	0.7551	35.4	36.56	21.4	6.64	.
VR189360_Exp	OE	4	0.7341	0.6843	50.6	31.86	12.39	3.82	1.33
VR190118	MC	1	0.6104	0.3728	38.96	61.04	.	.	.
VR190149	MX	2	1.117	0.4121	37.9	12.51	49.59	.	.
VR190172	MC	1	0.8154	0.4785	18.46	81.54	.	.	.
VR190189	XI	2	1.0527	0.623	32.01	30.72	37.28	.	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
VR190223	MC	1	0.5607	0.429	43.93	56.07	.	.	.
VR190397	XI	2	0.916	0.6041	36.96	34.48	28.56	.	.
VR190436_Con	OE	3	1.1611	0.7542	28.35	36.97	24.89	9.79	.
VR190436_Exp	OE	4	0.9847	0.7277	36.25	38.78	17.32	5.56	2.09
VR195381	MC	1	0.3226	0.1978	67.74	32.26	.	.	.
VR195404	MC	1	0.4521	0.2092	54.79	45.21	.	.	.
VR195619	MX	2	0.7975	0.4449	56.13	7.99	35.88	.	.
VR195642	MX	2	0.7308	0.4004	56.6	13.72	29.68	.	.
VR196113	XI	2	0.6944	0.5322	40.17	50.22	9.61	.	.
VR196123	MC	1	0.4015	0.2154	59.85	40.15	.	.	.
VR196135_Con	OE	3	1.0431	0.7383	33.19	37.25	21.63	7.93	.
VR196135_Exp	OE	4	0.8365	0.6947	45.55	33.63	13.89	5.48	1.45

Note: ELA Open-Ended Hand-Scored items are divided into two parts

Table D-9. Classical Item Statistics—Spring 2023 ELA Grade 10 FT Items

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
MDE1022P15-1-01	MX	2	1.0253	0.4135	45.17	7.14	47.7	.	.
MDE1022P15-1-02	MX	2	0.6726	0.3386	57.15	18.43	24.41	.	.
MDE1022P15-1-03	MC	1	0.3759	0.2661	62.41	37.59	.	.	.
MDE1022P15-1-04	XI	2	1.2633	0.3165	13.02	47.64	39.34	.	.
MDE1022P15-1-05	MX	2	0.6249	0.352	57.83	21.85	20.32	.	.
MDE1022P15-1-06	MC	1	0.2331	0.0163	76.69	23.31	.	.	.
MDE1022P15-2-01	MC	2	0.8229	0.2986	28.97	59.77	11.26	.	.
MDE1022P15-2-02	MX	2	0.9088	0.4284	27.49	54.14	18.37	.	.
MDE1022P15-2-03	MC	1	0.4429	0.1	55.71	44.29	.	.	.
MDE1022P15-2-04	MC	1	0.4976	0.3721	50.24	49.76	.	.	.
MDE1022P15-2-05	MX	2	0.2591	0.1772	76.05	22	1.95	.	.
MDE1022P15-2-06	XI	2	0.8936	0.3957	29.36	51.93	18.71	.	.
MDE1022P15-X-01	MC	2	0.4892	-0.0178	53.74	43.6	2.66	.	.
MDE1022P15-X-02	MC	1	0.3709	0.2405	62.91	37.09	.	.	.
MDE1022P15-X-03	MX	2	0.9971	0.1065	14.92	70.45	14.63	.	.
MDE1022P15-X-04	MX	2	0.6373	0.1285	50.9	34.48	14.62	.	.
MDE1022P15-X-05_Con	OE	3	1.1998	0.7138	33.08	27.93	24.92	14.07	.
MDE1022P15-X-05_Exp	OE	4	1.0748	0.6887	38.1	29.78	21.1	8.56	2.45
MDE1022P15-X-06_Con	OE	3	1.1566	0.7247	32.61	30.39	25.75	11.26	.
MDE1022P15-X-06_Exp	OE	4	0.8511	0.6603	49.39	25.95	16.46	6.54	1.65
MDE1022P17-1_01	MX	2	0.6717	0.3039	62.29	8.25	29.46	.	.
MDE1022P17-1_02	MC	2	1.2031	0.3876	14.43	50.83	34.74	.	.

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
MDE1022P17-1_03	MC	1	0.6494	0.3697	35.06	64.94	.	.	.
MDE1022P17-1_05	MX	2	0.8809	0.412	44.96	21.99	33.05	.	.
MDE1022P17-1_06	MX	2	0.312	-0.0606	71.34	26.13	2.54	.	.
MDE1022P17-1_07	MC	1	0.478	0.2629	52.2	47.8	.	.	.
MDE1022P17-2_01	MX	2	0.8382	0.2296	41.35	33.47	25.18	.	.
MDE1022P17-2_02	MX	2	0.6254	0.3684	47.66	42.15	10.19	.	.
MDE1022P17-2_04	MC	1	0.5732	0.2278	42.68	57.32	.	.	.
MDE1022P17-2_05	MC	1	0.2829	0.0324	71.71	28.29	.	.	.
MDE1022P17-2_06	MX	2	0.826	0.1528	33.93	49.55	16.52	.	.
MDE1022P17-2_07	MX	2	0.415	0.2981	68.65	21.21	10.15	.	.
MDE1022P17-X_01	MX	2	1.0683	0.5004	25.89	41.38	32.73	.	.
MDE1022P17-X_02	MX	2	1.2454	0.3986	25.74	23.98	50.28	.	.
MDE1022P17-X_03	XI	2	0.6046	0.222	45.41	48.72	5.87	.	.
MDE1022P17-X_04	MX	2	0.4865	0.4035	58.77	33.82	7.42	.	.
MDE1022P17-X_05_Con	OE	3	1.1599	0.6912	28.84	36.13	25.25	9.79	.
MDE1022P17-X_05_Exp	OE	4	0.9303	0.6299	42.77	30.57	19.45	5.28	1.93
MDE1022P17-X_06_Con	OE	3	1.4148	0.7236	23.59	29.12	29.52	17.77	.
MDE1022P17-X_06_Exp	OE	4	1.1721	0.6879	34.77	28.19	24.64	9.85	2.54
VR063289	MX	2	1.2778	0.4483	28.75	14.72	56.53	.	.
VR063378	MX	2	0.9793	0.3047	48.05	5.97	45.98	.	.
VR063486	MX	2	0.8267	0.2546	33.85	49.63	16.52	.	.
VR063553	MC	1	0.4646	0.3249	53.54	46.46	.	.	.
VR063652	XI	2	0.7163	0.3022	48.38	31.62	20.01	.	.
VR063712R_Con	OE	3	1.2185	0.6925	17.72	50.64	23.7	7.94	.
VR063712R_Exp	OE	4	1.1203	0.6667	16.56	59.54	19.93	3.25	0.72
VR066635	MX	2	1.2206	0.5575	33.3	11.33	55.37	.	.
VR066643	MX	2	1.4643	0.361	21.05	11.46	67.48	.	.
VR066662	MC	1	0.4857	0.4326	51.43	48.57	.	.	.
VR066770	MC	1	0.5216	0.4944	47.84	52.16	.	.	.
VR066777	MX	2	1.3074	0.5427	28.76	11.73	59.51	.	.
VR066837	MC	1	0.3872	0.1164	61.28	38.72	.	.	.
VR066956_Con	OE	3	1.3624	0.7014	20.81	33.63	34.07	11.49	.
VR066956_Exp	OE	4	1.141	0.6639	24.79	42.71	27	4.62	0.88
VR074055	MX	2	1.0146	0.5338	36.98	24.58	38.44	.	.
VR185147	MX	2	0.929	0.4121	51.79	3.52	44.69	.	.
VR185435	MX	2	1.4189	0.5325	20.26	17.6	62.15	.	.
VR185451	MC	1	0.5439	0.4606	45.61	54.39	.	.	.
VR185503	MC	1	0.527	0.3493	47.3	52.7	.	.	.
VR185510	MC	1	0.4757	0.1729	52.43	47.57	.	.	.
VR186110	MC	1	0.4935	0.2346	50.65	49.35	.	.	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
VR186122	MX	2	1.2265	0.5804	30.94	15.48	53.58	.	.
VR186176	XI	2	0.6286	0.3339	39.88	57.38	2.74	.	.
VR186214_Con	OE	3	1.2681	0.7283	20.18	43.61	25.44	10.77	.
VR186214_Exp	OE	4	1.1266	0.6989	21.18	50.72	23.35	3.74	1
VR193221	MX	2	1.2965	0.3375	30.78	8.78	60.44	.	.
VR193281	MX	2	1.2969	0.4043	33.37	3.58	63.06	.	.
VR193678	MX	2	1.093	0.2866	16.77	57.16	26.07	.	.
VR193703	MC	1	0.6957	0.3851	30.43	69.57	.	.	.
VR193826	MX	2	0.9755	0.4131	37.68	27.09	35.23	.	.
VR193891	MC	1	0.6265	0.4245	37.35	62.65	.	.	.
VR194346_Con	OE	3	1.2511	0.7324	19.33	45.25	26.39	9.03	.
VR194346_Exp	OE	4	1.0694	0.7015	22.26	53.27	20.46	3.29	0.72
VR211220	MC	1	0.5918	0.4271	40.82	59.18	.	.	.

Note: ELA Open-Ended Hand-Scored items are divided into two parts

Table D-10. Classical Item Statistics—Spring 2023 Geometry 1 FT Items

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
MDMGM22021	MX	1	0.1208	0.457	87.92	12.08	.	.	.
MDMGM22083	MC	1	0.589	0.2647	41.1	58.9	.	.	.
MDMGM22084	XI	1	0.1678	0.4489	83.22	16.78	.	.	.
MDMGM22246	MC	1	0.7362	0.3713	26.38	73.62	.	.	.
MDMGM22261	MC	1	0.4051	0.4897	59.49	40.51	.	.	.
MDMGM22269	XI	1	0.1481	0.5258	85.19	14.81	.	.	.
MDMGM22324	XI	1	0.1754	0.4614	82.46	17.54	.	.	.
MDMGM22359	XI	1	0.1245	0.4531	87.55	12.45	.	.	.
MDMGM22394	MC	1	0.4199	0.2281	58.01	41.99	.	.	.
MDMGM22492	MX	1	0.486	0.4591	51.4	48.6	.	.	.
MDMGM22493	MC	1	0.3624	0.4091	63.76	36.24	.	.	.
MDMGM22494	MC	1	0.3562	0.2469	64.38	35.62	.	.	.
MDMGM22499	MC	1	0.4389	0.2617	56.11	43.89	.	.	.
MDMGM22500	XI	1	0.1081	0.4529	89.19	10.81	.	.	.
MDMGM22501	MC	1	0.4546	0.4294	54.54	45.46	.	.	.
MDMGM22502	MC	1	0.2473	0.3188	75.27	24.73	.	.	.
MDMGM22558	XI	1	0.6851	0.1547	31.49	68.51	.	.	.
MDMGM22588	MX	1	0.0924	0.4784	90.76	9.24	.	.	.
MDMGM22596	OE	4	1.038	0.6653	48.48	22.14	14.04	7.77	7.57
MDMGM22598	OE	4	0.8961	0.6239	50.81	29.71	7.18	3.65	8.64
VR041933	MC	1	0.3924	0.3936	60.76	39.24	.	.	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
VR041939	XI	1	0.3202	0.4097	67.98	32.02	.	.	.
VR055057	MC	1	0.5142	0.5164	48.58	51.42	.	.	.
VR055279	MC	1	0.4402	0.3048	55.98	44.02	.	.	.
VR055454	MC	1	0.6481	0.3474	35.19	64.81	.	.	.
VR055637	MC	1	0.1273	0.27	87.27	12.73	.	.	.
VR055673	MC	1	0.6373	0.2064	36.27	63.73	.	.	.
VR055701	MC	1	0.4748	0.115	52.52	47.48	.	.	.
VR055710	MC	1	0.4495	0.1984	55.05	44.95	.	.	.
VR056392	MC	1	0.0555	0.4004	94.45	5.55	.	.	.
VR058729	MC	1	0.6268	0.095	37.32	62.68	.	.	.
VR058952	MC	1	0.0534	0.344	94.66	5.34	.	.	.
VR065897	XI	1	0.1772	0.5495	82.28	17.72	.	.	.
VR067531	XI	1	0.1222	0.5034	87.78	12.22	.	.	.
VR170727	MC	1	0.372	0.0097	62.8	37.2	.	.	.
VR170853	MC	1	0.4743	0.0357	52.57	47.43	.	.	.
VR171360	XI	1	0.1617	0.4269	83.83	16.17	.	.	.
VR172051	MX	1	0.5874	0.4227	41.26	58.74	.	.	.
VR176539	XI	1	0.1894	0.5007	81.06	18.94	.	.	.
VR179000	MC	1	0.2038	0.4609	79.62	20.38	.	.	.
VR179322	MC	1	0.6312	0.413	36.88	63.12	.	.	.
VR179338	MC	1	0.3126	0.3364	68.74	31.26	.	.	.
VR180287	MC	1	0.7212	0.433	27.88	72.12	.	.	.
VR181576	XI	1	0.2594	0.6208	74.06	25.94	.	.	.
VR182227	XI	1	0.4213	0.511	57.87	42.13	.	.	.
VR183087	MC	1	0.3565	0.2807	64.35	35.65	.	.	.
VR188350	MC	1	0.224	0.1216	77.6	22.4	.	.	.
VR201592	OE	4	0.7853	0.6265	57.63	22.6	9.28	4.6	5.89
VR219334	OE	4	0.3256	0.5757	80.34	11.19	5.05	2.4	1.02

Table D-11. Classical Item Statistics—Spring 2023 Mathematics Grade 3 FT Items

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
MDM0321004	OE	3	0.7274	0.6226	53.07	27.77	12.5	6.66	.
MDM0322060	MC	1	0.3395	0.5111	66.05	33.95	.	.	.
MDM0322061	XI	1	0.5823	0.5453	41.77	58.23	.	.	.
MDM0322062	MC	1	0.5909	0.553	40.91	59.09	.	.	.
MDM0322063	OE	3	1.7532	0.6699	27.04	13.58	16.4	42.98	.
MDM0322088	MX	1	0.4534	0.5134	54.66	45.34	.	.	.

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
MDM0322089	XI	1	0.5374	0.598	46.26	53.74	.	.	.
MDM0322090	XI	1	0.3357	0.4921	66.43	33.57	.	.	.
MDM0322093	MC	1	0.6081	0.4688	39.19	60.81	.	.	.
MDM0322094	XI	1	0.5023	0.5971	49.77	50.23	.	.	.
MDM0322095	MC	1	0.3525	0.4104	64.75	35.25	.	.	.
MDM0322149	XI	1	0.5638	0.4088	43.62	56.38	.	.	.
MDM0322150	MC	1	0.3143	0.2364	68.57	31.43	.	.	.
MDM0322151	XI	1	0.3891	0.4499	61.09	38.91	.	.	.
MDM0322169	MC	1	0.7101	0.5561	28.99	71.01	.	.	.
MDM0322170	MC	1	0.4337	0.434	56.63	43.37	.	.	.
MDM0322190	MC	1	0.5535	0.229	44.65	55.35	.	.	.
MDM0322230	MC	1	0.8746	0.4112	12.54	87.46	.	.	.
MDM0322232	MC	1	0.6516	0.5172	34.84	65.16	.	.	.
MDM0322233	XI	1	0.4224	0.4586	57.76	42.24	.	.	.
MDM0322234	XI	1	0.2976	0.5579	70.24	29.76	.	.	.
MDM0322277	XI	1	0.3524	0.5977	64.76	35.24	.	.	.
MDM0322279	XI	1	0.7731	0.4084	22.69	77.31	.	.	.
MDM0322355	XI	1	0.5634	0.5708	43.66	56.34	.	.	.
MDM0322356	MC	1	0.6828	0.4004	31.72	68.28	.	.	.
MDM0322406	OE	3	0.8169	0.6367	50.86	26.77	12.19	10.18	.
MDM0322407	MC	1	0.5382	0.4383	46.18	53.82	.	.	.
MDM0322420	MC	1	0.8171	0.3826	18.29	81.71	.	.	.
MDM0322421	MC	1	0.7125	0.4076	28.75	71.25	.	.	.
MDM0322422	MC	1	0.4622	0.4403	53.78	46.22	.	.	.
MDM0322423	MC	1	0.6552	0.4983	34.48	65.52	.	.	.
MDM0322424	XI	1	0.2865	0.6068	71.35	28.65	.	.	.
MDM0322445	MC	1	0.884	0.3835	11.6	88.4	.	.	.
MDM0322446	XI	1	0.7925	0.4796	20.75	79.25	.	.	.
MDM0322447	MC	1	0.6893	0.4995	31.07	68.93	.	.	.
MDM0322448	MC	1	0.5695	0.4438	43.05	56.95	.	.	.
MDM0322477	OE	3	2.0698	0.6631	20.85	9.16	12.16	57.83	.
MDM0322570	MC	1	0.4145	0.4318	58.55	41.45	.	.	.
MDM0322571	MC	1	0.5731	0.3621	42.69	57.31	.	.	.
MDM0322572	OE	3	1.3686	0.6156	25.12	30.77	26.24	17.87	.
MDM0322573	MC	1	0.8594	0.3906	14.06	85.94	.	.	.
MDM0322574	MC	1	0.5589	0.3977	44.11	55.89	.	.	.
MDM0322575	OE	3	0.8502	0.4755	47.81	26.37	18.82	7.01	.
VR043292	MC	1	0.7091	0.4378	29.09	70.91	.	.	.
VR043357	MC	1	0.6786	0.5835	32.14	67.86	.	.	.
VR043936	XI	1	0.3282	0.5014	67.18	32.82	.	.	.

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
VR043960	MC	1	0.7899	0.4479	21.01	78.99	.	.	.
VR044130	MX	1	0.6169	0.5577	38.31	61.69	.	.	.
VR046874	MC	1	0.493	0.5231	50.7	49.3	.	.	.
VR047191	XI	1	0.8212	0.4638	17.88	82.12	.	.	.
VR047452	MC	1	0.6684	0.3321	33.16	66.84	.	.	.
VR047494	XI	1	0.5655	0.6112	43.45	56.55	.	.	.
VR047885	MC	1	0.4075	0.4652	59.25	40.75	.	.	.
VR048003	MC	1	0.6865	0.4267	31.35	68.65	.	.	.
VR048024	XI	1	0.5046	0.498	49.54	50.46	.	.	.
VR048270	XI	1	0.8036	0.3393	19.64	80.36	.	.	.
VR048286	MC	1	0.8377	0.4126	16.23	83.77	.	.	.
VR049545	MC	1	0.846	0.4628	15.4	84.6	.	.	.
VR049589	MX	1	0.5997	0.5475	40.03	59.97	.	.	.
VR051117	MX	1	0.7246	0.5512	27.54	72.46	.	.	.
VR051329	MC	1	0.6549	0.6214	34.51	65.49	.	.	.
VR051344	MC	1	0.8222	0.3589	17.78	82.22	.	.	.
VR053125	XI	1	0.629	0.4772	37.1	62.9	.	.	.
VR053151	MX	1	0.2376	0.5476	76.24	23.76	.	.	.
VR053158	XI	1	0.3255	0.6246	67.45	32.55	.	.	.
VR053580	XI	1	0.6552	0.5321	34.48	65.52	.	.	.
VR053614	MC	1	0.3472	0.6098	65.28	34.72	.	.	.
VR054037	MC	1	0.505	0.5297	49.5	50.5	.	.	.
VR054104	XI	1	0.3201	0.4729	67.99	32.01	.	.	.
VR054111	MC	1	0.3321	0.5135	66.79	33.21	.	.	.
VR054160	MX	1	0.5484	0.197	45.16	54.84	.	.	.
VR054245	MC	1	0.8028	0.4558	19.72	80.28	.	.	.
VR054275	MC	1	0.6979	0.4348	30.21	69.79	.	.	.
VR054277	XI	1	0.2756	0.2429	72.44	27.56	.	.	.
VR054609	XI	1	0.4359	0.4827	56.41	43.59	.	.	.
VR054624	XI	1	0.3875	0.5878	61.25	38.75	.	.	.
VR054664	MC	1	0.6682	0.4723	33.18	66.82	.	.	.
VR054674	XI	1	0.5216	0.5581	47.84	52.16	.	.	.
VR054686	MC	1	0.2829	0.3995	71.71	28.29	.	.	.
VR054692	MC	1	0.7874	0.5113	21.26	78.74	.	.	.
VR055141	MC	1	0.6889	0.5668	31.11	68.89	.	.	.
VR055151	MC	1	0.5604	0.5696	43.96	56.04	.	.	.
VR056563	MC	1	0.4239	0.5273	57.61	42.39	.	.	.
VR056676	MX	1	0.6431	0.5768	35.69	64.31	.	.	.
VR056770	MX	1	0.5956	0.6386	40.44	59.56	.	.	.
VR056861	XI	1	0.2931	0.3925	70.69	29.31	.	.	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
VR056932	MC	1	0.7304	0.483	26.96	73.04	.	.	.
VR057038	MX	1	0.6129	0.493	38.71	61.29	.	.	.
VR057042	MC	1	0.5336	0.3028	46.64	53.36	.	.	.
VR059079	MC	1	0.6913	0.4204	30.87	69.13	.	.	.
VR059310	MC	1	0.6515	0.5542	34.85	65.15	.	.	.
VR059331	MX	1	0.6343	0.5746	36.57	63.44	.	.	.
VR063703	MC	1	0.7562	0.4656	24.38	75.62	.	.	.
VR063724	XI	1	0.0798	0.2288	92.02	7.98	.	.	.
VR063767	MC	1	0.6878	0.4323	31.22	68.78	.	.	.
VR064237	MC	1	0.7964	0.5013	20.36	79.64	.	.	.
VR065350	OE	3	1.1202	0.5274	48.26	8.71	25.79	17.25	.
VR065421	MC	1	0.5951	0.5321	40.49	59.51	.	.	.
VR067652	OE	3	1.1038	0.5129	15.74	68.68	5.02	10.55	.
VR067896	OE	3	1.0434	0.5071	37.26	31.76	20.35	10.63	.
VR067937	OE	3	0.9285	0.4664	44.16	32.41	9.85	13.59	.
VR165259	MC	1	0.7295	0.5285	27.05	72.95	.	.	.
VR168325	MX	1	0.3509	0.4807	64.91	35.09	.	.	.
VR168537	MC	1	0.593	0.4168	40.7	59.3	.	.	.
VR168583	MC	1	0.5419	0.471	45.81	54.19	.	.	.
VR175189	MC	1	0.4269	0.4738	57.31	42.69	.	.	.
VR175283	XI	1	0.5736	0.4934	42.64	57.36	.	.	.
VR175848	OE	3	0.7651	0.5834	51.66	31.83	4.85	11.66	.
VR179767	XI	1	0.301	0.5159	69.9	30.1	.	.	.
VR180469	MC	1	0.4866	0.5102	51.34	48.66	.	.	.
VR180629	XI	1	0.4344	0.5916	56.56	43.44	.	.	.
VR180672	XI	1	0.4577	0.5329	54.23	45.77	.	.	.
VR199748	OE	3	0.951	0.5236	50.22	17.2	19.86	12.73	.
VR216341	OE	3	0.9828	0.6284	37.75	40.16	8.14	13.95	.

Table D-12. Classical Item Statistics—Spring 2023 Mathematics Grade 4 FT Items

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
MDM0421002	XI	1	0.2157	0.5626	78.43	21.57	.	.	.
MDM0422077	XI	1	0.304	0.5462	69.6	30.4	.	.	.
MDM0422078	XI	1	0.0686	0.3742	93.14	6.86	.	.	.
MDM0422079	MX	1	0.7423	0.5026	25.77	74.23	.	.	.
MDM0422085	XI	1	0.5422	0.5567	45.78	54.22	.	.	.
MDM0422086	MC	1	0.3707	0.5305	62.93	37.07	.	.	.

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
MDM0422096	MX	1	0.5195	0.5866	48.05	51.95	.	.	.
MDM0422097	MX	1	0.4675	0.5706	53.25	46.75	.	.	.
MDM0422099	OE	3	0.5102	0.5074	73.34	9.64	9.68	7.34	.
MDM0422100	OE	3	0.9434	0.6379	49.77	22.98	10.38	16.87	.
MDM0422101	MC	1	0.5429	0.3449	45.71	54.29	.	.	.
MDM0422102	XI	1	0.6028	0.6141	39.72	60.28	.	.	.
MDM0422103	XI	1	0.3743	0.6356	62.57	37.43	.	.	.
MDM0422104	OE	3	1.2067	0.5701	47.39	12.72	11.73	28.16	.
MDM0422152	XI	1	0.2935	0.4317	70.65	29.35	.	.	.
MDM0422153	MC	1	0.5993	0.4975	40.07	59.93	.	.	.
MDM0422154	XI	1	0.1962	0.5403	80.38	19.62	.	.	.
MDM0422155	MC	1	0.4468	0.253	55.32	44.68	.	.	.
MDM0422156	MC	1	0.5372	0.6053	46.28	53.72	.	.	.
MDM0422157	XI	1	0.3264	0.3479	67.36	32.64	.	.	.
MDM0422158	MC	1	0.3221	0.392	67.79	32.21	.	.	.
MDM0422159	MC	1	0.8048	0.5001	19.52	80.48	.	.	.
MDM0422191	MX	1	0.5457	0.4651	45.43	54.57	.	.	.
MDM0422192	MC	1	0.5045	0.4076	49.55	50.45	.	.	.
MDM0422193	OE	3	1.1449	0.6814	42.74	18.93	19.44	18.89	.
MDM0422194	MC	1	0.4327	0.3375	56.73	43.27	.	.	.
MDM0422295	MC	1	0.6158	0.551	38.42	61.58	.	.	.
MDM0422296	OE	3	0.4616	0.5455	76.06	9.82	6.01	8.11	.
MDM0422297	MC	1	0.6142	0.2921	38.58	61.42	.	.	.
MDM0422298	MC	1	0.3279	0.4673	67.21	32.79	.	.	.
MDM0422299	XI	1	0.4652	0.6164	53.48	46.52	.	.	.
MDM0422300	XI	1	0.4936	0.6543	50.64	49.36	.	.	.
MDM0422369	MC	1	0.7043	0.4747	29.57	70.43	.	.	.
MDM0422370	MC	1	0.4948	0.3779	50.52	49.48	.	.	.
MDM0422371	OE	3	0.7776	0.5983	68	6.49	5.25	20.26	.
MDM0422372	OE	3	0.4746	0.4564	75.26	10.02	6.72	8	.
MDM0422482	MC	1	0.6169	0.5015	38.31	61.69	.	.	.
MDM0422483	MC	1	0.5448	0.5869	45.52	54.48	.	.	.
MDM0422484	MC	1	0.487	0.3347	51.3	48.7	.	.	.
MDM0422486	MC	1	0.4884	0.2947	51.16	48.84	.	.	.
MDM0422488	MC	1	0.7296	0.5166	27.04	72.96	.	.	.
MDM0422611	MC	1	0.4103	0.5021	58.97	41.03	.	.	.
MDM0422612	XI	1	0.2467	0.5853	75.33	24.67	.	.	.
VR046121	MX	1	0.6147	0.6105	38.53	61.47	.	.	.
VR046281	XI	1	0.5673	0.5451	43.27	56.73	.	.	.
VR046618	XI	1	0.7207	0.4311	27.93	72.07	.	.	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
VR046648	XI	1	0.782	0.3914	21.8	78.2	.	.	.
VR046795	MX	1	0.5052	0.6634	49.48	50.52	.	.	.
VR046925	MX	1	0.6118	0.6004	38.82	61.18	.	.	.
VR047016	MC	1	0.7559	0.5316	24.41	75.59	.	.	.
VR047330	XI	1	0.2721	0.414	72.79	27.21	.	.	.
VR048469	XI	1	0.6036	0.5038	39.64	60.36	.	.	.
VR048489	XI	1	0.2186	0.3606	78.14	21.86	.	.	.
VR048510	MX	1	0.8164	0.4282	18.36	81.64	.	.	.
VR048726	XI	1	0.6201	0.5563	37.99	62.01	.	.	.
VR048740	MC	1	0.7489	0.4765	25.11	74.89	.	.	.
VR049481	XI	1	0.7136	0.4595	28.64	71.36	.	.	.
VR049495	MX	1	0.8946	0.4385	10.54	89.46	.	.	.
VR049516	MC	1	0.5713	0.5649	42.87	57.13	.	.	.
VR049528	XI	1	0.5509	0.2736	44.91	55.09	.	.	.
VR049882	MX	1	0.4987	0.219	50.13	49.87	.	.	.
VR049899	OE	3	1.4019	0.6188	27.88	22.5	31.18	18.44	.
VR049956	XI	1	0.6106	0.5009	38.94	61.06	.	.	.
VR050022	MC	1	0.7269	0.4578	27.31	72.69	.	.	.
VR050102	MX	1	0.6061	0.4921	39.39	60.61	.	.	.
VR050129	MC	1	0.5289	0.6393	47.11	52.89	.	.	.
VR050311	MC	1	0.3467	0.474	65.33	34.67	.	.	.
VR050676	MC	1	0.4995	0.5162	50.05	49.95	.	.	.
VR050705	XI	1	0.5854	0.5773	41.46	58.54	.	.	.
VR050717	XI	1	0.3987	0.6267	60.13	39.87	.	.	.
VR050721	MC	1	0.5295	0.4277	47.05	52.95	.	.	.
VR051012	OE	3	1.1508	0.6033	46.91	17.57	9.03	26.48	.
VR051115	MX	1	0.5052	0.3532	49.48	50.52	.	.	.
VR051263	MC	1	0.8123	0.3946	18.77	81.23	.	.	.
VR051280	MC	1	0.8213	0.4123	17.87	82.13	.	.	.
VR052463	MC	1	0.6562	0.4502	34.38	65.62	.	.	.
VR054062	XI	1	0.448	0.5822	55.2	44.8	.	.	.
VR054079	XI	1	0.528	0.5501	47.2	52.8	.	.	.
VR054608	MC	1	0.6493	0.4891	35.07	64.93	.	.	.
VR054620	MC	1	0.5439	0.5244	45.61	54.39	.	.	.
VR054723	MX	1	0.4456	0.6087	55.45	44.56	.	.	.
VR054757	MC	1	0.3507	0.4443	64.93	35.07	.	.	.
VR055384	XI	1	0.66	0.4567	34	66	.	.	.
VR055619	OE	3	0.9445	0.5724	49.75	21.86	12.58	15.81	.
VR058442	OE	3	1.492	0.64	29.81	23.44	14.5	32.25	.
VR061206	MC	1	0.1482	0.0402	85.18	14.82	.	.	.

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
VR061612	MC	1	0.5573	0.384	44.27	55.73	.	.	.
VR061705	OE	3	0.9287	0.4671	52.78	12.36	24.06	10.8	.
VR063586	XI	1	0.4786	0.5116	52.14	47.86	.	.	.
VR063609	MC	1	0.8376	0.5101	16.24	83.76	.	.	.
VR063611	MC	1	0.6692	0.6139	33.08	66.92	.	.	.
VR063612	MC	1	0.5414	0.5721	45.86	54.14	.	.	.
VR065127	XI	1	0.3649	0.4793	63.51	36.49	.	.	.
VR065150	MC	1	0.3391	0.3735	66.09	33.91	.	.	.
VR065668	XI	1	0.3118	0.257	68.82	31.18	.	.	.
VR065893	MC	1	0.2688	0.1831	73.12	26.88	.	.	.
VR067047	MX	3	1.3246	0.7222	30.19	22.91	31.16	15.75	.
VR067072	MC	1	0.8728	0.4082	12.72	87.28	.	.	.
VR067198	XI	1	0.2336	0.4895	76.64	23.36	.	.	.
VR067517	OE	3	0.86	0.5934	52.09	25.45	6.85	15.62	.
VR068912	OE	3	0.8697	0.533	55.48	16.81	12.99	14.73	.
VR069389	MX	3	1.5806	0.6774	22.85	29.96	13.47	33.72	.
VR093562	MC	1	0.2609	0.2728	73.91	26.09	.	.	.
VR093585	OE	3	0.525	0.5622	71.81	10.79	10.5	6.9	.
VR094316	XI	1	0.3291	0.3833	67.09	32.91	.	.	.
VR165045	OE	3	0.7796	0.5732	67.13	6.07	8.49	18.3	.
VR165498	MC	1	0.6767	0.5011	32.33	67.67	.	.	.
VR166145	MC	1	0.2957	0.2985	70.43	29.57	.	.	.
VR167438	XI	1	0.1595	0.4918	84.05	15.95	.	.	.
VR167629	XI	1	0.4567	0.6469	54.33	45.67	.	.	.
VR167630	MC	1	0.7014	0.4676	29.86	70.14	.	.	.
VR167642	OE	3	1.1909	0.6173	29.64	29.84	32.31	8.21	.
VR167692	OE	3	1.5316	0.4629	30.63	9.16	36.62	23.59	.
VR167735	MC	1	0.5124	0.5785	48.76	51.24	.	.	.
VR167785	OE	3	0.6678	0.5936	59.67	19.59	15.03	5.71	.
VR168053	OE	3	0.4609	0.5641	74.51	14.46	1.48	9.56	.
VR172181	MC	1	0.675	0.62	32.5	67.5	.	.	.
VR216523	OE	3	1.5476	0.6123	27.4	27.99	7.07	37.54	.

Table D-13. Classical Item Statistics—Spring 2023 Mathematics Grade 5 FT Items

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
MDM0521007	XI	1	0.3173	0.5563	68.27	31.73	.	.	.
MDM0522115	OE	3	1.5056	0.6469	27.71	24.7	16.92	30.67	.
MDM0522116	XI	1	0.3418	0.5077	65.82	34.18	.	.	.
MDM0522117	XI	1	0.3546	0.5784	64.54	35.46	.	.	.
MDM0522118	XI	1	0.166	0.5238	83.4	16.6	.	.	.
MDM0522119	XI	1	0.6099	0.3888	39.01	60.99	.	.	.
MDM0522128	XI	1	0.6201	0.443	37.99	62.01	.	.	.
MDM0522129	MC	1	0.7622	0.4512	23.78	76.22	.	.	.
MDM0522130	XI	1	0.3067	0.4908	69.33	30.67	.	.	.
MDM0522132	OE	3	1.0944	0.6634	53.17	9.36	12.32	25.15	.
MDM0522133	MC	1	0.4117	0.3093	58.83	41.17	.	.	.
MDM0522134	XI	1	0.2786	0.6108	72.14	27.86	.	.	.
MDM0522172	MC	1	0.2875	0.3944	71.25	28.75	.	.	.
MDM0522173	XI	1	0.4032	0.5794	59.68	40.32	.	.	.
MDM0522174	MC	1	0.4859	0.4022	51.41	48.59	.	.	.
MDM0522195	MC	1	0.4677	0.4748	53.23	46.77	.	.	.
MDM0522196	MX	1	0.477	0.4602	52.3	47.7	.	.	.
MDM0522197	XI	1	0.5858	0.4362	41.42	58.58	.	.	.
MDM0522198	MC	1	0.5036	0.3151	49.64	50.36	.	.	.
MDM0522199	MC	1	0.5764	0.507	42.36	57.64	.	.	.
MDM0522200	XI	1	0.1714	0.5347	82.86	17.14	.	.	.
MDM0522235	MC	1	0.6383	0.47	36.17	63.83	.	.	.
MDM0522236	OE	3	1.1282	0.6253	41.7	25.44	11.19	21.67	.
MDM0522237	OE	3	1.512	0.6243	35.72	14.85	11.94	37.49	.
MDM0522325	MC	1	0.4557	0.3959	54.43	45.57	.	.	.
MDM0522326	MC	1	0.5063	0.4484	49.37	50.63	.	.	.
MDM0522327	MX	1	0.6223	0.6251	37.77	62.23	.	.	.
MDM0522328	XI	1	0.5691	0.4425	43.09	56.91	.	.	.
MDM0522329	MX	1	0.6498	0.4143	35.02	64.98	.	.	.
MDM0522331	XI	1	0.3889	0.553	61.11	38.89	.	.	.
MDM0522332	XI	1	0.4297	0.5394	57.03	42.97	.	.	.
MDM0522333	MX	1	0.4711	0.589	52.89	47.11	.	.	.
MDM0522383	MC	1	0.6073	0.5305	39.27	60.73	.	.	.
MDM0522384	MC	1	0.6527	0.451	34.73	65.27	.	.	.
MDM0522385	MC	1	0.702	0.4775	29.8	70.2	.	.	.
MDM0522386	MC	1	0.5884	0.4442	41.16	58.84	.	.	.
MDM0522387	MX	1	0.7718	0.3905	22.82	77.18	.	.	.
MDM0522388	MC	1	0.5037	0.0517	49.63	50.37	.	.	.
MDM0522389	MC	1	0.5061	0.3594	49.39	50.61	.	.	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
MDM0522391	XI	1	0.5532	0.5928	44.68	55.32	.	.	.
MDM0522392	MC	1	0.6445	0.3761	35.55	64.45	.	.	.
MDM0522450	MC	1	0.419	0.2797	58.1	41.9	.	.	.
MDM0522451	MC	1	0.3789	0.2521	62.11	37.89	.	.	.
MDM0522452	MX	1	0.3923	0.6344	60.77	39.23	.	.	.
MDM0522453	XI	1	0.4054	0.5717	59.46	40.54	.	.	.
MDM0522455	MC	1	0.2273	0.4613	77.27	22.73	.	.	.
MDM0522456	XI	1	0.6899	0.4456	31.01	68.99	.	.	.
MDM0522457	MC	1	0.4849	0.3864	51.51	48.49	.	.	.
MDM0522458	OE	3	1.0847	0.5757	54.07	9.64	10.05	26.24	.
MDM0522468	MC	1	0.5469	0.2786	45.31	54.69	.	.	.
MDM0522469	XI	1	0.1796	0.4957	82.04	17.96	.	.	.
MDM0522470	OE	3	0.7715	0.6428	52.74	25.58	13.48	8.2	.
VR047978	MC	1	0.5055	0.5771	49.45	50.55	.	.	.
VR048053	XI	1	0.4194	0.4093	58.06	41.94	.	.	.
VR048060	MX	1	0.1589	0.248	84.11	15.89	.	.	.
VR048797	XI	1	0.6775	0.4447	32.25	67.75	.	.	.
VR049423	MC	1	0.0813	0.2259	91.87	8.13	.	.	.
VR049431	MC	1	0.3413	0.218	65.87	34.13	.	.	.
VR049479	XI	1	0.2268	0.5695	77.32	22.68	.	.	.
VR049612	MC	1	0.3036	0.4629	69.64	30.36	.	.	.
VR050426	MC	1	0.4534	0.3867	54.66	45.34	.	.	.
VR051595	MX	1	0.2707	0.6148	72.93	27.07	.	.	.
VR051691	XI	1	0.1717	0.4292	82.83	17.17	.	.	.
VR051708	MC	1	0.4716	0.4391	52.84	47.16	.	.	.
VR051936	MC	1	0.5649	0.601	43.51	56.49	.	.	.
VR051988	XI	1	0.2983	0.4314	70.17	29.83	.	.	.
VR052127	XI	1	0.187	0.3329	81.3	18.7	.	.	.
VR054138	XI	1	0.3409	0.6297	65.91	34.09	.	.	.
VR054185	MC	1	0.5093	0.5018	49.07	50.93	.	.	.
VR054211	MX	1	0.4014	0.5479	59.86	40.14	.	.	.
VR054238	XI	1	0.4104	0.5645	58.96	41.04	.	.	.
VR054311	MX	1	0.3438	0.4258	65.62	34.38	.	.	.
VR054325	MX	4	1.2029	0.7137	44	19.32	16.3	13.16	7.22
VR054363	XI	1	0.0826	0.1358	91.74	8.26	.	.	.
VR054813	MX	1	0.25	0.4114	75	25	.	.	.
VR054930	XI	1	0.4105	0.4546	58.95	41.05	.	.	.
VR055383	XI	1	0.3274	0.6585	67.26	32.74	.	.	.
VR055485	XI	1	0.1327	0.5683	86.73	13.27	.	.	.
VR055617	MX	1	0.0999	0.4768	90.01	9.99	.	.	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
VR055800	MC	1	0.3751	0.2356	62.49	37.51	.	.	.
VR056023	MC	1	0.3307	0.478	66.93	33.07	.	.	.
VR056062	XI	1	0.3154	0.5182	68.46	31.54	.	.	.
VR056356	MC	1	0.0917	0.2852	90.83	9.17	.	.	.
VR056723	MC	1	0.4436	0.2865	55.64	44.36	.	.	.
VR056833	MC	1	0.5584	0.608	44.16	55.84	.	.	.
VR057016	XI	1	0.4551	0.6099	54.49	45.51	.	.	.
VR057046	MX	1	0.3956	0.5146	60.44	39.56	.	.	.
VR057117	MC	1	0.4639	0.3842	53.61	46.39	.	.	.
VR057272	MC	1	0.2629	0.3892	73.71	26.29	.	.	.
VR058301	MX	1	0.5464	0.4677	45.36	54.64	.	.	.
VR059649	MC	1	0.4591	0.2544	54.09	45.91	.	.	.
VR059706	MX	3	0.9672	0.5895	31.44	46.28	16.41	5.87	.
VR060136	XI	1	0.2178	0.2915	78.22	21.78	.	.	.
VR165049	MX	1	0.3793	0.5854	62.07	37.93	.	.	.
VR165297	MC	1	0.4372	0.2349	56.28	43.72	.	.	.
VR165315	MC	1	0.3809	0.5213	61.91	38.09	.	.	.
VR172478	MC	1	0.3174	0.1813	68.26	31.74	.	.	.
VR184284	OE	4	0.6331	0.5692	76.53	4.06	4.41	9.6	5.41

Table D-14. Classical Item Statistics—Spring 2023 Mathematics Grade 6 FT Items

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
MDM0622069	XI	1	0.5617	0.5349	43.83	56.17	.	.	.
MDM0622070	MC	1	0.2403	0.2849	75.97	24.03	.	.	.
MDM0622071	XI	1	0.1022	0.488	89.78	10.22	.	.	.
MDM0622072	MC	1	0.4876	0.3746	51.24	48.76	.	.	.
MDM0622073	XI	1	0.4695	0.5815	53.05	46.95	.	.	.
MDM0622075	MC	1	0.3017	0.6092	69.83	30.17	.	.	.
MDM0622135	MC	1	0.803	0.3946	19.7	80.3	.	.	.
MDM0622136	XI	1	0.2416	0.0957	75.84	24.16	.	.	.
MDM0622139	XI	1	0.4951	0.4961	50.49	49.51	.	.	.
MDM0622140	XI	1	0.0783	0.4038	92.17	7.83	.	.	.
MDM0622142	XI	1	0.4861	0.6217	51.39	48.61	.	.	.
MDM0622143	XI	1	0.6076	0.5878	39.24	60.76	.	.	.
MDM0622145	XI	1	0.3455	0.5927	65.45	34.55	.	.	.
MDM0622146	XI	1	0.5198	0.5006	48.02	51.98	.	.	.
MDM0622147	MC	1	0.6029	0.4947	39.71	60.29	.	.	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
MDM0622161	MC	1	0.4143	0.3414	58.57	41.43	.	.	.
MDM0622162	MC	1	0.3044	0.0685	69.56	30.44	.	.	.
MDM0622163	XI	1	0.1839	0.3332	81.61	18.39	.	.	.
MDM0622164	XI	1	0.597	0.5011	40.3	59.7	.	.	.
MDM0622165	XI	1	0.1083	0.4509	89.17	10.83	.	.	.
MDM0622166	OE	4	1.0021	0.6171	33.42	43.97	15.06	4.09	3.46
MDM0622167	MX	1	0.3003	0.3043	69.97	30.03	.	.	.
MDM0622175	MC	1	0.3862	0.2184	61.38	38.62	.	.	.
MDM0622176	OE	4	0.7044	0.6602	60.22	22.3	9.08	3.63	4.77
MDM0622185	MC	1	0.2754	0.5895	72.46	27.54	.	.	.
MDM0622186	MX	1	0.4018	0.4595	59.82	40.18	.	.	.
MDM0622187	MC	1	0.2934	0.4721	70.66	29.34	.	.	.
MDM0622188	XI	1	0.2097	0.5992	79.03	20.97	.	.	.
MDM0622189	XI	1	0.2903	0.5394	70.97	29.03	.	.	.
MDM0622270	MC	1	0.15	0.365	85	15	.	.	.
MDM0622271	MX	1	0.5511	0.4798	44.89	55.11	.	.	.
MDM0622272	XI	1	0.2316	0.4651	76.84	23.16	.	.	.
MDM0622273	XI	1	0.4848	0.4986	51.52	48.48	.	.	.
MDM0622336	MC	1	0.2756	0.5482	72.44	27.56	.	.	.
MDM0622337	MX	1	0.2664	0.539	73.36	26.64	.	.	.
MDM0622338	MX	1	0.6405	0.5737	35.95	64.05	.	.	.
MDM0622339	MC	1	0.7474	0.3089	25.26	74.74	.	.	.
MDM0622340	MC	1	0.6435	0.4618	35.65	64.35	.	.	.
MDM0622341	XI	1	0.4157	0.5806	58.43	41.57	.	.	.
MDM0622353	XI	1	0.0833	0.1396	91.67	8.33	.	.	.
MDM0622390	XI	1	0.0955	0.4537	90.45	9.55	.	.	.
MDM0622402	OE	3	1.1523	0.6428	25.35	45.69	17.34	11.62	.
MDM0622454	XI	1	0.098	0.4471	90.2	9.8	.	.	.
MDM0622478	XI	1	0.3598	0.5037	64.02	35.98	.	.	.
MDM0622479	MC	1	0.6918	0.49	30.82	69.18	.	.	.
MDM0622480	XI	1	0.6583	0.4996	34.17	65.83	.	.	.
MDM0622481	OE	4	0.5206	0.5877	71.25	18.26	3.44	1.27	5.77
MDM0622581	MC	1	0.4701	0.5185	52.99	47.01	.	.	.
MDM0622582	MC	1	0.5233	0.6283	47.67	52.33	.	.	.
MDM0622583	MC	1	0.4387	0.4263	56.13	43.87	.	.	.
MDM0622584	OE	4	1.1268	0.6575	50.57	12.25	19.85	8.59	8.74
VR043358	MC	1	0.5736	0.2612	42.64	57.36	.	.	.
VR047126	XI	1	0.285	0.5523	71.5	28.5	.	.	.
VR047700	XI	1	0.2822	0.4738	71.78	28.22	.	.	.
VR049884	XI	1	0.4925	0.483	50.75	49.25	.	.	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
VR050428	XI	1	0.3851	0.552	61.49	38.51	.	.	.
VR053167	MC	1	0.3667	0.1869	63.33	36.67	.	.	.
VR053697	MC	1	0.5354	0.3369	46.46	53.54	.	.	.
VR053887	MC	1	0.6352	0.3932	36.48	63.52	.	.	.
VR053918	XI	1	0.2234	0.5818	77.66	22.34	.	.	.
VR053931	XI	1	0.2983	0.6209	70.17	29.83	.	.	.
VR054121	XI	1	0.213	0.6281	78.7	21.3	.	.	.
VR055053	XI	1	0.464	0.5313	53.6	46.4	.	.	.
VR055994	MC	1	0.2806	0.4697	71.94	28.06	.	.	.
VR056220	XI	1	0.1248	0.4761	87.52	12.48	.	.	.
VR056251	MX	1	0.2687	0.3289	73.13	26.87	.	.	.
VR056449	XI	1	0.347	0.6236	65.3	34.7	.	.	.
VR056536	OE	3	0.4153	0.6115	71.22	17.44	9.93	1.41	.
VR056665	OE	3	1.4795	0.6924	23.11	25.6	31.53	19.76	.
VR057400	MC	1	0.1346	-0.0586	86.54	13.46	.	.	.
VR057462	MX	1	0.2573	0.4602	74.27	25.73	.	.	.
VR062457	OE	3	0.5669	0.6378	65.31	16.03	15.31	3.35	.
VR062462	OE	3	0.7742	0.6207	49.62	30.7	12.32	7.36	.
VR062484	OE	3	2.0211	0.6447	17.38	12.2	21.37	49.06	.
VR062889	MC	1	0.3141	0.3938	68.59	31.41	.	.	.
VR062945	XI	1	0.1123	0.4735	88.77	11.23	.	.	.
VR062990	OE	3	0.755	0.6404	60.63	15.04	12.55	11.79	.
VR063010	MC	1	0.3417	0.1022	65.83	34.17	.	.	.
VR065908	MC	1	0.3936	0.5492	60.64	39.36	.	.	.
VR066268	MC	1	0.4966	0.459	50.34	49.66	.	.	.
VR066342	XI	1	0.1702	0.5481	82.98	17.02	.	.	.
VR066405	MC	1	0.2874	0.266	71.26	28.74	.	.	.
VR066407	MX	1	0.1328	0.4017	86.72	13.28	.	.	.
VR066421	OE	4	0.7236	0.6447	59.68	19.64	11.88	6.25	2.56
VR066487	XI	1	0.2346	0.5776	76.54	23.46	.	.	.
VR066497	OE	3	0.8106	0.6769	44.1	34.96	16.73	4.21	.
VR067462	XI	1	0.3061	0.4968	69.39	30.61	.	.	.
VR068002	MC	1	0.4818	0.4263	51.82	48.18	.	.	.
VR068013	MC	1	0.3118	0.5279	68.82	31.18	.	.	.
VR068154	MC	1	0.5807	0.3814	41.93	58.07	.	.	.
VR068208	MC	1	0.4096	0.3704	59.04	40.96	.	.	.
VR068217	MC	1	0.4071	0.2591	59.29	40.71	.	.	.
VR068720	MC	1	0.538	0.3295	46.2	53.8	.	.	.
VR069060	MC	1	0.3497	0.5673	65.03	34.97	.	.	.
VR078020	MX	4	1.1546	0.6792	36.02	32.47	15.5	12.05	3.96

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
VR096444	MX	3	1.065	0.6508	35.68	28.89	28.67	6.76	.
VR099788	MC	1	0.3307	0.386	66.93	33.07	.	.	.
VR099986	MC	1	0.3381	0.337	66.19	33.81	.	.	.
VR100028	MX	1	0.4404	0.4004	55.96	44.04	.	.	.
VR100124	MX	4	1.2317	0.6732	45.44	11.08	25.9	10.03	7.55
VR167611	MX	1	0.4118	0.5641	58.82	41.18	.	.	.
VR167631	XI	1	0.5661	0.634	43.39	56.61	.	.	.
VR167694	MX	1	0.1923	0.3966	80.77	19.23	.	.	.
VR167740	MC	1	0.674	0.3733	32.6	67.4	.	.	.
VR167752	MC	1	0.5878	0.4084	41.22	58.78	.	.	.
VR167753	XI	1	0.2769	0.621	72.31	27.69	.	.	.
VR167775	XI	1	0.1669	0.4007	83.31	16.69	.	.	.
VR168037	MC	1	0.2798	0.6084	72.02	27.98	.	.	.
VR168169	OE	4	1.2656	0.6786	36.4	21.89	26.22	9.72	5.77
VR168550	XI	1	0.1665	0.4469	83.35	16.65	.	.	.
VR168806	MC	1	0.4564	0.5106	54.36	45.64	.	.	.
VR168953	MX	1	0.3357	0.5257	66.43	33.57	.	.	.
VR169130	MC	1	0.5532	0.3926	44.68	55.32	.	.	.
VR169334	MC	1	0.3177	0.5081	68.23	31.77	.	.	.
VR170030	OE	3	0.8289	0.6647	55.24	19.11	13.15	12.49	.
VR170330	MC	1	0.4759	0.0683	52.41	47.59	.	.	.
VR177594	MC	1	0.616	0.5332	38.4	61.6	.	.	.

Table D-15. Classical Item Statistics—Spring 2023 Mathematics Grade 7 FT Items

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
MDM0721001	XI	1	0.0914	0.4038	90.86	9.14	.	.	.
MDM0721002	XI	1	0.2355	0.4153	76.45	23.55	.	.	.
MDM0721007	XI	1	0.071	0.468	92.9	7.1	.	.	.
MDM0721008	MC	1	0.1834	0.2609	81.66	18.34	.	.	.
MDM0722005	XI	1	0.1054	0.4612	89.46	10.54	.	.	.
MDM0722006	MC	1	0.0453	0.2869	95.47	4.53	.	.	.
MDM0722007	XI	1	0.1627	0.4742	83.73	16.27	.	.	.
MDM0722008	MC	1	0.2032	0.4856	79.68	20.32	.	.	.
MDM0722009	XI	1	0.2356	0.4761	76.44	23.56	.	.	.
MDM0722013	MC	1	0.4503	0.4586	54.97	45.03	.	.	.
MDM0722014	MC	1	0.3983	0.1484	60.17	39.83	.	.	.
MDM0722015	MC	1	0.3706	0.3802	62.94	37.06	.	.	.

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
MDM0722017	MC	1	0.0921	0.4327	90.79	9.21	.	.	.
MDM0722019	XI	1	0.2543	0.4187	74.57	25.43	.	.	.
MDM0722023	MC	1	0.6559	0.5438	34.41	65.59	.	.	.
MDM0722024	XI	1	0.0894	0.4584	91.06	8.94	.	.	.
MDM0722025	XI	1	0.0553	0.4362	94.47	5.53	.	.	.
MDM0722036	XI	1	0.2973	0.5366	70.27	29.73	.	.	.
MDM0722037	XI	1	0.104	0.4412	89.6	10.4	.	.	.
MDM0722038	MC	1	0.0162	0.1426	98.38	1.62	.	.	.
MDM0722039	XI	1	0.1516	0.5326	84.84	15.16	.	.	.
MDM0722040	OE	4	0.2771	0.519	81.79	12.21	3.25	1.99	0.76
MDM0722041	OE	4	1.0089	0.5722	57.6	12.9	12.1	5.81	11.59
MDM0722042	MC	1	0.298	0.1982	70.2	29.8	.	.	.
MDM0722054	MC	1	0.5397	0.0902	46.03	53.97	.	.	.
MDM0722055	MC	1	0.3563	0.1514	64.37	35.63	.	.	.
MDM0722056	OE	3	0.4419	0.6151	76.33	10.16	6.5	7.01	.
MDM0722141	OE	4	0.2819	0.5312	85.07	7.14	4.28	1.54	1.97
MDM0722183	MX	1	0.1109	0.4042	88.91	11.09	.	.	.
MDM0722256	XI	1	0.1833	0.4739	81.67	18.33	.	.	.
MDM0722258	OE	4	0.6132	0.5868	68.43	15.32	8	3.02	5.23
MDM0722342	OE	4	0.4002	0.5242	77.83	12.79	4.38	1.57	3.44
MDM0722343	MX	1	0.2395	0.3881	76.05	23.95	.	.	.
MDM0722344	XI	1	0.2007	0.3234	79.93	20.07	.	.	.
MDM0722345	OE	3	0.6557	0.6041	63.56	17.57	8.62	10.26	.
MDM0722364	XI	1	0.1026	0.2662	89.74	10.26	.	.	.
MDM0722365	XI	1	0.1355	0.5356	86.45	13.55	.	.	.
MDM0722366	XI	1	0.0477	0.3648	95.23	4.77	.	.	.
MDM0722373	MC	1	0.4125	0.1606	58.75	41.25	.	.	.
MDM0722374	MX	1	0.1129	0.3225	88.71	11.29	.	.	.
MDM0722375	MC	1	0.6135	0.3006	38.65	61.35	.	.	.
MDM0722376	MX	1	0.3288	0.4724	67.12	32.88	.	.	.
MDM0722377	XI	1	0.2176	0.3352	78.24	21.76	.	.	.
MDM0722398	MC	1	0.2166	0.1264	78.34	21.66	.	.	.
MDM0722399	XI	1	0.0814	0.3573	91.86	8.14	.	.	.
MDM0722405	MC	1	0.0874	0.3513	91.26	8.74	.	.	.
MDM0722471	MX	1	0.2065	0.1664	79.35	20.65	.	.	.
MDM0722472	MC	1	0.3097	0.0348	69.03	30.97	.	.	.
MDM0722473	MC	1	0.3194	0.4564	68.06	31.94	.	.	.
MDM0722523	MC	1	0.1254	0.3	87.46	12.54	.	.	.
MDM0722546	XI	1	0.153	0.5138	84.7	15.3	.	.	.
MDM0722547	MC	1	0.1456	0.4969	85.44	14.56	.	.	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
MDM0722585	XI	1	0.0928	0.4677	90.72	9.28	.	.	.
MDM0722586	MC	1	0.2372	0.1729	76.28	23.72	.	.	.
MDM0722587	MC	1	0.3457	0.3126	65.43	34.57	.	.	.
MDM0722609	MC	1	0.4214	0.4988	57.86	42.14	.	.	.
MDM0722642	XI	1	0.0585	0.4098	94.15	5.85	.	.	.
VR045814	MC	1	0.3465	0.268	65.35	34.65	.	.	.
VR045817	MC	1	0.299	0.2693	70.1	29.9	.	.	.
VR046263	XI	1	0.4863	0.5772	51.37	48.63	.	.	.
VR047524	XI	1	0.2715	0.5372	72.85	27.15	.	.	.
VR047735	MC	1	0.4164	0.3687	58.36	41.64	.	.	.
VR047768	MC	1	0.1797	0.1905	82.03	17.97	.	.	.
VR047802	MC	1	0.4074	0.2538	59.26	40.74	.	.	.
VR047887	MC	1	0.3606	0.4463	63.94	36.06	.	.	.
VR048001	MX	1	0.2561	0.3945	74.39	25.61	.	.	.
VR048038	MX	1	0.1379	0.5542	86.21	13.79	.	.	.
VR048165	MC	1	0.324	0.2763	67.6	32.41	.	.	.
VR048214	MC	1	0.3513	0.3376	64.87	35.13	.	.	.
VR048494	MC	1	0.0825	0.3133	91.75	8.25	.	.	.
VR049538	XI	1	0.1114	0.4926	88.86	11.14	.	.	.
VR049556	XI	1	0.1271	0.4521	87.29	12.71	.	.	.
VR050429	XI	1	0.218	0.5809	78.2	21.8	.	.	.
VR050496	MX	1	0.3544	0.1418	64.56	35.44	.	.	.
VR050818	MX	1	0.0419	0.2988	95.81	4.19	.	.	.
VR050878	XI	1	0.0833	0.4127	91.67	8.33	.	.	.
VR050996	MC	1	0.4696	0.3494	53.04	46.96	.	.	.
VR051980	XI	1	0.1328	0.3228	86.72	13.28	.	.	.
VR052535	MC	1	0.2635	-0.0164	73.65	26.35	.	.	.
VR053096	MC	1	0.2521	0.2721	74.79	25.21	.	.	.
VR053127	MC	1	0.4527	0.4814	54.73	45.27	.	.	.
VR053367	MC	1	0.7853	0.4049	21.47	78.53	.	.	.
VR053534	MC	1	0.3796	0.1497	62.04	37.96	.	.	.
VR053542	MC	1	0.3358	0.2076	66.42	33.58	.	.	.
VR054112	MX	1	0.2031	0.2792	79.69	20.31	.	.	.
VR054120	MC	1	0.3928	0.2954	60.72	39.28	.	.	.
VR054244	MX	1	0.5908	0.565	40.92	59.08	.	.	.
VR054717	MX	4	1.442	0.7512	37.83	19.28	12.78	21.06	9.04
VR054736	MC	1	0.3804	0.3341	61.96	38.04	.	.	.
VR056298	XI	1	0.4991	0.6385	50.09	49.91	.	.	.
VR056629	MX	1	0.4566	0.5669	54.34	45.66	.	.	.
VR058457	MC	1	0.3347	0.3398	66.53	33.47	.	.	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
VR058471	XI	1	0.5392	0.5107	46.08	53.92	.	.	.
VR058484	MX	1	0.404	0.4632	59.6	40.4	.	.	.
VR059223	XI	1	0.4949	0.4562	50.51	49.49	.	.	.
VR060300	MX	1	0.5939	0.5567	40.61	59.39	.	.	.
VR060602	MC	1	0.1826	0.3471	81.74	18.26	.	.	.
VR060613	MC	1	0.2694	0.1885	73.06	26.94	.	.	.
VR060627	MC	1	0.5675	0.3343	43.25	56.75	.	.	.
VR060648	XI	1	0.4513	0.6076	54.87	45.13	.	.	.
VR060696	MC	1	0.3706	0.4224	62.94	37.06	.	.	.
VR061121	MC	1	0.5664	0.5235	43.36	56.64	.	.	.
VR061214	MC	1	0.5534	0.3924	44.66	55.34	.	.	.
VR061866	MX	1	0.3736	0.6191	62.64	37.36	.	.	.
VR062051	MC	1	0.4159	0.3106	58.42	41.59	.	.	.
VR062138	MC	1	0.4494	0.2011	55.06	44.94	.	.	.
VR062159	MC	1	0.2361	0.2487	76.39	23.61	.	.	.
VR062948	OE	3	0.8679	0.6895	50.89	22.11	16.33	10.68	.
VR065484	MC	1	0.362	0.1796	63.8	36.2	.	.	.
VR066052	MX	1	0.0443	0.2045	95.57	4.43	.	.	.
VR066088	MC	1	0.1318	0.2482	86.82	13.18	.	.	.
VR066120	MX	1	0.3283	0.3934	67.17	32.83	.	.	.
VR067571	MC	1	0.5362	0.2816	46.38	53.62	.	.	.
VR067659	MX	1	0.0407	0.208	95.93	4.07	.	.	.
VR068224	MC	1	0.3562	0.2129	64.38	35.62	.	.	.
VR068317	MX	3	1.0366	0.724	47.09	23.13	8.8	20.98	.
VR068615	MX	3	0.7555	0.6346	49.64	30.59	14.33	5.43	.
VR068722	MC	1	0.2418	0.113	75.82	24.18	.	.	.
VR068932	OE	4	0.6426	0.6377	51.05	38.19	7.13	2.7	0.93
VR068961	OE	3	0.259	0.4911	83.51	10.46	2.64	3.39	.
VR068972	MC	1	0.2768	0.0141	72.32	27.68	.	.	.
VR068978	MC	1	0.3354	0.1116	66.46	33.54	.	.	.
VR068999	MC	1	0.2658	0.4049	73.42	26.58	.	.	.
VR069051	MC	1	0.2378	0.3227	76.22	23.78	.	.	.
VR069890	MX	3	1.0161	0.7508	49.26	14.11	22.39	14.24	.
VR070038	MX	1	0.2472	0.3376	75.28	24.72	.	.	.
VR093093	MX	3	1.0021	0.6742	39.87	32.82	14.54	12.77	.
VR094539	MC	1	0.502	0.2846	49.8	50.2	.	.	.
VR142819	MC	1	0.4202	0.4876	57.98	42.02	.	.	.
VR143170	MX	1	0.1763	0.2808	82.37	17.63	.	.	.
VR164698	MC	1	0.0491	0.2536	95.09	4.91	.	.	.
VR166274	MX	1	0.5558	0.6431	44.42	55.58	.	.	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
VR166410	MC	1	0.3573	0.2452	64.27	35.73	.	.	.
VR166449	MC	1	0.4815	0.5067	51.85	48.15	.	.	.
VR166479	XI	1	0.2321	0.4727	76.79	23.21	.	.	.
VR166555	MC	1	0.3377	0.2176	66.23	33.77	.	.	.
VR166756	MC	1	0.3323	0.3877	66.77	33.23	.	.	.
VR167000	MC	1	0.0557	0.2574	94.43	5.57	.	.	.
VR168544	MC	1	0.1065	0.2243	89.35	10.65	.	.	.
VR169640	MC	1	0.3419	0.2221	65.81	34.19	.	.	.
VR169781	MX	1	0.6819	0.4592	31.81	68.19	.	.	.
VR169837	MC	1	0.3563	0.3061	64.37	35.63	.	.	.
VR169887	MC	1	0.4545	0.1459	54.55	45.45	.	.	.
VR170069	MC	1	0.2534	0.1792	74.66	25.34	.	.	.
VR170887	MX	1	0.422	0.2419	57.8	42.2	.	.	.
VR170976	MC	1	0.3153	0.2646	68.47	31.53	.	.	.
VR175678	MC	1	0.3279	0.2024	67.21	32.79	.	.	.
VR176407	MC	1	0.4783	0.5738	52.17	47.83	.	.	.
VR178649	MX	1	0.1402	0.1856	85.98	14.02	.	.	.
VR182018	MC	1	0.3617	0.2074	63.83	36.17	.	.	.
VR183088	MC	1	0.5173	0.4745	48.27	51.73	.	.	.
VR183192	MX	1	0.1792	0.474	82.08	17.92	.	.	.
VR183622	XI	1	0.2118	0.492	78.82	21.18	.	.	.
VR183657	MC	1	0.5045	0.4402	49.55	50.45	.	.	.
VR184251	XI	1	0.5814	0.5084	41.86	58.14	.	.	.
VR186735	MX	1	0.3364	0.5629	66.36	33.64	.	.	.
VR186760	MX	1	0.035	0.272	96.5	3.5	.	.	.
VR187270	OE	4	0.8078	0.6014	67.69	9.91	6.08	6.59	9.74
VR187861	OE	4	0.378	0.603	73.81	19.5	3.67	1.15	1.88
VR188567	MX	1	0.2854	0.4577	71.46	28.54	.	.	.
VR190631	MX	1	0.1543	0.2912	84.57	15.43	.	.	.
VR199939	OE	3	1.1149	0.6708	38.99	31.7	8.13	21.17	.
VR213350	MC	1	0.2019	0.0821	79.81	20.19	.	.	.
VR216049	OE	3	1.0857	0.7157	38.19	27.82	21.22	12.77	.

Table D-16. Classical Item Statistics—Spring 2023 Mathematics Grade 8 FT Items

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
MDM0822001	XI	1	0.2207	0.4617	77.93	22.07	.	.	.
MDM0822002	MC	1	0.0821	0.2726	91.79	8.21	.	.	.
MDM0822003	MC	1	0.4905	0.1517	50.95	49.05	.	.	.
MDM0822004	MC	1	0.1504	0.1244	84.96	15.04	.	.	.
MDM0822010	XI	1	0.2131	0.5583	78.69	21.31	.	.	.
MDM0822011	XI	1	0.1142	0.2115	88.58	11.42	.	.	.
MDM0822012	OE	3	0.2788	0.554	75.66	21.3	2.54	0.5	.
MDM0822016	XI	1	0.0518	0.3767	94.82	5.18	.	.	.
MDM0822020	MC	1	0.3561	0.0619	64.39	35.61	.	.	.
MDM0822026	MC	1	0.2409	0.4844	75.91	24.09	.	.	.
MDM0822027	MC	1	0.1783	0.0463	82.17	17.83	.	.	.
MDM0822028	MC	1	0.0298	0.0242	97.02	2.98	.	.	.
MDM0822029	MC	1	0.1858	0.3578	81.42	18.58	.	.	.
MDM0822030	OE	3	0.767	0.5578	57.01	19.43	13.41	10.15	.
MDM0822031	MX	1	0.0466	0.3909	95.34	4.66	.	.	.
MDM0822032	MC	1	0.3871	0.4007	61.29	38.71	.	.	.
MDM0822033	MC	1	0.343	0.1903	65.7	34.3	.	.	.
MDM0822034	MC	1	0.1566	0.4328	84.34	15.66	.	.	.
MDM0822035	XI	1	0.1816	0.4303	81.84	18.16	.	.	.
MDM0822049	MX	1	0.1746	0.1729	82.54	17.46	.	.	.
MDM0822050	XI	1	0.0078	0.236	99.22	0.78	.	.	.
MDM0822051	MC	1	0.3119	0.1278	68.81	31.19	.	.	.
MDM0822052	MC	1	0.0352	0.1869	96.48	3.52	.	.	.
MDM0822053	MC	1	0.0829	0.2511	91.71	8.29	.	.	.
MDM0822184	XI	1	0.0894	0.4124	91.06	8.94	.	.	.
MDM0822367	XI	1	0.1334	0.4769	86.66	13.34	.	.	.
MDM0822368	OE	4	0.3641	0.5209	70.82	23.64	4.05	1.28	0.21
MDM0822378	MX	1	0.2989	0.4216	70.11	29.89	.	.	.
MDM0822379	MC	1	0.4829	0.1915	51.71	48.29	.	.	.
MDM0822380	XI	1	0.0714	0.2918	92.86	7.14	.	.	.
MDM0822381	MC	1	0.3813	0.0175	61.87	38.13	.	.	.
MDM0822382	XI	1	0.0334	0.231	96.66	3.34	.	.	.
MDM0822400	MC	1	0.406	0.1408	59.4	40.6	.	.	.
MDM0822403	MC	1	0.1889	-0.0359	81.11	18.89	.	.	.
MDM0822404	OE	4	0.2001	0.5004	85.01	12.07	1.41	0.94	0.57
MDM0822438	MX	1	0.2431	0.0266	75.69	24.31	.	.	.
MDM0822439	XI	1	0.1247	0.0803	87.53	12.47	.	.	.
MDM0822440	MC	1	0.0603	0.1438	93.97	6.04	.	.	.
MDM0822441	XI	1	0.0308	0.3002	96.92	3.08	.	.	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
MDM0822442	MC	1	0.4146	0.5053	58.54	41.46	.	.	.
MDM0822444	OE	3	0.1907	0.4124	83.08	15.09	1.52	0.31	.
MDM0822474	MC	1	0.2716	0.3895	72.84	27.16	.	.	.
MDM0822475	MC	1	0.3995	0.1684	60.05	39.95	.	.	.
MDM0822476	MC	1	0.4091	0.2621	59.09	40.91	.	.	.
MDM0822524	MC	1	0.3984	0.0718	60.16	39.84	.	.	.
MDM0822543	XI	1	0.0641	0.4412	93.59	6.41	.	.	.
MDM0822544	MX	1	0.1075	0.1684	89.25	10.75	.	.	.
MDM0822545	MC	1	0.5302	0.2561	46.98	53.02	.	.	.
VR047955	MC	1	0.2454	0.4416	75.46	24.55	.	.	.
VR048006	MC	1	0.4439	0.168	55.61	44.39	.	.	.
VR048018	MX	1	0.4529	0.4466	54.71	45.29	.	.	.
VR048022	MX	1	0.2244	0.3532	77.56	22.44	.	.	.
VR048119	MC	1	0.2864	0.1495	71.36	28.64	.	.	.
VR048122	XI	1	0.0925	0.1351	90.75	9.25	.	.	.
VR048743	XI	1	0.2823	0.4305	71.77	28.23	.	.	.
VR049513	MC	1	0.0645	0.2473	93.55	6.45	.	.	.
VR049524	MC	1	0.2698	0.5744	73.02	26.98	.	.	.
VR049564	MC	1	0.3333	-0.0356	66.67	33.33	.	.	.
VR049576	MX	1	0.0179	0.22	98.21	1.79	.	.	.
VR049799	MC	1	0.3211	0.1417	67.89	32.11	.	.	.
VR049923	MC	1	0.2733	0.3535	72.67	27.33	.	.	.
VR049941	MC	1	0.2929	0.0601	70.71	29.29	.	.	.
VR050087	MC	1	0.077	0.0558	92.3	7.7	.	.	.
VR050149	XI	1	0.1508	0.4476	84.92	15.08	.	.	.
VR050206	MC	1	0.3027	0.3741	69.73	30.27	.	.	.
VR050291	MC	1	0.0732	0.2816	92.68	7.32	.	.	.
VR050731	MX	1	0.1588	0.4372	84.12	15.88	.	.	.
VR050839	MX	1	0.0054	0.1383	99.46	0.54	.	.	.
VR050919	MX	1	0.1481	0.4975	85.19	14.81	.	.	.
VR050938	OE	4	0.4358	0.4928	67.85	26.08	2.81	1.15	2.11
VR053696	MC	1	0.2184	0.1673	78.16	21.84	.	.	.
VR054536	MX	1	0.0006	0.0397	99.94	0.06	.	.	.
VR054589	MX	1	0.0566	0.2773	94.34	5.66	.	.	.
VR054726	MX	1	0.0642	0.3511	93.58	6.42	.	.	.
VR055723	MX	1	0.1274	0.3532	87.26	12.74	.	.	.
VR055823	MX	1	0.0592	0.3924	94.08	5.92	.	.	.
VR057599	MC	1	0.5991	0.305	40.09	59.91	.	.	.
VR057755	MX	1	0.1765	0.3783	82.35	17.65	.	.	.
VR057757	MC	1	0.0139	0.0416	98.61	1.39	.	.	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
VR058744	XI	1	0.0985	0.3254	90.15	9.85	.	.	.
VR059389	XI	1	0.0107	0.1689	98.93	1.07	.	.	.
VR059396	XI	1	0.1756	0.3072	82.44	17.56	.	.	.
VR062433	MX	1	0.3587	0.2988	64.13	35.87	.	.	.
VR062672	XI	1	0.0162	0.2332	98.38	1.62	.	.	.
VR062706	XI	1	0.058	0.2758	94.2	5.8	.	.	.
VR062720	XI	1	0.0745	0.3523	92.55	7.45	.	.	.
VR062961	MC	1	0.1952	0.2025	80.48	19.52	.	.	.
VR062975	MX	1	0.118	0.3059	88.2	11.8	.	.	.
VR062977	MX	1	0.2297	0.2759	77.03	22.97	.	.	.
VR064899	MX	1	0.4429	0.3731	55.71	44.29	.	.	.
VR064914	MC	1	0.1878	0.222	81.22	18.78	.	.	.
VR064917	MC	1	0.6022	0.1497	39.78	60.22	.	.	.
VR066146	MC	1	0.4311	0.3503	56.89	43.11	.	.	.
VR066281	MX	1	0.0613	0.1181	93.87	6.13	.	.	.
VR066300	OE	3	0.3892	0.4861	73.97	17.11	4.95	3.97	.
VR066320	XI	1	0.018	0.1457	98.2	1.8	.	.	.
VR066420	MX	1	0.0553	0.2913	94.47	5.53	.	.	.
VR066459	XI	1	0.2034	0.4367	79.66	20.34	.	.	.
VR066477	MC	1	0.0566	0.0425	94.34	5.66	.	.	.
VR066739	MC	1	0.3783	0.3053	62.17	37.83	.	.	.
VR066928	XI	1	0.0121	0.0866	98.79	1.21	.	.	.
VR066942	MC	1	0.1384	0.2586	86.16	13.84	.	.	.
VR067082	MX	1	0.1539	0.4822	84.61	15.39	.	.	.
VR067938	OE	3	0.2317	0.3854	78.34	20.61	0.6	0.45	.
VR068209	MC	1	0.5076	0.1854	49.24	50.76	.	.	.
VR068235	XI	1	0.0174	0.2789	98.26	1.74	.	.	.
VR068793	MC	1	0.324	0.1226	67.6	32.4	.	.	.
VR068845	XI	1	0.0546	0.3469	94.54	5.46	.	.	.
VR068880	MC	1	0.3189	0.1747	68.11	31.89	.	.	.
VR068890	MX	1	0.4537	0.6003	54.63	45.37	.	.	.
VR068984	MX	1	0.029	0.2885	97.1	2.9	.	.	.
VR069007	MX	4	0.1605	0.463	87.02	11.03	1.12	0.52	0.3
VR069267	MX	1	0.2674	0.1413	73.26	26.74	.	.	.
VR069797	MX	1	0.0782	0.3714	92.18	7.82	.	.	.
VR073765	MC	1	0.4901	0.2841	50.99	49.01	.	.	.
VR096267	MX	1	0.081	0.3612	91.9	8.1	.	.	.
VR098885	MC	1	0.0664	0.2829	93.36	6.64	.	.	.
VR098971	MC	1	0.0549	0.2604	94.51	5.49	.	.	.
VR122378	OE	3	0.7749	0.6578	42.76	41.42	11.39	4.43	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
VR122439	OE	4	0.426	0.5177	63.84	31.79	2.6	1.47	0.3
VR167691	XI	1	0.2896	0.5067	71.04	28.96	.	.	.
VR167695	MC	1	0.0272	0.2047	97.28	2.72	.	.	.
VR167700	MX	1	0.1189	0.3875	88.12	11.89	.	.	.
VR167731	MC	1	0.5177	0.3384	48.23	51.77	.	.	.
VR167734	MC	1	0.3322	0.1837	66.78	33.22	.	.	.
VR167737	XI	1	0.0451	0.2952	95.49	4.51	.	.	.
VR167739	MX	1	0.4639	0.5697	53.61	46.39	.	.	.
VR170280	MX	1	0.1142	-0.1387	88.58	11.42	.	.	.
VR170281	MX	1	0.5257	0.5504	47.43	52.57	.	.	.
VR170316	MC	1	0.1889	0.1088	81.11	18.89	.	.	.
VR170332	XI	1	0.2593	0.4728	74.07	25.93	.	.	.
VR170353	XI	1	0.1149	0.3103	88.51	11.49	.	.	.
VR170417	XI	1	0.314	0.218	68.6	31.4	.	.	.
VR170469	XI	1	0.076	0.3603	92.4	7.6	.	.	.
VR173741	MC	1	0.3481	-0.1386	65.19	34.81	.	.	.
VR173742	MX	1	0.4902	0.4633	50.98	49.02	.	.	.
VR173756	MC	1	0.4888	0.0735	51.12	48.88	.	.	.
VR173769	XI	1	0.0454	0.201	95.46	4.54	.	.	.
VR173791	MX	1	0.116	0.3116	88.4	11.6	.	.	.
VR173800	MC	1	0.3421	0.1456	65.79	34.21	.	.	.
VR173958	MC	1	0.3718	0.1748	62.82	37.18	.	.	.
VR174057	MC	1	0.2529	0.3072	74.71	25.29	.	.	.
VR177772	XI	1	0.0611	0.3256	93.89	6.11	.	.	.
VR178771	MC	1	0.3558	0.1123	64.42	35.58	.	.	.
VR180196	OE	3	0.3079	0.4164	73.78	22.11	3.64	0.46	.
VR180219	MX	1	0.0101	0.1377	98.99	1.01	.	.	.
VR184196	MX	1	0.0451	0.2304	95.49	4.51	.	.	.
VR184233	MC	1	0.4327	0.1912	56.73	43.27	.	.	.
VR184250	MC	1	0.384	0.1568	61.6	38.4	.	.	.
VR184274	MX	1	0.1539	0.2664	84.61	15.39	.	.	.
VR185351	OE	4	0.1592	0.3197	91.51	4.48	1.79	1	1.21
VR185465	MC	1	0.3997	0.3924	60.03	39.97	.	.	.
VR185492	MX	1	0.2044	0.3076	79.56	20.44	.	.	.
VR185674	MC	1	0.0367	0.1091	96.33	3.67	.	.	.
VR186086	OE	3	0.1113	0.3864	89.59	9.94	0.21	0.26	.
VR186277	MX	1	0.0185	0.1348	98.15	1.85	.	.	.
VR186290	OE	4	0.4508	0.4844	73.19	16.06	5.71	2.57	2.47
VR186724	MX	1	0.0546	0.1448	94.54	5.46	.	.	.

Table D-17. Classical Item Statistics—Spring 2023 MISA Grade 5 FT Items

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
MDC0522L08_01	MC	1	0.3974	0.3708	60.26	39.74	.	.	.
MDC0522L08_02	MC	1	0.4459	0.0065	55.41	44.59	.	.	.
MDC0522L08_03	MC	1	0.6015	0.5338	39.85	60.15	.	.	.
MDC0522L08_04	XI	1	0.2063	0.1271	79.37	20.63	.	.	.
MDC0522L08_05	XI	1	0.4191	0.4625	58.09	41.91	.	.	.
MDC0522L08_06	OE	3	1.3738	0.471	18.63	36.1	34.54	10.74	.
MDC0522L08_07	MC	1	0.5193	0.2769	48.07	51.93	.	.	.
MDC0522L08_08	MC	1	0.2504	0.0853	74.96	25.04	.	.	.
MDC0522L08_09	MC	1	0.7946	0.4119	20.54	79.46	.	.	.
MDC0522L08_10	MC	1	0.5763	0.3506	42.37	57.63	.	.	.
MDC0522L08_11	MC	1	0.4607	0.2295	53.93	46.07	.	.	.
MDC0522L08_12	OE	3	1.2588	0.5935	22.62	37.16	31.93	8.29	.
VR052502	MC	1	0.6868	0.4528	31.32	68.68	.	.	.
VR052509	MC	1	0.4308	0.3277	56.92	43.08	.	.	.
VR054721	MC	1	0.6336	0.3312	36.64	63.36	.	.	.
VR054734	MC	1	0.7543	0.3233	24.57	75.43	.	.	.
VR054737	MC	1	0.6461	0.3747	35.39	64.61	.	.	.
VR054741	MC	1	0.8108	0.3182	18.92	81.08	.	.	.
VR054772	MC	1	0.5184	0.195	48.16	51.84	.	.	.
VR054776	MX	1	0.7852	0.3479	21.48	78.52	.	.	.
VR054793	MX	1	0.8357	0.3714	16.43	83.57	.	.	.
VR054811	OE	3	1.197	0.5271	14.09	54.49	29.07	2.36	.
VR054819	MC	1	0.5005	0.3224	49.95	50.05	.	.	.
VR055998	MC	1	0.6052	0.3582	39.48	60.52	.	.	.
VR056044	MC	1	0.4261	0.1226	57.39	42.61	.	.	.
VR056054	OE	3	0.7446	0.5532	42.63	42.83	11.97	2.56	.
VR056058	MC	1	0.3752	0.2079	62.48	37.52	.	.	.
VR056076	MX	1	0.6965	0.4469	30.35	69.65	.	.	.
VR056098	MC	1	0.7473	0.4654	25.27	74.73	.	.	.
VR056110	MC	1	0.1075	0.1724	89.25	10.76	.	.	.
VR056114	MC	1	0.6029	0.4562	39.71	60.29	.	.	.
VR056120	MC	1	0.5112	0.2291	48.88	51.12	.	.	.
VR056126	XI	1	0.6818	0.3271	31.82	68.18	.	.	.
VR056139	MC	1	0.7421	0.4652	25.79	74.21	.	.	.
VR056147	OE	3	0.958	0.5547	36.8	33.93	25.94	3.33	.
VR056317	OE	3	1.0201	0.5731	27.51	44.04	27.38	1.07	.
VR056730	MX	1	0.4299	0.238	57.01	42.99	.	.	.
VR056738	MX	1	0.29	0.3749	71	29	.	.	.
VR056759	MX	2	0.5395	0.5021	59.3	27.44	13.26	.	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
VR056768	OE	2	0.5993	0.5445	51.38	37.32	11.31	.	.
VR056774	MC	1	0.3498	0.2062	65.02	34.98	.	.	.
VR057090	MC	1	0.6556	0.4854	34.44	65.56	.	.	.
VR057097	MC	1	0.6505	0.4602	34.95	65.05	.	.	.
VR057099	MC	1	0.278	0.168	72.2	27.8	.	.	.
VR057102	OE	2	1.2657	0.5355	22.17	29.1	48.73	.	.
VR057132	MX	2	1.061	0.4134	26.8	40.31	32.89	.	.
VR057279	MX	1	0.5132	0.3899	48.68	51.32	.	.	.
VR071112	MX	1	0.259	0.1101	74.1	25.9	.	.	.
VR184882	MX	1	0.4099	0.2862	59.01	40.99	.	.	.
VR184945	XI	1	0.4775	0.2731	52.25	47.75	.	.	.
VR184954	MC	1	0.5902	0.4137	40.98	59.02	.	.	.
VR185051	MC	1	0.5252	0.2497	47.48	52.52	.	.	.
VR185097	MC	1	0.6233	0.347	37.67	62.33	.	.	.
VR185115	OE	3	1.0711	0.5779	29.89	39.33	24.56	6.23	.
VR185158	XI	1	0.3538	0.1275	64.62	35.38	.	.	.
VR185173	MC	1	0.4381	0.0667	56.19	43.81	.	.	.
VR185660	MC	1	0.5306	0.4342	46.94	53.06	.	.	.
VR185675	MC	1	0.3121	0.1981	68.79	31.21	.	.	.
VR185687	MX	2	0.7893	0.3357	33.26	54.55	12.19	.	.
VR185709	MC	1	0.6067	0.42	39.33	60.67	.	.	.
VR185712	MC	1	0.5336	0.3984	46.64	53.36	.	.	.
VR185725	MC	1	0.7215	0.2957	27.85	72.15	.	.	.
VR185742	MC	1	0.6364	0.4356	36.36	63.64	.	.	.
VR185765	MC	1	0.3804	0.3736	61.96	38.04	.	.	.
VR185770	OE	3	0.718	0.5498	42.84	44.38	10.91	1.87	.
VR185782	OE	2	1.1103	0.5356	21.2	46.58	32.23	.	.
VR185803	MC	1	0.3967	0.269	60.33	39.67	.	.	.
VR185813	MC	1	0.4699	0.2533	53.01	46.99	.	.	.
VR185828	MC	1	0.3926	0.3384	60.74	39.26	.	.	.
VR185844	MC	1	0.5061	0.1991	49.39	50.61	.	.	.
VR185851	MX	2	0.9321	0.4762	33.73	39.33	26.94	.	.
VR185869	OE	2	1.0077	0.5014	12.86	73.51	13.63	.	.
VR186068	MC	1	0.3965	0.3162	60.35	39.65	.	.	.
VR186779	MC	1	0.4687	0.2737	53.13	46.87	.	.	.
VR186788	XI	1	0.3405	0.2953	65.95	34.05	.	.	.
VR186857	MC	1	0.446	0.4381	55.4	44.6	.	.	.
VR186896	MX	2	0.8745	0.2841	35.35	41.86	22.79	.	.
VR187105	OE	2	0.6762	0.5644	40.21	51.97	7.83	.	.
VR187131	MX	2	0.6431	0.2545	45.95	43.78	10.26	.	.

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
VR187193	MC	1	0.6532	0.4565	34.68	65.32	.	.	.
VR187209	MC	1	0.2838	0.4148	71.62	28.38	.	.	.
VR187242	MC	1	0.3936	0.282	60.64	39.36	.	.	.
VR187287	MC	1	0.4152	0.1628	58.48	41.52	.	.	.
VR187328	OE	2	0.8891	0.5531	30.88	49.34	19.78	.	.
VR223238	MX	1	0.5322	0.4792	46.78	53.22	.	.	.
VR223240	MC	1	0.3879	0.3829	61.21	38.79	.	.	.
VR223241	MC	1	0.2599	0.0992	74.01	25.99	.	.	.
VR223242	MC	1	0.5647	0.2833	43.53	56.47	.	.	.
VR223243	MC	1	0.4916	0.4022	50.84	49.16	.	.	.
VR223244	OE	3	0.8384	0.5814	40.39	37.72	19.55	2.34	.
VR223245	MC	1	0.5163	0.2124	48.37	51.63	.	.	.
VR223246	MC	1	0.272	0.3343	72.8	27.2	.	.	.
VR223248	MC	1	0.2349	0.0408	76.51	23.49	.	.	.
VR223249	MC	1	0.3271	0.0486	67.29	32.71	.	.	.
VR223250	MC	1	0.1893	-0.0131	81.07	18.93	.	.	.
VR223251	OE	3	0.6624	0.4001	52.49	30.27	15.76	1.48	.
VR223818	MC	1	0.2104	-0.1489	78.96	21.04	.	.	.
VR223819	MC	1	0.1933	0.0998	80.67	19.33	.	.	.
VR223820	MC	1	0.1013	0.1797	89.87	10.13	.	.	.
VR223821	MC	1	0.1557	-0.0385	84.43	15.57	.	.	.
VR223822	MX	1	0.353	0.3721	64.7	35.3	.	.	.
VR223823	OE	4	0.784	0.5515	38.98	45.73	13.44	1.63	0.23
VR223824	MC	1	0.2595	0.0209	74.05	25.95	.	.	.
VR223826	MX	1	0.5836	0.3412	41.64	58.36	.	.	.
VR223827	MC	1	0.645	0.406	35.5	64.5	.	.	.
VR223828	XI	1	0.9209	0.2118	7.91	92.09	.	.	.
VR223829	MC	1	0.5756	0.4101	42.44	57.56	.	.	.
VR223830	OE	4	0.4393	0.3942	65.89	25.11	8.31	0.56	0.13

Table D-18. Classical Item Statistics—Spring 2023 MISA Grade 8 FT Items

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
MDC0822L07_01	MC	1	0.3415	0.2468	65.85	34.15	.	.	.
MDC0822L07_02	MC	1	0.3853	0.3091	61.47	38.53	.	.	.
MDC0822L07_03	MX	1	0.121	0.3916	87.91	12.1	.	.	.
MDC0822L07_04	MC	1	0.1469	-0.1453	85.31	14.69	.	.	.
MDC0822L07_05	XI	1	0.16	0.3328	84	16	.	.	.

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
MDC0822L07_06	OE	3	0.9133	0.6777	32.15	47.69	16.85	3.31	.
MDC0822L07_07	XI	1	0.1784	0.3129	82.16	17.84	.	.	.
MDC0822L07_08	MC	1	0.0437	0.0106	95.63	4.37	.	.	.
MDC0822L07_09	XI	1	0.1395	0.3836	86.05	13.95	.	.	.
MDC0822L07_10	MC	1	0.5083	0.2989	49.17	50.83	.	.	.
MDC0822L07_11	MX	1	0.3063	0.1634	69.37	30.63	.	.	.
MDC0822L07_12	OE	3	0.935	0.6567	30.03	49.1	18.23	2.65	.
VR055181	MX	2	1.1774	0.5333	18.22	45.81	35.96	.	.
VR055761	MX	1	0.4869	0.5281	51.31	48.69	.	.	.
VR055780	MX	1	0.465	0.3007	53.5	46.5	.	.	.
VR055788	MC	1	0.2627	0.4081	73.73	26.27	.	.	.
VR055864	MX	1	0.5183	0.4619	48.17	51.83	.	.	.
VR055883	OE	2	0.694	0.6125	45.05	40.5	14.45	.	.
VR055908	MX	1	0.3469	0.2088	65.31	34.69	.	.	.
VR056408	XI	1	0.3213	0.357	67.87	32.13	.	.	.
VR056410	OE	2	0.7553	0.5866	29.16	66.15	4.69	.	.
VR060396	XI	1	0.5699	0.4081	43.01	56.99	.	.	.
VR060397	MC	1	0.8197	0.3976	18.03	81.97	.	.	.
VR064725	MC	1	0.3895	0.4131	61.05	38.95	.	.	.
VR064727	XI	1	0.7356	0.4117	26.44	73.56	.	.	.
VR064729	MC	1	0.2135	-0.0144	78.65	21.35	.	.	.
VR064731	MX	1	0.2648	0.4564	73.52	26.48	.	.	.
VR064805	MC	1	0.3016	-0.0915	69.84	30.16	.	.	.
VR064808	MC	1	0.3644	0.3682	63.56	36.44	.	.	.
VR064811	MC	1	0.1534	0.2033	84.66	15.34	.	.	.
VR064812	MX	1	0.3196	0.3065	68.04	31.96	.	.	.
VR064815	OE	3	0.9076	0.603	32.71	44.74	21.61	0.93	.
VR064816	MC	1	0.5777	0.3737	42.23	57.77	.	.	.
VR064820	OE	3	1.3481	0.6423	20.51	35.32	33.02	11.15	.
VR066279	MX	1	0.32	0.16	68	32	.	.	.
VR066286	MC	1	0.3961	0.0933	60.39	39.61	.	.	.
VR066317	MX	1	0.2065	0.3301	79.35	20.65	.	.	.
VR066319	MX	1	0.2806	0.4262	71.94	28.06	.	.	.
VR066321	MX	1	0.2422	0.2479	75.78	24.22	.	.	.
VR066322	XI	1	0.6077	0.406	39.23	60.77	.	.	.
VR066324	MC	1	0.3648	0.0642	63.52	36.48	.	.	.
VR066326	OE	3	0.7617	0.5747	37.26	50.38	11.3	1.06	.
VR066327	MX	1	0.3183	0.38	68.17	31.83	.	.	.
VR066329	MC	1	0.4905	0.1808	50.95	49.05	.	.	.
VR066330	MC	1	0.4385	0.3295	56.15	43.85	.	.	.

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
VR066331	OE	3	0.9438	0.646	40.02	27.96	29.65	2.37	.
VR066556	MC	1	0.4088	0.6206	59.12	40.88	.	.	.
VR072901	MX	2	0.5188	0.3743	53.42	41.27	5.3	.	.
VR093577	MC	1	0.5	0.3556	50	50	.	.	.
VR093587	MC	1	0.3967	0.4639	60.33	39.67	.	.	.
VR093720	MC	1	0.2936	0.3003	70.64	29.36	.	.	.
VR094667	MX	1	0.4576	0.3565	54.24	45.76	.	.	.
VR094722	MC	1	0.6807	0.4171	31.93	68.07	.	.	.
VR094738	MX	1	0.1262	0.2373	87.38	12.62	.	.	.
VR094959	MC	1	0.3276	0.1347	67.24	32.76	.	.	.
VR095008	MX	1	0.6064	0.5859	39.36	60.64	.	.	.
VR095027	MC	1	0.33	0.4165	67	33	.	.	.
VR095149	MC	1	0.1005	0.1006	89.95	10.05	.	.	.
VR095600	OE	3	1.0903	0.6677	23.85	47.57	24.29	4.3	.
VR095612	OE	3	0.767	0.6293	55.9	19.72	16.18	8.21	.
VR103873	MC	1	0.7649	0.302	23.51	76.49	.	.	.
VR103878	MX	1	0.7663	0.4037	23.37	76.63	.	.	.
VR103895	MC	1	0.3708	0.0921	62.92	37.08	.	.	.
VR103902	MC	1	0.3477	0.4665	65.23	34.77	.	.	.
VR103912	MC	1	0.8266	0.355	17.34	82.66	.	.	.
VR103929	MC	1	0.3045	0.196	69.55	30.45	.	.	.
VR103934	MC	1	0.4732	0.4708	52.68	47.32	.	.	.
VR103942	MX	1	0.3871	0.3754	61.29	38.71	.	.	.
VR103953	OE	3	1.1476	0.5675	17.08	54.04	25.93	2.95	.
VR104023	OE	3	0.8771	0.5783	35.64	44.52	16.32	3.51	.
VR104058	MC	1	0.353	0.2412	64.7	35.3	.	.	.
VR104067	MX	1	0.6672	0.3675	33.28	66.72	.	.	.
VR200086	MC	1	0.6278	0.4709	37.22	62.78	.	.	.
VR200087	MC	1	0.3074	0.2844	69.26	30.74	.	.	.
VR200090	MX	1	0.4822	0.4134	51.78	48.22	.	.	.
VR200091	MC	1	0.5469	0.5101	45.31	54.69	.	.	.
VR200092	MC	1	0.6938	0.4582	30.62	69.38	.	.	.
VR200093	OE	3	1.1134	0.6434	27.27	41.91	23.01	7.8	.
VR200104	MC	1	0.378	0.194	62.2	37.8	.	.	.
VR200108	MC	1	0.4147	0.3296	58.53	41.47	.	.	.
VR200109	MC	1	0.3519	0.3794	64.81	35.19	.	.	.
VR200110	MC	1	0.3294	0.3497	67.06	32.94	.	.	.
VR200525	XI	1	0.4186	0.5131	58.14	41.86	.	.	.
VR200542	OE	3	1.6122	0.6366	13.23	29.89	39.32	17.56	.
VR202023	MC	1	0.37	0.3602	63	37	.	.	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
VR202032	MX	1	0.6043	0.3458	39.57	60.43	.	.	.
VR202043	MC	1	0.5817	0.4639	41.83	58.17	.	.	.
VR202066	MC	1	0.5842	0.458	41.58	58.42	.	.	.
VR202083	MC	1	0.4034	0.4941	59.66	40.34	.	.	.
VR202090	OE	3	1.1137	0.5702	21.69	50.32	22.93	5.06	.
VR202100	MX	1	0.3774	0.4633	62.26	37.74	.	.	.
VR202148	XI	1	0.5664	0.5644	43.36	56.64	.	.	.
VR202162	XI	1	0.6976	0.5385	30.24	69.76	.	.	.
VR202180	MC	1	0.5556	0.4222	44.44	55.56	.	.	.
VR202181	MC	1	0.5513	0.2446	44.87	55.13	.	.	.
VR202186	OE	3	0.9984	0.6001	19.48	64.73	12.26	3.53	.

Table D-19. Classical Item Statistics—Spring 2023 Social Studies Grade 8 FT Items

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
MDS822002	MC	1	0.2873	0.1871	71.27	28.73	.	.	.
MDS822005	MC	1	0.3449	0.2059	65.51	34.49	.	.	.
MDS822006	MC	1	0.4019	0.4753	59.81	40.19	.	.	.
MDS822010	MC	1	0.4023	0.3782	59.77	40.23	.	.	.
MDS822012	MC	1	0.5838	0.6431	41.62	58.38	.	.	.
MDS822013	XI	2	0.9455	0.2584	21.23	63	15.77	.	.
MDS822014	MC	1	0.5031	0.5262	49.69	50.31	.	.	.
MDS822015	MX	2	0.7171	0.3521	48.2	31.9	19.91	.	.
MDS822017	MC	1	0.6682	0.3966	33.18	66.83	.	.	.
MDS822018	XI	2	0.6792	0.3926	41.57	48.93	9.49	.	.
MDS822019	MC	1	0.4996	0.4737	50.04	49.96	.	.	.
MDS822020	XI	2	1.5197	0.279	2.81	42.41	54.78	.	.
MDS822021	MC	1	0.5095	0.4726	49.05	50.95	.	.	.
MDS822022	XI	2	0.7978	0.3879	44.97	30.28	24.75	.	.
MDS822024	MC	1	0.4035	0.5016	59.65	40.35	.	.	.
MDS822025	MC	1	0.4573	0.4299	54.27	45.73	.	.	.
MDS822026	MC	1	0.4903	0.3507	50.97	49.03	.	.	.
MDS822027	MC	1	0.4436	0.4423	55.64	44.36	.	.	.
MDS822028	MC	1	0.4055	0.339	59.45	40.55	.	.	.
MDS822030	MC	1	0.5135	0.3171	48.65	51.35	.	.	.
MDS822032	XI	2	1.273	0.452	12.84	47.03	40.14	.	.
MDS822033	MX	2	0.75	0.5717	48.54	27.93	23.54	.	.
MDS822034	XI	2	1.0586	0.4408	17.86	58.42	23.72	.	.

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
MDS822036	XI	2	1.3217	0.2026	8.64	50.55	40.81	.	.
MDS822038	XI	2	1.0731	0.3326	14.27	64.16	21.57	.	.
MDS822039	MC	1	0.7531	0.3919	24.69	75.31	.	.	.
MDS822040	XI	2	1.293	0.191	5.91	58.89	35.21	.	.
MDS822041	MC	1	0.2829	0.1179	71.71	28.29	.	.	.
MDS822042	MC	1	0.6242	0.3525	37.58	62.42	.	.	.
MDS822043	MC	1	0.5223	0.3387	47.77	52.23	.	.	.
MDS822045	MC	1	0.162	0.1149	83.8	16.2	.	.	.
MDS822046	MC	1	0.321	0.2961	67.9	32.1	.	.	.
MDS822047	MC	1	0.4209	0.3012	57.91	42.09	.	.	.
MDS822051	MC	1	0.5121	0.1945	48.79	51.21	.	.	.
MDS822052	XI	2	1.3039	0.4501	14.98	39.65	45.37	.	.
MDS822054	MC	1	0.5215	0.3647	47.85	52.15	.	.	.
MDS822055	MC	1	0.256	0.1731	74.4	25.6	.	.	.
MDS822056	MC	1	0.3658	0.1662	63.42	36.58	.	.	.
MDS822057	MC	1	0.304	0.3465	69.6	30.4	.	.	.
MDS822062	MC	1	0.5499	0.4942	45.01	54.99	.	.	.
MDS822063	MC	1	0.2746	0.3625	72.54	27.46	.	.	.
MDS822064	MC	1	0.4411	0.2241	55.89	44.11	.	.	.
MDS822066	MC	1	0.457	0.3732	54.3	45.7	.	.	.
MDS822067	MC	1	0.3956	0.3087	60.44	39.56	.	.	.
MDS822068	MC	1	0.4662	0.315	53.38	46.62	.	.	.
MDS822069	MC	1	0.4381	0.3255	56.19	43.81	.	.	.
MDS822073	XI	2	1.0614	0.4993	19.53	54.8	25.67	.	.
MDS822074	MC	1	0.4412	0.3482	55.88	44.12	.	.	.
MDS822075	XI	2	0.9786	0.4439	27.14	47.86	25	.	.
MDS822076	MC	1	0.3731	0.2781	62.69	37.31	.	.	.
MDS822079	XI	2	0.9142	0.2676	27.03	54.52	18.45	.	.
MDS822081	MC	1	0.6396	0.2284	36.04	63.96	.	.	.
MDS822P05_02	OE	2	0.5737	0.6051	66.45	9.72	23.82	.	.
MDS822P05_03	OE	2	0.5211	0.4784	59.72	28.45	11.83	.	.
MDS822P05_04	MX	2	0.7819	0.6033	42.66	36.49	20.85	.	.
MDS822P05_05	MX	2	1.0412	0.5664	29	37.88	33.12	.	.
MDS822P05_06	MX	2	1.26	0.6188	21.24	31.52	47.24	.	.
MDS822P05_07	OE	2	0.5683	0.5797	62.14	18.89	18.97	.	.
MDS822P05_08	OE	2	1.1859	0.5885	22.69	36.02	41.29	.	.
MDS822P05_09	OE	2	0.9984	0.5103	33.29	33.57	33.13	.	.
MDS822P05_10	OE	4	1.4821	0.6625	16.07	32.54	40.07	9.75	1.57
MDS8R20P01_07	MX	2	0.8468	0.6137	34.84	45.64	19.52	.	.
MDS8R20P01_08	OE	2	0.154	0.2827	87.54	9.53	2.94	.	.

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
MDS8R20P01_09	OE	2	0.4429	0.2714	61.84	32.02	6.13	.	.
MDS8R20P01_10	OE	2	0.8026	0.5263	33.57	52.59	13.84	.	.
VR056836	MC	1	0.6075	0.5701	39.25	60.75	.	.	.
VR057570	MC	1	0.3701	0.2406	62.99	37.01	.	.	.
VR057604	MC	1	0.3188	0.4045	68.12	31.88	.	.	.
VR057640	MC	1	0.5218	0.4686	47.82	52.18	.	.	.
VR057774	MC	1	0.4793	0.4116	52.07	47.93	.	.	.
VR058305	MC	1	0.3714	0.1792	62.86	37.14	.	.	.
VR058755	MC	1	0.6593	0.3227	34.07	65.93	.	.	.
VR058788	MC	1	0.4577	0.4134	54.23	45.77	.	.	.
VR058793	MC	1	0.6407	0.4024	35.93	64.07	.	.	.
VR059603	MC	1	0.754	0.3942	24.6	75.4	.	.	.
VR059882	MC	1	0.3908	0.5351	60.92	39.08	.	.	.
VR059941	MC	1	0.768	0.4328	23.2	76.8	.	.	.
VR059999	MC	1	0.2466	0.117	75.34	24.66	.	.	.
VR060280	MC	1	0.3644	0.1898	63.56	36.44	.	.	.
VR060939	MC	1	0.4205	0.5207	57.95	42.05	.	.	.
VR061656	MC	1	0.4186	0.2619	58.14	41.86	.	.	.
VR068011	MC	1	0.6669	0.1453	33.31	66.69	.	.	.
VR068039	MC	1	0.3105	0.3472	68.95	31.05	.	.	.
VR068055	MC	1	0.575	0.6169	42.5	57.5	.	.	.
VR068151	MC	1	0.3078	0.2277	69.22	30.78	.	.	.
VR072295	MC	1	0.5541	0.5565	44.59	55.41	.	.	.
VR072370	MC	1	0.2422	0.2533	75.78	24.22	.	.	.
VR072382	MC	1	0.5062	0.3592	49.38	50.62	.	.	.
VR073243	MC	1	0.8791	0.3757	12.09	87.91	.	.	.
VR073253	MC	1	0.6051	0.4955	39.49	60.51	.	.	.
VR073295	XI	2	1.3553	0.3281	13.8	36.86	49.33	.	.
VR073754	OE	4	0.6875	0.6245	61.36	14.71	18.3	5.11	0.53
VR073760	OE	4	1.4523	0.7022	18.91	28.32	43.01	8.17	1.6
VR076423	MC	1	0.5994	0.4041	40.06	59.94	.	.	.
VR076451	MC	1	0.5738	0.4469	42.62	57.38	.	.	.
VR086217	MC	1	0.5456	0.1861	45.44	54.56	.	.	.
VR086218	MC	1	0.5511	0.2909	44.89	55.11	.	.	.
VR086665	MC	1	0.6161	0.4118	38.39	61.61	.	.	.
VR086668	MC	1	0.4204	0.1731	57.96	42.04	.	.	.
VR086776	MC	1	0.5048	0.4879	49.52	50.48	.	.	.
VR086818	MC	1	0.2213	0.2951	77.87	22.13	.	.	.
VR088152	OE	4	0.5442	0.6308	65.02	18.87	13.03	2.84	0.25
VR091538	XI	2	0.9121	0.4412	41.82	25.14	33.03	.	.

UIN	Item Type	Max Points	Item Mean	Item-Total r	Percentage of Students				
					0	1	2	3	4
VR091699	MC	1	0.3378	0.4333	66.22	33.78	.	.	.
VR091711	MC	1	0.3772	0.3807	62.28	37.72	.	.	.
VR091712	MC	1	0.3102	0.2138	68.98	31.02	.	.	.
VR091739	XI	2	0.7133	0.2711	36.85	54.96	8.19	.	.
VR092478	MC	1	0.4822	0.3583	51.78	48.22	.	.	.
VR094711	XI	2	0.6216	0.2468	49.57	38.71	11.72	.	.
VR095078	XI	2	0.8122	0.3449	35.98	46.81	17.2	.	.
VR095984	MX	2	0.9891	0.6553	27.13	46.82	26.05	.	.
VR096013	OE	4	1.3871	0.6694	22.13	30.82	35.81	8.65	2.58
VR098251	MC	1	0.4319	0.4853	56.81	43.19	.	.	.
VR098253	MC	1	0.5735	0.2622	42.65	57.35	.	.	.
VR104211	XI	2	0.8578	0.2663	29.58	55.07	15.36	.	.
VR109811	MX	2	0.573	0.5578	56.82	29.05	14.13	.	.
VR109817	MX	2	0.9235	0.5838	24.6	58.45	16.95	.	.
VR109819	MX	2	0.8606	0.5601	39.18	35.58	25.24	.	.
VR167002	MC	1	0.3602	0.4254	63.98	36.02	.	.	.
VR167025	MC	1	0.5555	0.3343	44.46	55.55	.	.	.
VR167059	MC	1	0.4895	0.4513	51.05	48.95	.	.	.
VR167086	MC	1	0.5349	0.3697	46.51	53.49	.	.	.
VR167089	MC	1	0.4322	0.3953	56.78	43.22	.	.	.
VR167111	MC	1	0.3484	0.2416	65.16	34.84	.	.	.
VR167130	MC	1	0.3236	0.3406	67.64	32.36	.	.	.
VR167147	MC	1	0.4156	0.2049	58.44	41.56	.	.	.
VR167153	MC	1	0.4646	0.404	53.54	46.46	.	.	.
VR167160	MC	1	0.2614	0.2082	73.86	26.14	.	.	.
VR167180	MC	1	0.3684	0.338	63.16	36.84	.	.	.
VR167184	MC	1	0.4338	0.4067	56.62	43.38	.	.	.
VR167211	MC	1	0.385	0.3018	61.5	38.5	.	.	.
VR167405	MC	1	0.4674	0.1867	53.26	46.74	.	.	.
VR167415	MC	1	0.3486	0.2481	65.14	34.86	.	.	.
VR167463	MC	1	0.5248	0.3788	47.52	52.48	.	.	.
VR167478	MC	1	0.3852	0.3083	61.48	38.52	.	.	.
VR167485	MC	1	0.4618	0.2767	53.82	46.18	.	.	.
VR167501	MC	1	0.2909	0.2354	70.91	29.09	.	.	.
VR167506	MC	1	0.2616	0.2883	73.84	26.16	.	.	.
VR167528	MC	1	0.2809	0.3885	71.91	28.09	.	.	.
VR167538	MC	1	0.3277	0.0687	67.23	32.77	.	.	.
VR168039	MC	1	0.1929	0.1415	80.71	19.29	.	.	.
VR168160	MC	1	0.4435	0.2771	55.65	44.35	.	.	.
VR168162	MC	1	0.556	0.412	44.4	55.6	.	.	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
VR168171	MC	1	0.7286	0.4639	27.14	72.86	.	.	.
VR168232	MC	1	0.4395	0.5096	56.05	43.95	.	.	.
VR168241	MC	1	0.6311	0.481	36.89	63.11	.	.	.
VR168261	MC	1	0.3614	0.3589	63.86	36.14	.	.	.
VR175920	MC	1	0.3922	0.0147	60.78	39.22	.	.	.
VR175942	MC	1	0.2451	-0.0757	75.49	24.51	.	.	.
VR175958	MC	1	0.3615	0.3972	63.85	36.15	.	.	.
VR175968	MC	1	0.3891	0.3343	61.09	38.91	.	.	.
VR175981	MC	1	0.6219	0.4684	37.81	62.19	.	.	.
VR176011	MC	1	0.2963	0.3028	70.37	29.63	.	.	.
VR176285	MC	1	0.4131	0.1807	58.69	41.31	.	.	.
VR176307	MC	1	0.566	0.5178	43.4	56.6	.	.	.
VR176466	MC	1	0.4806	0.4708	51.94	48.06	.	.	.
VR176472	MC	1	0.3787	0.0394	62.13	37.87	.	.	.
VR176692	MC	1	0.514	0.3151	48.6	51.4	.	.	.
VR176763	MC	1	0.4146	0.2317	58.54	41.46	.	.	.
VR176810	MC	1	0.3504	0.4796	64.96	35.04	.	.	.
VR177292	MC	1	0.3498	0.0786	65.02	34.98	.	.	.
VR178533	XI	2	1.2566	0.3341	9.64	55.07	35.29	.	.
VR178571	MC	1	0.3443	0.3771	65.57	34.43	.	.	.
VR178603	MC	1	0.546	0.3719	45.4	54.6	.	.	.
VR178640	MC	1	0.2007	0.2258	79.93	20.07	.	.	.
VR178653	MC	1	0.581	0.4113	41.9	58.1	.	.	.
VR178941	XI	2	1.0606	0.1955	16.65	60.64	22.71	.	.
VR179508	XI	2	1.0624	0.215	15.61	62.53	21.86	.	.
VR179548	MX	2	1.3797	0.4638	11.8	38.42	49.77	.	.
VR196655	MC	1	0.5031	0.2767	49.69	50.31	.	.	.
VR196669	MC	1	0.5447	0.3308	45.53	54.47	.	.	.
VR196689	MC	1	0.46	0.4767	54	46	.	.	.
VR196693	MC	1	0.541	0.5521	45.9	54.1	.	.	.
VR197429	MC	1	0.2554	0.3239	74.46	25.54	.	.	.
VR197491	MC	1	0.6337	0.4448	36.63	63.37	.	.	.
VR197504	MC	1	0.5756	0.176	42.44	57.56	.	.	.
VR197556	MC	1	0.4892	0.413	51.08	48.92	.	.	.
VR197640	MC	1	0.4621	0.501	53.79	46.21	.	.	.
VR197834	MC	1	0.2494	0.1397	75.07	24.94	.	.	.
VR198059	MC	1	0.3442	0.2616	65.58	34.42	.	.	.
VR198175	MC	1	0.7726	0.4811	22.74	77.26	.	.	.
VR199120	OE	4	0.3919	0.5446	69.8	22.3	6.84	1.02	0.04
VR199671	MC	1	0.4338	0.1611	56.62	43.38	.	.	.

					Percentage of Students				
UIN	Item Type	Max Points	Item Mean	Item-Total r	0	1	2	3	4
VR200213	MC	1	0.6137	0.3335	38.63	61.37	.	.	.
VR200391	MC	1	0.5747	0.379	42.53	57.47	.	.	.
VR200451	MC	1	0.5426	0.3879	45.74	54.26	.	.	.
VR200483	MC	1	0.5131	0.4328	48.69	51.31	.	.	.
VR200492	XI	2	0.6458	0.2662	52.09	31.24	16.67	.	.
VR200515	XI	2	0.6855	0.3619	56.46	18.53	25.01	.	.
VR200523	MC	1	0.5331	0.3328	46.69	53.31	.	.	.
VR200529	MC	1	0.6785	0.3576	32.15	67.85	.	.	.
VR200695	MC	1	0.4277	0.4384	57.23	42.77	.	.	.
VR200749	XI	2	1.1835	0.1946	17.85	45.95	36.2	.	.
VR200963	XI	2	1.5681	0.4195	6.76	29.67	63.57	.	.
VR200999	XI	2	1.1728	0.4757	20.5	41.73	37.77	.	.
VR201081	MX	2	0.4181	0.3354	64.23	29.73	6.04	.	.
VR201328	XI	2	1.256	0.4638	17.61	39.19	43.21	.	.
VR201408	XI	2	1.4099	0.3092	8.91	41.19	49.9	.	.
VR201436	MC	1	0.6052	0.4799	39.48	60.52	.	.	.
VR201453	XI	2	1.0702	0.248	13.72	65.54	20.74	.	.
VR201481	XI	2	0.8305	0.3375	40.72	35.51	23.77	.	.
VR212740	OE	2	0.8925	0.5924	26.89	56.96	16.14	.	.
VR213061	MX	2	0.8771	0.6526	33.71	44.88	21.42	.	.
VR213085	OE	2	0.4566	0.5947	66.89	20.56	12.55	.	.
VR213128	OE	2	0.3006	0.3755	79.33	11.28	9.39	.	.
VR213200	OE	2	0.4384	0.6142	61.85	32.47	5.68	.	.
VR213215	OE	2	0.7631	0.5419	32.92	57.85	9.23	.	.
VR213523	OE	2	1.134	0.5137	17.38	51.83	30.78	.	.
VR213532	MX	2	0.5975	0.5474	54.59	31.08	14.34	.	.
VR213541	OE	2	0.2573	0.4272	80.81	12.66	6.53	.	.
VR213544	OE	2	0.3501	0.4653	72.91	19.17	7.92	.	.
VR213601	MX	2	0.4072	0.5613	64.13	31.02	4.85	.	.
VR213803	OE	2	0.8071	0.6046	37.92	43.44	18.64	.	.
VR213812	OE	4	1.2952	0.6582	21.76	37.44	30.52	10.07	0.2
VR213874	OE	4	1.2145	0.7177	30.74	28.76	30.37	8.6	1.53
VR219615	MX	2	0.4284	0.5988	60.28	36.6	3.12	.	.
VR219638	MX	2	0.0217	0.2357	98.68	0.48	0.84	.	.
VR219677	MX	2	0.299	0.5531	70.81	28.48	0.71	.	.
VR220451	MX	2	0.8095	0.6281	39.03	40.98	19.98	.	.
VR228274	MC	1	0.6752	0.5064	32.48	67.52	.	.	.

Appendix E. Reliability

Scaled CSEM is computed as the product of the conditional standard error of measurement (CSEM) and the slope constant of the respective reporting scale.

Table E-1. ELA 10 Fall 2022 Test Score Reliability Estimates, as a Function of Subgroup

Group	Subgroup	N	IRT Marginal Reliability	SD Scaled Score	Classical SEM
Overall	--	10,263	0.919	18.149	5.161
Race/Ethnicity	American Indian or Alaskan Native	30	--	--	--
	Asian	406	0.937	18.361	4.624
	Black or African American	4,004	0.869	14.996	5.435
	Hispanic or Latino	1,960	0.899	16.829	5.361
	Native Hawaiian or Pacific Islander	14	--	--	--
	White	3,377	0.932	18.423	4.799
	Multiracial	427	0.918	16.903	4.842
	Not Specified	45	--	--	--
Economically Disadvantaged	Yes	4,906	0.888	16.043	5.360
	No	4,715	0.933	19.086	4.952
	Not Specified	642	0.915	17.555	5.110
Gender	Female	4,926	0.924	18.191	5.001
	Male	5,327	0.912	17.841	5.306
	Non-Binary	9	--	--	--
	Not Specified	1	--	--	--
LEP	Exited	757	0.909	15.542	4.685
	No	8,585	0.922	18.280	5.110
	Yes	906	0.733	11.485	5.929
	Not Specified	15	--	--	--
Special Education Services	Yes	1,204	0.797	12.877	5.797
	No	7,303	0.923	18.194	5.064
	Exited	369	0.922	18.161	5.067
	Code 504 student	704	0.913	17.529	5.181
	Exited, but Enrolled in 504	65	0.887	14.008	4.704
	Not Specified	618	0.917	17.611	5.063

Table E-2. Algebra 1 Fall 2022 Test Score Reliability Estimates, as a Function of Subgroup

Group	Subgroup	N	IRT Marginal Reliability	SD Scaled Score	Classical SEM
Overall	--	7,655	0.777	16.410	7.754
Race/Ethnicity	American Indian or Alaskan Native	22	--	--	--
	Asian	337	0.896	20.593	6.642
	Black or African American	3,070	0.597	13.080	8.301
	Hispanic or Latino	1,498	0.668	14.935	8.608
	Native Hawaiian or Pacific Islander	10	--	--	--
	White	2,371	0.837	16.369	6.602
	Multiracial	325	0.803	16.068	7.124
	Not Specified	22	--	--	--
Economically Disadvantaged	Yes	3,758	0.639	13.776	8.277
	No	3,406	0.839	17.681	7.105
	Not Specified	491	0.769	16.493	7.926
Gender	Female	3,583	0.773	15.806	7.538
	Male	4,058	0.778	16.862	7.937
	Non-Binary	14	--	--	--
	Not Specified	0	--	--	--
LEP	Exited	480	0.737	14.510	7.441
	No	6,471	0.790	16.375	7.495
	Yes	686	0.443	13.300	9.925
	Not Specified	18	--	--	--
Special Education Services	Yes	964	0.487	13.078	9.362
	No	5,428	0.799	16.556	7.422
	Exited	262	0.761	14.512	7.089
	Code 504 student	499	0.795	16.154	7.322
	Exited, but Enrolled in 504	59	0.722	13.692	7.219
	Not Specified	443	0.609	13.941	8.722

Table E-3. Algebra 2 Fall 2022 Test Score Reliability Estimates, as a Function of Subgroup

Group	Subgroup	N	IRT Marginal Reliability	SD Scaled Score	Classical SEM
Overall	--	1,682	0.846	14.309	5.607
Race/Ethnicity	American Indian or Alaskan Native	5	--	--	--
	Asian	157	0.871	14.161	5.085
	Black or African American	278	0.787	12.944	5.969
	Hispanic or Latino	225	0.790	14.026	6.433
	Native Hawaiian or Pacific Islander	4	--	--	--
	White	909	0.841	13.413	5.343
	Multiracial	99	0.880	16.502	5.716
	Not Specified	5	--	--	--
Economically Disadvantaged	Yes	373	0.792	12.963	5.913
	No	1,187	0.850	14.259	5.519
	Not Specified	122	0.841	13.763	5.493
Gender	Female	865	0.821	12.744	5.388
	Male	817	0.864	15.789	5.829
	Non-Binary	0	--	--	--
	Not Specified	0	--	--	--
LEP	Exited	127	0.857	15.300	5.777
	No	1,536	0.846	14.207	5.581
	Yes	18	--	--	--
	Not Specified	1	--	--	--
Special Education Services	Yes	47	--	--	--
	No	1,469	0.844	13.977	5.516
	Exited	55	0.873	15.655	5.574
	Code 504 student	108	0.837	14.299	5.775
	Exited, but Enrolled in 504	2	--	--	--
	Not Specified	1	--	--	--

Table E-4. Geometry 1 Fall 2022 Test Score Reliability Estimates, as a Function of Subgroup

Group	Subgroup	N	IRT Marginal Reliability	SD Scaled Score	Classical SEM
Overall	--	2,635	0.780	16.566	7.762
Race/Ethnicity	American Indian or Alaskan Native	4	--	--	--
	Asian	131	0.840	17.565	7.029
	Black or African American	496	0.672	15.173	8.683
	Hispanic or Latino	472	0.685	14.673	8.240
	Native Hawaiian or Pacific Islander	2	--	--	--
	White	1,358	0.790	15.778	7.231
	Multiracial	156	0.765	16.095	7.796
	Not Specified	16	--	--	--
Economically Disadvantaged	Yes	864	0.686	15.109	8.467
	No	1,583	0.796	16.432	7.417
	Not Specified	188	0.778	15.277	7.197
Gender	Female	1,295	0.760	15.573	7.622
	Male	1,340	0.796	17.467	7.895
	Non-Binary	0	--	--	--
	Not Specified	0	--	--	--
LEP	Exited	199	0.725	14.635	7.669
	No	2,282	0.786	16.509	7.642
	Yes	152	0.439	12.631	9.463
	Not Specified	2	--	--	--
Special Education Services	Yes	243	0.525	13.100	9.033
	No	2,092	0.781	16.147	7.564
	Exited	99	0.827	18.536	7.719
	Code 504 student	190	0.768	16.519	7.952
	Exited, but Enrolled in 504	2	--	--	--
	Not Specified	9	--	--	--

Table E-5. ELA 3 Spring 2023 Test Score Reliability Estimates, as a Function of Subgroup

Group	Subgroup	N	IRT Marginal Reliability	SD Scaled Score	Classical SEM
Overall	--	63,702	0.937	21.491	5.409
Race/Ethnicity	American Indian or Alaskan Native	153	0.917	18.015	5.192
	Asian	4,296	0.928	21.508	5.765
	Black or African American	20,236	0.924	19.073	5.264
	Hispanic or Latino	14,143	0.918	18.343	5.243
	Native Hawaiian or Pacific Islander	84	0.930	20.152	5.317
	White	21,079	0.932	21.404	5.566
	Multiracial	3,635	0.937	21.963	5.499
	Not Specified	76	0.903	16.900	5.258
Economically Disadvantaged	Yes	23,737	0.916	18.000	5.228
	No	25,316	0.933	21.658	5.625
	Not Specified	14,649	0.932	20.412	5.316
Gender	Female	30,907	0.938	21.948	5.446
	Male	32,751	0.934	20.904	5.374
	Non-Binary	7	--	--	--
	Not Specified	37	--	--	--
LEP	Exited	728	0.903	18.604	5.786
	No	52,997	0.936	21.580	5.448
	Yes	9,930	0.874	14.568	5.167
	Not Specified	47	--	--	--
Special Education Services	Yes	6,703	0.877	15.448	5.412
	No	52,923	0.936	21.490	5.420
	Exited	1,845	0.925	19.127	5.244
	Code 504 student	1,802	0.929	19.817	5.288
	Exited, but Enrolled in 504	204	0.911	17.523	5.213
	Not Specified	225	0.910	17.672	5.307

Table E-6. ELA Grade 4 Spring 2023 Test Score Reliability, as a Function of Subgroup

Group	Subgroup	N	IRT Marginal Reliability	SD Scaled Score	Classical SEM
Overall	--	63,940	0.923	19.713	5.455
Race/Ethnicity	American Indian or Alaskan Native	165	0.899	16.738	5.316
	Asian	4,370	0.914	18.764	5.514
	Black or African American	20,649	0.909	18.019	5.450
	Hispanic or Latino	14,009	0.906	17.825	5.461
	Native Hawaiian or Pacific Islander	98	0.911	18.316	5.474
	White	21,061	0.916	18.742	5.448
	Multiracial	3,544	0.923	19.557	5.443
	Not Specified	44	--	--	--
Economically Disadvantaged	Yes	23,835	0.900	17.195	5.446
	No	25,567	0.917	19.063	5.478
	Not Specified	14,538	0.919	19.099	5.432
Gender	Female	31,250	0.925	19.991	5.458
	Male	32,676	0.919	19.132	5.453
	Non-Binary	7	--	--	--
	Not Specified	7	--	--	--
LEP	Exited	1,670	0.879	15.557	5.421
	No	52,389	0.923	19.679	5.452
	Yes	9,860	0.858	14.533	5.481
	Not Specified	21	--	--	--
Special Education Services	Yes	7,095	0.858	15.214	5.734
	No	52,109	0.921	19.266	5.424
	Exited	2,039	0.910	17.911	5.358
	Code 504 student	2,260	0.910	17.871	5.356
	Exited, but Enrolled in 504	236	0.891	16.110	5.325
	Not Specified	201	0.899	18.254	5.795

Table E-7. ELA Grade 5 Spring 2023 Test Score Reliability, as a Function of Subgroup

Group	Subgroup	N	IRT Marginal Reliability	SD Scaled Score	Classical SEM
Overall	--	64,147	0.932	18.356	4.781
Race/Ethnicity	American Indian or Alaskan Native	145	0.928	17.927	4.812
	Asian	4,464	0.921	17.215	4.841
	Black or African American	20,760	0.921	17.010	4.786
	Hispanic or Latino	13,940	0.918	16.898	4.831
	Native Hawaiian or Pacific Islander	87	0.931	18.020	4.745
	White	21,119	0.924	17.215	4.730
	Multiracial	3,623	0.930	18.033	4.770
	Not Specified	9	--	--	--
Economically Disadvantaged	Yes	23,529	0.914	16.363	4.811
	No	26,025	0.926	17.542	4.772
	Not Specified	14,593	0.929	17.860	4.746
Gender	Female	31,418	0.934	18.467	4.754
	Male	32,712	0.928	17.941	4.806
	Non-Binary	11	--	--	--
	Not Specified	6	--	--	--
LEP	Exited	4,157	0.887	13.468	4.529
	No	52,206	0.932	18.258	4.762
	Yes	7,773	0.828	12.142	5.029
	Not Specified	11	--	--	--
Special Education Services	Yes	7,240	0.877	14.897	5.225
	No	51,508	0.930	17.800	4.720
	Exited	2,372	0.927	17.349	4.699
	Code 504 student	2,585	0.923	16.865	4.691
	Exited, but Enrolled in 504	290	0.910	15.267	4.583
	Not Specified	152	0.909	19.692	5.942

Table E-8. ELA Grade 6 Spring 2023 Test Score Reliability, as a Function of Subgroup

Group	Subgroup	N	IRT Marginal Reliability	SD Scaled Score	Classical SEM
Overall	--	63,599	0.915	18.603	5.437
Race/Ethnicity	American Indian or Alaskan Native	163	0.911	18.202	5.441
	Asian	4,423	0.908	17.123	5.190
	Black or African American	20,971	0.897	17.442	5.587
	Hispanic or Latino	13,644	0.896	17.347	5.604
	Native Hawaiian or Pacific Islander	76	0.909	17.425	5.252
	White	20,972	0.908	17.277	5.231
	Multiracial	3,300	0.916	18.558	5.374
	Not Specified	50	0.846	16.060	6.306
Economically Disadvantaged	Yes	23,057	0.886	16.783	5.676
	No	25,854	0.910	17.469	5.250
	Not Specified	14,688	0.912	18.178	5.379
Gender	Female	31,089	0.918	18.638	5.352
	Male	32,488	0.907	18.089	5.518
	Non-Binary	16	--	--	--
	Not Specified	6	--	--	--
LEP	Exited	5,028	0.867	14.072	5.137
	No	52,119	0.915	18.436	5.380
	Yes	6,429	0.778	12.915	6.088
	Not Specified	23	--	--	--
Special Education Services	Yes	6,827	0.838	15.142	6.100
	No	50,913	0.911	17.901	5.346
	Exited	2,262	0.905	17.518	5.390
	Code 504 student	3,070	0.897	16.719	5.368
	Exited, but Enrolled in 504	342	0.881	15.399	5.305
	Not Specified	185	0.864	17.215	6.350

Table E-9. ELA Grade 7 Spring 2023 Test Score Reliability, as a Function of Subgroup

Group	Subgroup	N	IRT Marginal Reliability	SD Scaled Score	Classical SEM
Overall	--	63,565	0.923	16.608	4.612
Race/Ethnicity	American Indian or Alaskan Native	167	0.908	14.686	4.457
	Asian	4,331	0.923	15.675	4.338
	Black or African American	21,130	0.905	15.408	4.743
	Hispanic or Latino	13,432	0.904	15.552	4.819
	Native Hawaiian or Pacific Islander	83	0.921	15.693	4.410
	White	21,046	0.918	15.426	4.409
	Multiracial	3,331	0.921	16.105	4.519
	Not Specified	45	--	--	--
Economically Disadvantaged	Yes	22,752	0.894	14.904	4.855
	No	26,324	0.920	15.643	4.415
	Not Specified	14,489	0.925	16.688	4.570
Gender	Female	30,935	0.927	16.783	4.531
	Male	32,579	0.914	15.977	4.687
	Non-Binary	48	--	--	--
	Not Specified	3	--	--	--
LEP	Exited	4,275	0.900	13.536	4.281
	No	53,076	0.923	16.329	4.536
	Yes	6,199	0.748	10.763	5.405
	Not Specified	15	--	--	--
Special Education Services	Yes	6,516	0.808	13.111	5.750
	No	51,248	0.924	16.113	4.448
	Exited	2,150	0.914	16.160	4.753
	Code 504 student	3,139	0.906	14.419	4.419
	Exited, but Enrolled in 504	362	0.895	13.573	4.407
	Not Specified	150	0.855	16.145	6.156

Table E-10. ELA Grade 8 Spring 2023 Test Score Reliability, as a Function of Subgroup

Group	Subgroup	N	IRT Marginal Reliability	SD Scaled Score	Classical SEM
Overall	--	65,479	0.936	20.909	5.290
Race/Ethnicity	American Indian or Alaskan Native	151	0.933	19.857	5.158
	Asian	4,464	0.940	19.322	4.737
	Black or African American	22,064	0.918	19.328	5.530
	Hispanic or Latino	13,862	0.919	20.103	5.713
	Native Hawaiian or Pacific Islander	91	0.946	22.973	5.319
	White	21,494	0.937	19.402	4.874
	Multiracial	3,333	0.937	20.358	5.095
	Not Specified	20	--	--	--
Economically Disadvantaged	Yes	23,248	0.908	18.888	5.725
	No	27,614	0.938	19.709	4.907
	Not Specified	14,617	0.939	21.286	5.266
Gender	Female	32,078	0.941	20.912	5.096
	Male	33,323	0.927	20.275	5.471
	Non-Binary	72	0.918	16.174	4.626
	Not Specified	6	--	--	--
LEP	Exited	5,034	0.921	17.177	4.832
	No	55,208	0.937	20.503	5.149
	Yes	5,215	0.776	14.633	6.921
	Not Specified	22	--	--	--
Special Education Services	Yes	6,750	0.822	16.282	6.860
	No	52,262	0.938	20.387	5.070
	Exited	2,324	0.930	19.284	5.113
	Code 504 student	3,530	0.928	19.097	5.121
	Exited, but Enrolled in 504	450	0.923	18.035	5.003
	Not Specified	163	0.883	18.350	6.278

Table E-11. ELA Grade 10 Spring 2023 Test Score Reliability, as a Function of Subgroup

Group	Subgroup	N	IRT Marginal Reliability	SD Scaled Score	Classical SEM
Overall	--	63,613	0.923	17.599	4.890
Race/Ethnicity	American Indian or Alaskan Native	161	0.928	17.802	4.770
	Asian	4,527	0.924	16.134	4.458
	Black or African American	21,387	0.904	16.298	5.062
	Hispanic or Latino	13,735	0.901	17.289	5.433
	Native Hawaiian or Pacific Islander	107	0.926	16.662	4.524
	White	20,797	0.924	16.142	4.442
	Multiracial	2,835	0.925	16.570	4.531
	Not Specified	64	0.819	17.091	7.275
Economically Disadvantaged	Yes	21,532	0.896	16.509	5.312
	No	29,002	0.926	16.982	4.611
	Not Specified	13,079	0.922	17.055	4.764
Gender	Female	30,902	0.927	17.376	4.708
	Male	32,590	0.914	17.251	5.054
	Non-Binary	96	0.920	15.052	4.268
	Not Specified	25	--	--	--
LEP	Exited	5,120	0.908	14.454	4.392
	No	52,929	0.924	16.993	4.699
	Yes	5,509	0.736	13.138	6.752
	Not Specified	55	0.845	17.790	6.999
Special Education Services	Yes	6,223	0.811	14.400	6.266
	No	50,501	0.924	17.140	4.723
	Exited	2,149	0.915	15.773	4.585
	Code 504 student	4,037	0.915	15.889	4.623
	Exited, but Enrolled in 504	470	0.917	15.794	4.552
	Not Specified	233	0.835	15.313	6.215

Table E-12. Mathematics Grade 3 Spring 2023 Test Score Reliability, as a Function of Subgroup

Group	Subgroup	N	IRT Marginal Reliability	SD Scaled Score	Classical SEM
Overall	--	64,275	0.937	26.213	6.555
Race/Ethnicity	American Indian or Alaskan Native	154	0.932	25.305	6.598
	Asian	4,374	0.935	26.916	6.864
	Black or African American	20,261	0.919	22.764	6.460
	Hispanic or Latino	14,511	0.901	22.263	7.015
	Native Hawaiian or Pacific Islander	85	0.934	24.948	6.405
	White	21,137	0.936	24.900	6.284
	Multiracial	3,637	0.942	26.196	6.333
	Not Specified	116	0.901	22.082	6.961
Economically Disadvantaged	Yes	23,933	0.912	22.249	6.604
	No	25,518	0.939	25.827	6.401
	Not Specified	14,824	0.923	24.301	6.737
Gender	Female	31,182	0.934	25.137	6.435
	Male	33,043	0.940	27.147	6.666
	Non-Binary	7	--	--	--
	Not Specified	43	--	--	--
LEP	Exited	728	0.923	22.616	6.265
	No	53,016	0.942	26.285	6.356
	Yes	10,475	0.861	20.139	7.496
	Not Specified	56	0.910	24.219	7.274
Special Education Services	Yes	6,697	0.878	22.499	7.853
	No	53,438	0.939	25.863	6.387
	Exited	1,841	0.932	24.385	6.357
	Code 504 student	1,798	0.938	25.132	6.262
	Exited, but Enrolled in 504	204	0.939	23.842	5.909
	Not Specified	297	0.887	22.549	7.578

Table E-13. Mathematics Grade 4 Spring 2023 Test Score Reliability, as a Function of Subgroup

Group	Subgroup	N	IRT Marginal Reliability	SD Scaled Score	Classical SEM
Overall	--	64,520	0.939	19.795	4.883
Race/Ethnicity	American Indian or Alaskan Native	165	0.931	17.275	4.542
	Asian	4,443	0.935	20.855	5.315
	Black or African American	20,690	0.917	16.814	4.836
	Hispanic or Latino	14,402	0.903	16.750	5.203
	Native Hawaiian or Pacific Islander	98	0.939	18.024	4.453
	White	21,105	0.937	18.439	4.627
	Multiracial	3,544	0.942	19.654	4.735
	Not Specified	73	0.931	21.005	5.536
Economically Disadvantaged	Yes	24,003	0.914	16.651	4.885
	No	25,758	0.939	19.448	4.794
	Not Specified	14,759	0.926	18.539	5.030
Gender	Female	31,508	0.935	18.772	4.778
	Male	32,989	0.942	20.677	4.980
	Non-Binary	7	--	--	--
	Not Specified	16	--	--	--
LEP	Exited	1,669	0.926	17.249	4.681
	No	52,399	0.943	19.901	4.746
	Yes	10,422	0.857	14.681	5.542
	Not Specified	30	--	--	--
Special Education Services	Yes	7,098	0.872	16.134	5.761
	No	52,616	0.941	19.501	4.755
	Exited	2,036	0.936	19.007	4.800
	Code 504 student	2,260	0.942	19.128	4.603
	Exited, but Enrolled in 504	235	0.927	19.619	5.314
	Not Specified	275	0.880	18.483	6.400

Table E-14. Mathematics Grade 5 Spring 2023 Test Score Reliability, as a Function of Subgroup

Group	Subgroup	N	IRT Marginal Reliability	SD Scaled Score	Classical SEM
Overall	--	64,667	0.932	17.922	4.658
Race/Ethnicity	American Indian or Alaskan Native	145	0.928	16.572	4.457
	Asian	4,518	0.937	19.776	4.949
	Black or African American	20,796	0.896	14.774	4.772
	Hispanic or Latino	14,327	0.881	15.054	5.198
	Native Hawaiian or Pacific Islander	87	0.930	17.861	4.721
	White	21,159	0.940	16.874	4.120
	Multiracial	3,616	0.939	17.484	4.305
	Not Specified	19	--	--	--
Economically Disadvantaged	Yes	23,682	0.893	14.641	4.788
	No	26,219	0.942	18.110	4.367
	Not Specified	14,766	0.913	16.724	4.938
Gender	Female	31,674	0.929	17.045	4.555
	Male	32,974	0.935	18.692	4.754
	Non-Binary	11	--	--	--
	Not Specified	8	--	--	--
LEP	Exited	4,158	0.931	15.371	4.049
	No	52,191	0.939	18.042	4.462
	Yes	8,303	0.759	12.134	5.962
	Not Specified	15	--	--	--
Special Education Services	Yes	7,225	0.848	14.709	5.726
	No	51,989	0.936	17.798	4.486
	Exited	2,371	0.934	17.309	4.434
	Code 504 student	2,581	0.938	17.260	4.302
	Exited, but Enrolled in 504	290	0.935	16.167	4.124
	Not Specified	211	0.714	18.353	9.817

Table E-15. Mathematics Grade 6 Spring 2023 Test Score Reliability, as a Function of Subgroup

Group	Subgroup	N	IRT Marginal Reliability	SD Scaled Score	Classical SEM
Overall	--	63,644	0.934	17.604	4.526
Race/Ethnicity	American Indian or Alaskan Native	160	0.943	18.035	4.314
	Asian	4,280	0.951	19.014	4.224
	Black or African American	20,911	0.896	14.733	4.752
	Hispanic or Latino	13,945	0.887	14.858	4.990
	Native Hawaiian or Pacific Islander	77	0.941	17.696	4.293
	White	20,925	0.941	16.554	4.012
	Multiracial	3,279	0.938	17.849	4.439
	Not Specified	67	0.896	16.369	5.286
Economically Disadvantaged	Yes	23,119	0.888	14.524	4.855
	No	25,715	0.946	17.692	4.128
	Not Specified	14,810	0.918	16.220	4.650
Gender	Female	31,165	0.932	17.042	4.457
	Male	32,456	0.936	18.118	4.591
	Non-Binary	16	--	--	--
	Not Specified	7	--	--	--
LEP	Exited	4,988	0.934	15.652	4.011
	No	51,758	0.939	17.625	4.360
	Yes	6,874	0.723	11.192	5.895
	Not Specified	24	--	--	--
Special Education Services	Yes	6,788	0.795	12.786	5.784
	No	50,961	0.940	17.660	4.340
	Exited	2,247	0.928	16.447	4.398
	Code 504 student	3,058	0.937	17.064	4.294
	Exited, but Enrolled in 504	343	0.933	15.891	4.105
	Not Specified	247	0.813	15.326	6.622

Table E-16. Mathematics Grade 7 Spring 2023 Test Score Reliability, as a Function of Subgroup

Group	Subgroup	N	IRT Marginal Reliability	SD Scaled Score	Classical SEM
Overall	--	56,106	0.907	20.542	6.268
Race/Ethnicity	American Indian or Alaskan Native	143	0.919	20.856	5.930
	Asian	2,527	0.934	21.830	5.599
	Black or African American	19,745	0.867	17.675	6.452
	Hispanic or Latino	13,022	0.850	18.268	7.082
	Native Hawaiian or Pacific Islander	79	0.925	21.418	5.869
	White	17,749	0.927	20.331	5.500
	Multiracial	2,772	0.910	20.286	6.075
	Not Specified	69	0.857	16.977	6.413
Economically Disadvantaged	Yes	21,304	0.856	17.834	6.772
	No	20,314	0.924	20.437	5.648
	Not Specified	14,488	0.908	20.902	6.323
Gender	Female	27,539	0.905	19.774	6.107
	Male	28,525	0.909	21.255	6.420
	Non-Binary	34	--	--	--
	Not Specified	8	--	--	--
LEP	Exited	3,362	0.907	16.773	5.124
	No	46,123	0.917	20.497	5.910
	Yes	6,598	0.658	14.950	8.737
	Not Specified	23	--	--	--
Special Education Services	Yes	6,341	0.685	16.675	9.360
	No	44,524	0.920	20.211	5.727
	Exited	1,946	0.902	20.351	6.372
	Code 504 student	2,764	0.922	19.892	5.549
	Exited, but Enrolled in 504	313	0.924	19.646	5.433
	Not Specified	218	0.784	17.701	8.229

Table E-17. Mathematics Grade 8 Spring 2023 Test Score Reliability, as a Function of Subgroup

Group	Subgroup	N	IRT Marginal Reliability	SD Scaled Score	Classical SEM
Overall	--	41,741	0.819	16.844	7.169
Race/Ethnicity	American Indian or Alaskan Native	106	0.820	15.286	6.484
	Asian	1,189	0.901	20.525	6.461
	Black or African American	16,628	0.768	15.468	7.443
	Hispanic or Latino	11,091	0.756	15.549	7.673
	Native Hawaiian or Pacific Islander	56	0.770	14.978	7.178
	White	10,791	0.864	17.094	6.306
	Multiracial	1,860	0.837	16.612	6.698
	Not Specified	20	--	--	--
Economically Disadvantaged	Yes	17,475	0.752	15.331	7.634
	No	12,101	0.851	17.159	6.632
	Not Specified	12,165	0.838	17.391	6.989
Gender	Female	20,215	0.819	16.220	6.894
	Male	21,492	0.818	17.375	7.419
	Non-Binary	30	--	--	--
	Not Specified	4	--	--	--
LEP	Exited	2,532	0.797	13.368	6.019
	No	33,745	0.836	16.991	6.887
	Yes	5,445	0.589	14.191	9.103
	Not Specified	19	--	--	--
Special Education Services	Yes	6,133	0.602	15.535	9.795
	No	31,427	0.840	16.538	6.607
	Exited	1,450	0.839	16.278	6.540
	Code 504 student	2,226	0.844	16.305	6.435
	Exited, but Enrolled in 504	288	0.845	17.931	7.049
	Not Specified	217	0.726	16.576	8.675

Table E-18. Algebra 1 Spring 2023 Test Score Reliability, as a Function of Subgroup

Group	Subgroup	N	IRT Marginal Reliability	SD Scaled Score	Classical SEM
Overall	--	67,136	0.684	16.542	9.295
Race/Ethnicity	American Indian or Alaskan Native	188	-8.891	16.585	52.159
	Asian	4,520	0.932	18.090	4.719
	Black or African American	22,596	0.821	13.967	5.910
	Hispanic or Latino	15,084	0.807	14.509	6.368
	Native Hawaiian or Pacific Islander	103	0.913	15.928	4.699
	White	21,324	0.243	15.160	13.192
	Multiracial	3,234	0.918	16.250	4.657
	Not Specified	87	0.747	13.293	6.688
Economically Disadvantaged	Yes	23,025	0.473	14.008	10.173
	No	28,229	0.625	16.623	10.183
	Not Specified	15,882	0.875	15.748	5.557
Gender	Female	32,256	0.885	16.075	5.462
	Male	34,782	0.517	16.963	11.791
	Non-Binary	73	0.903	13.020	4.065
	Not Specified	25	--	--	--
LEP	Exited	4,750	0.890	14.821	4.919
	No	55,119	0.645	16.393	9.766
	Yes	7,209	0.578	11.835	7.691
	Not Specified	58	0.786	14.176	6.556
Special Education Services	Yes	6,802	-0.155	13.304	14.296
	No	53,785	0.710	16.467	8.874
	Exited	2,217	0.896	15.444	4.980
	Code 504 student	3,549	0.883	15.235	5.208
	Exited, but Enrolled in 504	429	0.880	13.152	4.554
	Not Specified	354	0.767	13.085	6.318

Table E-19. Algebra 2 Spring 2023 Test Score Reliability, as a Function of Subgroup

Group	Subgroup	N	IRT Marginal Reliability	SD Scaled Score	Classical SEM
Overall	--	11,743	0.871	15.244	5.475
Race/Ethnicity	American Indian or Alaskan Native	24	--	--	--
	Asian	1,516	0.910	17.045	5.125
	Black or African American	2,646	0.784	12.819	5.964
	Hispanic or Latino	1,462	0.784	13.599	6.325
	Native Hawaiian or Pacific Islander	14	--	--	--
	White	5,398	0.865	13.808	5.065
	Multiracial	675	0.879	15.621	5.424
	Not Specified	8	--	--	--
Economically Disadvantaged	Yes	2,356	0.792	13.282	6.061
	No	7,173	0.886	15.240	5.154
	Not Specified	2,214	0.842	14.616	5.817
Gender	Female	5,841	0.865	14.409	5.301
	Male	5,878	0.876	15.994	5.641
	Non-Binary	17	--	--	--
	Not Specified	7	--	--	--
LEP	Exited	347	0.860	17.054	6.370
	No	11,098	0.873	15.113	5.393
	Yes	287	0.601	11.319	7.152
	Not Specified	11	--	--	--
Special Education Services	Yes	542	0.700	12.977	7.107
	No	9,976	0.875	15.211	5.372
	Exited	339	0.841	14.609	5.830
	Code 504 student	768	0.857	13.983	5.296
	Exited, but Enrolled in 504	100	0.852	14.157	5.448
	Not Specified	18	--	--	--

Table E-20. Algebra 1 Spring 2023 Test Score Reliability, as a Function of Subgroup

Group	Subgroup	N	IRT Marginal Reliability	SD Scaled Score	Classical SEM
Overall	--	19,907	0.876	18.486	6.499
Race/Ethnicity	American Indian or Alaskan Native	34	--	--	--
	Asian	2,391	0.899	16.932	5.390
	Black or African American	4,074	0.793	15.974	7.269
	Hispanic or Latino	2,683	0.811	17.111	7.431
	Native Hawaiian or Pacific Islander	28	--	--	--
	White	9,425	0.867	16.866	6.141
	Multiracial	1,267	0.881	18.121	6.249
	Not Specified	5	--	--	--
Economically Disadvantaged	Yes	4,330	0.801	16.253	7.242
	No	11,234	0.888	17.539	5.880
	Not Specified	4,343	0.828	17.366	7.202
Gender	Female	9,711	0.867	17.730	6.470
	Male	10,163	0.884	19.171	6.528
	Non-Binary	28	--	--	--
	Not Specified	5	--	--	--
LEP	Exited	1,446	0.869	16.993	6.156
	No	17,913	0.877	18.369	6.442
	Yes	542	0.561	13.303	8.812
	Not Specified	6	--	--	--
Special Education Services	Yes	1,054	0.739	16.050	8.198
	No	16,711	0.879	18.268	6.367
	Exited	777	0.853	17.010	6.521
	Code 504 student	1,179	0.861	17.334	6.466
	Exited, but Enrolled in 504	169	0.845	17.155	6.759
	Not Specified	17	--	--	--

Table E-21. MISA Grade 5 Spring 2023 Test Score Reliability, as a Function of Subgroup

Group	Subgroup	N	IRT Marginal Reliability	SD Scaled Score	Classical SEM
Overall	--	64,570	0.856	14.498	5.504
Race/Ethnicity	American Indian or Alaskan Native	148	0.845	14.125	5.560
	Asian	4,500	0.853	13.720	5.251
	Black or African American	20,737	0.818	13.347	5.701
	Hispanic or Latino	14,253	0.815	13.542	5.830
	Native Hawaiian or Pacific Islander	87	0.837	13.368	5.397
	White	21,158	0.841	12.923	5.152
	Multiracial	3,630	0.853	13.727	5.259
	Not Specified	57	0.793	20.022	9.118
Economically Disadvantaged	Yes	23,710	0.807	12.956	5.697
	No	26,125	0.853	13.742	5.261
	Not Specified	14,735	0.840	14.025	5.611
Gender	Female	31,636	0.851	14.107	5.443
	Male	32,906	0.860	14.849	5.555
	Non-Binary	12	--	--	--
	Not Specified	16	--	--	--
LEP	Exited	3,439	0.783	10.992	5.126
	No	45,787	0.860	14.341	5.366
	Yes	5,748	0.673	10.884	6.225
	Not Specified	9,596	0.824	13.848	5.818
Special Education Services	Yes	7,736	0.789	13.347	6.127
	No	51,671	0.852	14.052	5.410
	Exited	2,125	0.840	13.146	5.253
	Code 504 student	2,594	0.859	14.099	5.301
	Exited, but Enrolled in 504	290	0.823	12.414	5.216
	Not Specified	154	0.770	19.853	9.532

Table E-22. MISA Grade 8 Spring 2023 Test Score Reliability, as a Function of Subgroup

Group	Subgroup	N	IRT Marginal Reliability	SD Scaled Score	Classical SEM
Overall	--	66,048	0.875	15.949	5.631
Race/Ethnicity	American Indian or Alaskan Native	152	0.856	14.674	5.571
	Asian	4,458	0.879	14.689	5.102
	Black or African American	22,086	0.827	13.910	5.778
	Hispanic or Latino	14,330	0.833	15.167	6.199
	Native Hawaiian or Pacific Islander	90	0.892	16.818	5.537
	White	21,561	0.869	14.364	5.193
	Multiracial	3,328	0.876	15.478	5.456
	Not Specified	43	--	--	--
Economically Disadvantaged	Yes	23,493	0.826	14.013	5.852
	No	27,703	0.878	15.041	5.258
	Not Specified	14,852	0.859	15.823	5.938
Gender	Female	32,341	0.875	15.849	5.614
	Male	33,627	0.876	16.039	5.648
	Non-Binary	72	0.838	12.460	5.021
	Not Specified	8	--	--	--
LEP	Exited	4,988	0.839	13.150	5.276
	No	47,542	0.879	15.631	5.446
	Yes	4,030	0.626	10.757	6.576
	Not Specified	9,488	0.834	15.329	6.252
Special Education Services	Yes	7,175	0.758	12.742	6.263
	No	52,400	0.874	15.687	5.562
	Exited	2,317	0.864	14.798	5.457
	Code 504 student	3,542	0.865	14.503	5.334
	Exited, but Enrolled in 504	458	0.860	14.400	5.383
	Not Specified	156	0.782	15.821	7.392

Table E-23. Social Studies Grade 8 Spring 2023 Test Score Reliability, as a Function of Subgroup

Group	Subgroup	N	IRT Marginal Reliability	SD Scaled Score	Classical SEM
Overall	--	65,324	0.930	20.619	5.451
Race/Ethnicity	American Indian or Alaskan Native	148	0.919	20.073	5.717
	Asian	4,486	0.927	22.221	5.989
	Black or African American	21,706	0.898	16.540	5.282
	Hispanic or Latino	14,176	0.905	17.573	5.419
	Native Hawaiian or Pacific Islander	91	0.933	20.707	5.364
	White	21,386	0.928	20.502	5.509
	Multiracial	3,305	0.934	21.479	5.516
	Not Specified	26	--	--	--
Economically Disadvantaged	Yes	23,154	0.897	16.651	5.341
	No	27,566	0.932	21.428	5.605
	Not Specified	14,604	0.914	18.137	5.324
Gender	Female	32,000	0.928	20.125	5.411
	Male	33,248	0.932	21.068	5.488
	Non-Binary	70	0.910	19.000	5.685
	Not Specified	6	--	--	--
LEP	Exited	5,002	0.915	18.099	5.269
	No	54,611	0.931	20.639	5.430
	Yes	5,690	0.767	11.992	5.790
	Not Specified	21	--	--	--
Special Education Services	Yes	6,613	0.861	15.355	5.727
	No	52,225	0.931	20.574	5.421
	Exited	2,297	0.926	19.593	5.336
	Code 504 student	3,503	0.928	19.968	5.365
	Exited, but Enrolled in 504	453	0.929	20.133	5.377
	Not Specified	233	0.865	17.620	6.479

Appendix F. Decision Accuracy and Consistency

Table F-1. Fall 2022 Overall Decision Accuracy and Consistency Results, as a Function of Content Area and Grade

Content Area	Grade	N	Accuracy	Consistency	False Positive	False Negative
ELA	10	10,263	0.843	0.776	0.081	0.076
Algebra 1	HS	7,655	0.787	0.704	0.121	0.093
Algebra 2	HS	1,682	0.816	0.741	0.100	0.085
Geometry	HS	2,635	0.767	0.679	0.126	0.107

Table F-2. Spring 2023 Overall Decision Accuracy and Consistency Results, as a Function of Content Area and Grade

Content Area	Grade	N	Accuracy	Consistency	False Positive	False Negative
				Core Form 1		
ELA	3	63,702	0.855	0.794	0.074	0.071
	4	63,940	0.838	0.771	0.082	0.081
	5	64,147	0.854	0.793	0.074	0.072
	6	63,599	0.835	0.768	0.084	0.081
	7	63,565	0.862	0.804	0.071	0.067
	8	65,479	0.863	0.806	0.068	0.070
	10	63,613	0.849	0.787	0.076	0.074
Mathematics	3	64,275	0.840	0.775	0.081	0.078
	4	64,520	0.855	0.795	0.074	0.071
	5	64,667	0.860	0.802	0.073	0.067
	6	63,644	0.866	0.812	0.070	0.064
	7	56,106	0.845	0.781	0.085	0.071
	8	41,741	0.814	0.741	0.103	0.083
Algebra 1	HS	67,136	0.712	0.608	0.154	0.134
Algebra 2	HS	11,743	0.820	0.745	0.096	0.084
Geometry	HS	19,907	0.807	0.730	0.101	0.092
Science	5	64,570	0.801	0.720	0.096	0.103
	8	66,048	0.816	0.744	0.091	0.093
Social Studies	8	65,324	0.844	0.778	0.082	0.075

Table F-3. Fall 2022 Decision Accuracy and Consistency Results, as a Function of Content Area, Grade, and Cut Score

Content Area	Grade	N	Accuracy	Consistency	False Positive	False Negative
				Beginning/Developing		
ELA	10	10,263	0.960	0.941	0.018	0.022
Algebra 1	HS	7,655	0.844	0.784	0.079	0.076
Algebra 2	HS	1,682	0.922	0.889	0.031	0.047
Geometry	HS	2,635	0.867	0.814	0.055	0.079
				Developing/Proficient		
ELA	10	10,263	0.911	0.874	0.045	0.045
Algebra 1	HS	7,655	0.947	0.924	0.038	0.016
Algebra 2	HS	1,682	0.906	0.868	0.058	0.037
Geometry	HS	2,635	0.902	0.866	0.070	0.028
				Proficient/Distinguished		
ELA	10	10,263	0.971	0.960	0.019	0.010
Algebra 1	HS	7,655	0.996	0.994	0.004	0.001
Algebra 2	HS	1,682	0.988	0.984	0.011	0.001
Geometry	HS	2,635	0.998	0.996	0.001	0.000

Table F-4. Spring 2023 Decision Accuracy and Consistency Results, as a Function of Content Area, Grade, and Cut Score

Content Area	Grade	N	Accuracy	Consistency	False Positive	False Negative
Beginning/Developing						
ELA	3	63,702	0.948	0.925	0.024	0.028
	4	63,940	0.951	0.931	0.019	0.030
	5	64,147	0.951	0.931	0.020	0.029
	6	63,599	0.958	0.940	0.016	0.026
	7	63,565	0.971	0.958	0.012	0.016
	8	65,479	0.957	0.938	0.018	0.025
	10	63,613	0.974	0.963	0.011	0.015
Mathematics	3	64,275	0.931	0.903	0.031	0.038
	4	64,520	0.934	0.907	0.028	0.038
	5	64,667	0.929	0.900	0.033	0.038
	6	63,644	0.921	0.889	0.036	0.043
	7	56,106	0.903	0.864	0.049	0.048
	8	41,741	0.862	0.808	0.068	0.070
Algebra 1	HS	67,136	0.829	0.765	0.069	0.102
Algebra 2	HS	11,743	0.910	0.872	0.040	0.050
Geometry	HS	19,907	0.908	0.871	0.038	0.053
Science	5	64,570	0.930	0.902	0.024	0.046
	8	66,048	0.917	0.886	0.028	0.055
Social Studies	8	65,324	0.932	0.903	0.034	0.034
Developing/Proficient						
ELA	3	63,702	0.923	0.892	0.040	0.036
	4	63,940	0.917	0.883	0.044	0.039
	5	64,147	0.923	0.891	0.042	0.035
	6	63,599	0.908	0.870	0.048	0.045
	7	63,565	0.910	0.874	0.045	0.045
	8	65,479	0.920	0.887	0.040	0.040
	10	63,613	0.912	0.876	0.042	0.046
Mathematics	3	64,275	0.927	0.898	0.039	0.033
	4	64,520	0.935	0.908	0.038	0.027
	5	64,667	0.937	0.912	0.036	0.027
	6	63,644	0.951	0.931	0.031	0.019
	7	56,106	0.949	0.928	0.031	0.020
	8	41,741	0.954	0.934	0.033	0.013
Algebra 1	HS	67,136	0.892	0.848	0.077	0.031
Algebra 2	HS	11,743	0.922	0.891	0.048	0.030
Geometry	HS	19,907	0.910	0.874	0.054	0.036
Science	5	64,570	0.883	0.837	0.062	0.055
	8	66,048	0.905	0.869	0.058	0.037
Social Studies	8	65,324	0.927	0.896	0.038	0.035
Proficient/Distinguished						
ELA	3	63,702	0.984	0.977	0.010	0.007
	4	63,940	0.970	0.957	0.018	0.012
	5	64,147	0.980	0.970	0.013	0.008
	6	63,599	0.970	0.957	0.020	0.010
	7	63,565	0.980	0.972	0.014	0.006
	8	65,479	0.986	0.981	0.010	0.004
	10	63,613	0.963	0.948	0.024	0.013
Mathematics	3	64,275	0.982	0.974	0.011	0.007
	4	64,520	0.986	0.980	0.008	0.006
	5	64,667	0.993	0.990	0.004	0.003
	6	63,644	0.994	0.991	0.003	0.003
	7	56,106	0.992	0.989	0.005	0.003
	8	41,741	0.998	0.998	0.002	0.000
Algebra 1	HS	67,136	0.991	0.985	0.008	0.001
Algebra 2	HS	11,743	0.988	0.981	0.008	0.004
Geometry	HS	19,907	0.989	0.984	0.008	0.003
Science	5	64,570	0.988	0.980	0.010	0.002
	8	66,048	0.994	0.989	0.004	0.002
Social Studies	8	65,324	0.985	0.979	0.010	0.005

Appendix G. Scaled Score Statistics and Performance Level Percentages

Table G-1. Fall 2022 ALG 01 Total Scaled Score Statistics and Performance Level Percentages, as a Function of Subgroup

			Scaled Score Statistics				Performance Level Percentages			
Group	Subgroup	N	Mean	SD	Skew	Kurtosis	1	2	3	4
Overall	--	6,909	726.43	15.91	0.28	2.51	48.3%	44.0%	7.1%	0.6%
Race/Ethnicity	American Indian or Alaskan Native	20	--	--	--	--	--	--	--	--
	Asian	260	741.61	20.97	0.79	2.19	20.0%	48.5%	26.5%	5.0%
	Black or African American	2,516	721.85	13.40	-0.47	3.89	60.2%	37.8%	1.8%	0.2%
	Hispanic or Latino	1,423	721.56	14.05	0.06	2.29	61.3%	34.9%	3.7%	0.1%
	Native Hawaiian or Pacific Islander	15	--	--	--	--	--	--	--	--
	White	2,266	732.92	15.70	0.22	1.23	29.9%	56.3%	13.0%	0.8%
	Multiracial	323	727.82	13.99	0.49	1.25	46.1%	46.4%	7.1%	0.3%
	Not Specified	86	718.24	17.27	-1.02	2.73	66.3%	32.6%	1.2%	0.0%
Economically Disadvantaged	Yes	2,144	722.47	13.05	-0.13	3.86	58.9%	38.9%	2.1%	0.0%
	No	2,798	732.25	17.08	0.15	1.85	32.6%	52.5%	13.8%	1.0%
	Not Specified	1,967	722.47	14.43	0.15	3.73	59.2%	37.5%	2.9%	0.5%
Gender	Female	3,213	727.23	15.56	0.03	1.79	44.9%	47.3%	7.3%	0.4%
	Male	3,638	725.86	16.13	0.52	3.09	51.0%	41.3%	7.0%	0.7%
	Non-Binary	5	--	--	--	--	--	--	--	--
	Not Specified	53	718.34	18.26	-1.03	2.85	67.9%	32.1%	0.0%	0.0%
LEP	Exited	349	726.15	16.71	0.47	5.98	47.3%	45.8%	6.0%	0.9%
	No	5,784	727.75	15.86	0.26	2.34	44.4%	47.0%	8.0%	0.6%
	Yes	676	716.39	11.61	-0.36	2.79	79.6%	19.7%	0.7%	0.0%
	Not Specified	100	718.99	15.17	-0.88	3.87	70.0%	29.0%	1.0%	0.0%
Special Education Services	Yes	843	717.62	11.71	-0.87	5.30	77.0%	22.4%	0.6%	0.0%
	No	5,086	727.70	16.23	0.32	2.36	44.7%	46.3%	8.4%	0.6%
	Exited	220	728.62	14.64	0.42	0.81	39.5%	51.4%	8.6%	0.5%
	Code 504 student	407	728.33	15.08	0.53	1.52	44.0%	46.9%	8.1%	1.0%
	Exited, But Enrolled in 504	66	723.86	15.37	-0.64	1.49	47.0%	51.5%	1.5%	0.0%
	Not Specified	287	726.15	14.96	-1.06	4.75	42.2%	55.7%	2.1%	0.0%

Table G-2. Fall 2022 ALG 02 Total Scaled Score Statistics and Performance Level Percentages, as a Function of Subgroup

			Scaled Score Statistics				Performance Level Percentages			
Group	Subgroup	N	Mean	SD	Skew	Kurtosis	1	2	3	4
Overall	--	457	736.74	13.07	0.20	-0.07	17.7%	65.6%	15.8%	0.9%
Race/Ethnicity	American Indian or Alaskan Native	0	--	--	--	--	--	--	--	--
	Asian	8	--	--	--	--	--	--	--	--
	Black or African American	28	--	--	--	--	--	--	--	--
	Hispanic or Latino	26	--	--	--	--	--	--	--	--
	Native Hawaiian or Pacific Islander	0	--	--	--	--	--	--	--	--
	White	366	737.47	13.45	0.11	-0.13	17.2%	63.7%	18.0%	1.1%
	Multiracial	17	--	--	--	--	--	--	--	--
	Not Specified	12	--	--	--	--	--	--	--	--
Economically Disadvantaged	Yes	96	732.88	12.20	0.69	1.07	21.9%	68.8%	8.3%	1.0%
	No	246	737.30	12.33	0.21	0.19	15.4%	69.5%	14.2%	0.8%
	Not Specified	115	738.77	14.66	-0.16	-0.54	19.1%	54.8%	25.2%	0.9%
Gender	Female	232	735.00	12.17	0.10	-0.26	19.0%	69.8%	11.2%	0.0%
	Male	216	739.23	13.54	0.15	0.02	14.4%	62.5%	21.3%	1.9%
	Non-Binary	0	--	--	--	--	--	--	--	--
	Not Specified	9	--	--	--	--	--	--	--	--
LEP	Exited	3	--	--	--	--	--	--	--	--
	No	445	737.02	13.02	0.18	-0.04	16.9%	66.3%	16.0%	0.9%
	Yes	0	--	--	--	--	--	--	--	--
	Not Specified	9	--	--	--	--	--	--	--	--
Special Education Services	Yes	11	--	--	--	--	--	--	--	--
	No	399	737.52	13.00	0.11	0.04	15.8%	66.7%	16.5%	1.0%
	Exited	16	--	--	--	--	--	--	--	--
	Code 504 student	17	--	--	--	--	--	--	--	--
	Exited, But Enrolled in 504	4	--	--	--	--	--	--	--	--
	Not Specified	10	--	--	--	--	--	--	--	--

Table G-3. Fall 2022 ELA 10 Total Scaled Score Statistics and Performance Level Percentages, as a Function of Subgroup

			Scaled Score Statistics				Performance Level Percentages			
Group	Subgroup	N	Mean	SD	Skew	Kurtosis	1	2	3	4
Overall	--	8,779	748.86	18.42	0.19	0.29	7.4%	46.4%	38.2%	7.9%
Race/Ethnicity	American Indian or Alaskan Native	32	--	--	--	--	--	--	--	--
	Asian	315	759.17	21.15	0.32	0.44	4.4%	30.2%	45.1%	20.3%
	Black or African American	2,801	741.82	15.04	0.15	1.11	10.4%	61.6%	26.3%	1.8%
	Hispanic or Latino	1,707	742.53	16.94	0.25	0.63	11.6%	55.5%	29.8%	3.2%
	Native Hawaiian or Pacific Islander	13	--	--	--	--	--	--	--	--
	White	3,379	756.75	17.69	-0.11	0.24	3.0%	31.5%	51.4%	14.1%
	Multiracial	433	753.16	18.49	-0.08	0.79	5.5%	37.2%	46.2%	11.1%
	Not Specified	99	735.96	14.05	0.27	-0.38	21.2%	63.6%	15.2%	0.0%
Economically Disadvantaged	Yes	2,460	744.80	16.68	0.04	0.84	9.4%	53.6%	33.3%	3.7%
	No	3,954	755.99	18.63	0.02	0.01	3.8%	33.2%	48.5%	14.4%
	Not Specified	2,365	741.15	15.09	0.10	0.95	11.3%	61.1%	26.3%	1.4%
Gender	Female	4,202	751.63	18.20	0.11	0.49	5.6%	41.1%	43.6%	9.7%
	Male	4,502	746.50	18.25	0.28	0.25	8.8%	51.1%	33.7%	6.4%
	Non-Binary	2	--	--	--	--	--	--	--	--
	Not Specified	73	734.89	14.38	0.50	-0.31	23.3%	63.0%	13.7%	0.0%
LEP	Exited	503	748.58	16.99	-0.18	1.83	5.2%	47.1%	42.7%	5.0%
	No	7,434	750.67	18.21	0.15	0.32	5.9%	43.8%	41.3%	9.0%
	Yes	709	731.76	11.21	-0.10	1.76	22.7%	70.9%	6.3%	0.0%
	Not Specified	133	739.52	16.08	0.41	-0.22	16.5%	59.4%	21.8%	2.3%
Special Education Services	Yes	903	735.49	12.63	0.42	1.08	15.7%	71.5%	12.1%	0.7%
	No	6,463	750.73	18.65	0.12	0.37	6.4%	43.0%	41.1%	9.5%
	Exited	300	749.31	17.15	0.18	-0.40	6.7%	44.3%	41.7%	7.3%
	Code 504 student	648	749.81	17.20	0.05	0.29	6.0%	44.4%	42.9%	6.6%
	Exited, But Enrolled in 504	55	746.91	18.47	0.44	-0.06	7.3%	56.4%	29.1%	7.3%
	Not Specified	410	747.15	15.74	-0.39	0.79	7.8%	48.5%	42.2%	1.5%

Table G-4. Fall 2022 GEO 01 Total Scaled Score Statistics and Performance Level Percentages, as a Function of Subgroup

			Scaled Score Statistics				Performance Level Percentages			
Group	Subgroup	N	Mean	SD	Skew	Kurtosis	1	2	3	4
Overall	--	612	726.65	18.62	-0.15	1.08	44.6%	44.8%	10.5%	0.2%
Race/Ethnicity	American Indian or Alaskan Native	2	--	--	--	--	--	--	--	--
	Asian	7	--	--	--	--	--	--	--	--
	Black or African American	110	715.80	15.44	-0.88	2.53	70.0%	30.0%	0.0%	0.0%
	Hispanic or Latino	51	723.08	16.65	-0.29	-0.13	49.0%	47.1%	3.9%	0.0%
	Native Hawaiian or Pacific Islander	0	--	--	--	--	--	--	--	--
	White	400	730.85	18.25	-0.23	1.44	34.0%	51.5%	14.3%	0.3%
	Multiracial	27	--	--	--	--	--	--	--	--
	Not Specified	15	--	--	--	--	--	--	--	--
Economically Disadvantaged	Yes	215	721.16	17.15	-0.79	2.26	55.3%	40.0%	4.7%	0.0%
	No	296	734.72	17.28	0.07	0.36	25.3%	56.4%	17.9%	0.3%
	Not Specified	101	714.70	14.35	-0.56	1.31	78.2%	20.8%	1.0%	0.0%
Gender	Female	257	728.75	18.08	-0.38	1.20	38.5%	48.6%	12.8%	0.0%
	Male	343	725.78	18.69	0.00	1.30	47.2%	43.4%	9.0%	0.3%
	Non-Binary	0	--	--	--	--	--	--	--	--
	Not Specified	12	--	--	--	--	--	--	--	--
LEP	Exited	6	--	--	--	--	--	--	--	--
	No	582	727.34	18.57	-0.18	1.17	43.1%	45.7%	11.0%	0.2%
	Yes	12	--	--	--	--	--	--	--	--
	Not Specified	12	--	--	--	--	--	--	--	--
Special Education Services	Yes	57	713.05	12.09	-0.77	2.25	80.7%	19.3%	0.0%	0.0%
	No	485	729.24	18.27	-0.16	1.03	38.4%	48.7%	12.8%	0.2%
	Exited	14	--	--	--	--	--	--	--	--
	Code 504 student	36	--	--	--	--	--	--	--	--
	Exited, But Enrolled in 504	8	--	--	--	--	--	--	--	--
	Not Specified	12	--	--	--	--	--	--	--	--

Table G-5. Spring 2023 ELA Grade 3 Total Scaled Score Statistics and Performance Level Percentages, as a Function of Subgroup

			Scaled Score Statistics				Performance Level Percentages			
Group	**Subgroup**	**N**	**Mean**	**SD**	**Skew**	**Kurtosis**	**1**	**2**	**3**	**4**
Overall	--	62,844	749.37	22.10	0.45	-0.11	11.6%	42.8%	41.1%	4.5%
Race/Ethnicity	American Indian or Alaskan Native	164	745.03	18.77	0.53	-0.17	11.6%	52.4%	34.1%	1.8%
	Asian	4,219	763.78	22.98	0.09	-0.13	3.7%	23.3%	60.2%	12.7%
	Black or African American	20,000	743.04	19.78	0.58	0.55	16.1%	50.9%	31.1%	2.0%
	Hispanic or Latino	13,544	741.55	18.66	0.77	0.59	16.4%	53.9%	28.3%	1.4%
	Native Hawaiian or Pacific Islander	100	752.79	21.33	0.11	-1.03	7.0%	37.0%	53.0%	3.0%
	White	20,983	757.05	21.86	0.15	-0.32	6.1%	32.4%	54.4%	7.1%
	Multiracial	3,611	753.47	22.56	0.27	-0.31	8.4%	38.2%	47.0%	6.4%
	Not Specified	223	733.23	21.08	0.76	1.00	34.1%	48.4%	16.6%	0.9%
Economically Disadvantaged	Yes	15,479	739.75	18.43	0.59	0.97	19.3%	54.0%	25.6%	1.1%
	No	21,860	755.23	21.96	0.20	-0.28	7.3%	34.6%	51.9%	6.2%
	Not Specified	25,505	750.19	22.31	0.51	-0.19	10.5%	43.0%	41.3%	5.2%
Gender	Female	30,649	751.72	22.58	0.42	-0.15	9.7%	40.5%	43.9%	5.9%
	Male	31,995	747.22	21.36	0.46	-0.10	13.2%	44.9%	38.6%	3.3%
	Non-Binary	1	--	--	--	--	--	--	--	--
	Not Specified	199	732.83	21.29	0.73	1.04	34.2%	49.2%	15.6%	1.0%
LEP	Exited	1,008	762.08	21.48	0.02	0.00	2.9%	25.1%	63.1%	8.9%
	No	51,563	751.50	22.34	0.35	-0.18	10.1%	39.9%	44.8%	5.3%
	Yes	10,034	737.55	15.90	0.79	0.96	19.4%	59.4%	20.8%	0.5%
	Not Specified	239	732.66	21.08	0.68	0.85	36.4%	46.9%	15.9%	0.8%
Special Education Services	Yes	6,883	733.94	17.02	0.99	2.57	28.4%	56.4%	14.5%	0.7%
	No	52,423	751.51	21.95	0.40	-0.18	9.4%	40.8%	44.7%	5.1%
	Exited	1,391	749.72	20.64	0.50	0.35	8.9%	44.3%	42.6%	4.2%
	Code 504 student	1,641	748.42	20.53	0.36	0.11	9.9%	46.2%	40.7%	3.2%
	Exited, But Enrolled in 504	143	748.90	19.96	0.45	0.00	10.5%	44.1%	41.3%	4.2%
	Not Specified	363	736.64	21.71	0.75	0.62	30.3%	46.0%	21.5%	2.2%

Table G-6. Spring 2023 ELA Grade 4 Total Scaled Score Statistics and Performance Level Percentages, as a Function of Subgroup

			Scaled Score Statistics				Performance Level Percentages			
Group	**Subgroup**	**N**	**Mean**	**SD**	**Skew**	**Kurtosis**	**1**	**2**	**3**	**4**
Overall	--	63,287	747.52	19.53	0.07	-0.21	12.9%	40.9%	40.6%	5.6%
Race/Ethnicity	American Indian or Alaskan Native	150	744.54	18.86	0.01	-0.13	18.0%	40.7%	38.0%	3.3%
	Asian	4,337	759.17	18.53	-0.21	0.18	4.2%	24.2%	58.0%	13.6%
	Black or African American	20,017	741.81	18.17	0.13	0.04	17.9%	48.7%	31.1%	2.3%
	Hispanic or Latino	13,357	740.44	17.68	0.32	-0.04	20.1%	49.8%	28.1%	2.0%
	Native Hawaiian or Pacific Islander	85	745.19	18.02	-0.17	-0.64	15.3%	41.2%	42.4%	1.2%
	White	21,156	754.77	18.23	-0.11	-0.07	5.5%	32.0%	53.4%	9.1%
	Multiracial	3,670	751.20	19.40	-0.02	-0.05	9.3%	36.6%	46.7%	7.4%
	Not Specified	515	731.69	18.70	0.16	1.47	36.7%	47.2%	15.5%	0.6%
Economically Disadvantaged	Yes	14,413	739.15	17.54	0.18	0.22	21.2%	51.0%	26.2%	1.6%
	No	22,896	753.44	18.71	-0.13	-0.05	7.1%	33.1%	51.4%	8.3%
	Not Specified	25,978	746.94	19.50	0.15	-0.23	13.5%	42.2%	39.0%	5.4%
Gender	Female	30,809	750.58	19.65	0.02	-0.12	9.8%	37.9%	44.6%	7.7%
	Male	31,984	744.80	18.91	0.11	-0.30	15.6%	43.7%	37.1%	3.6%
	Non-Binary	9	--	--	--	--	--	--	--	--
	Not Specified	485	731.35	18.42	0.17	1.68	37.1%	47.6%	14.8%	0.4%
LEP	Exited	1,793	757.74	15.29	0.02	0.24	1.8%	26.5%	63.1%	8.6%
	No	51,282	749.62	19.41	-0.01	-0.16	10.6%	38.6%	44.3%	6.5%
	Yes	9,671	735.39	15.15	0.30	0.11	26.0%	55.7%	17.9%	0.4%
	Not Specified	541	731.13	19.38	0.06	1.52	37.9%	46.2%	15.2%	0.7%
Special Education Services	Yes	7,192	731.74	16.39	0.42	1.36	35.6%	50.7%	12.9%	0.8%
	No	46,867	749.67	19.06	0.06	-0.25	10.1%	39.4%	44.1%	6.4%
	Exited	1,844	748.84	17.59	0.13	-0.02	8.6%	43.2%	43.9%	4.4%
	Code 504 student	1,982	746.43	17.97	0.11	0.14	11.2%	46.9%	38.4%	3.6%
	Exited, But Enrolled in 504	187	747.62	15.22	0.22	0.07	5.3%	49.7%	41.7%	3.2%
	Not Specified	5,215	749.89	19.08	-0.12	0.01	9.8%	38.1%	46.4%	5.7%

Table G-7. Spring 2023 ELA Grade 5 Total Scaled Score Statistics and Performance Level Percentages, as a Function of Subgroup

			Scaled Score Statistics				Performance Level Percentages			
Group	**Subgroup**	**N**	**Mean**	**SD**	**Skew**	**Kurtosis**	**1**	**2**	**3**	**4**
Overall	--	64,588	745.07	18.93	0.09	-0.26	15.4%	43.6%	36.0%	5.0%
Race/Ethnicity	American Indian or Alaskan Native	169	744.81	18.23	0.30	-0.17	13.6%	47.9%	33.7%	4.7%
	Asian	4,377	757.49	18.14	-0.21	0.24	4.7%	26.2%	54.9%	14.2%
	Black or African American	20,895	739.21	17.47	0.17	-0.14	21.6%	50.6%	25.8%	2.0%
	Hispanic or Latino	13,402	738.61	17.19	0.30	-0.15	23.0%	50.6%	24.5%	1.8%
	Native Hawaiian or Pacific Islander	77	748.39	17.80	0.11	-0.04	11.7%	37.7%	45.5%	5.2%
	White	21,768	751.88	17.72	-0.11	0.00	7.2%	36.3%	48.7%	7.8%
	Multiracial	3,470	748.78	18.51	0.05	-0.17	10.1%	42.1%	41.1%	6.7%
	Not Specified	430	729.28	17.40	0.11	1.09	40.0%	48.1%	10.9%	0.9%
Economically Disadvantaged	Yes	14,575	736.71	16.70	0.23	-0.02	25.2%	52.8%	20.8%	1.2%
	No	23,569	750.54	17.98	-0.09	-0.07	8.6%	37.7%	46.7%	7.1%
	Not Specified	26,444	744.80	19.17	0.14	-0.27	15.9%	43.9%	34.9%	5.3%
Gender	Female	31,403	748.07	19.12	0.07	-0.26	11.8%	41.2%	39.8%	7.2%
	Male	32,788	742.37	18.24	0.08	-0.31	18.5%	45.9%	32.6%	3.0%
	Non-Binary	10	--	--	--	--	--	--	--	--
	Not Specified	387	729.14	17.41	0.11	1.24	40.6%	47.8%	10.6%	1.0%
LEP	Exited	2,899	753.18	14.64	0.10	0.17	2.4%	38.6%	53.3%	5.6%
	No	52,514	746.97	18.81	0.02	-0.22	12.8%	41.9%	39.4%	5.8%
	Yes	8,713	731.80	14.11	0.29	0.08	33.3%	55.6%	10.9%	0.2%
	Not Specified	462	727.81	18.04	0.10	0.95	44.2%	44.8%	10.0%	1.1%
Special Education Services	Yes	7,499	728.00	15.26	0.56	0.93	47.0%	44.0%	8.6%	0.5%
	No	46,944	747.50	18.37	0.07	-0.22	11.3%	43.0%	39.7%	5.9%
	Exited	2,047	746.17	16.80	0.10	-0.15	10.6%	47.3%	38.3%	3.7%
	Code 504 student	2,681	744.03	16.89	0.12	-0.02	12.7%	50.0%	34.5%	2.8%
	Exited, But Enrolled in 504	257	743.26	15.61	0.24	0.09	11.3%	55.3%	30.7%	2.7%
	Not Specified	5,160	747.97	17.78	-0.07	0.00	9.3%	43.5%	41.8%	5.3%

Table G-8. Spring 2023 ELA Grade 6 Total Scaled Score Statistics and Performance Level Percentages, as a Function of Subgroup

			Scaled Score Statistics				Performance Level Percentages			
Group	**Subgroup**	**N**	**Mean**	**SD**	**Skew**	**Kurtosis**	**1**	**2**	**3**	**4**
Overall	--	63,172	746.21	18.15	-0.08	0.06	12.4%	43.4%	39.9%	4.3%
Race/Ethnicity	American Indian or Alaskan Native	166	743.52	17.24	-0.11	-0.42	13.9%	47.6%	35.5%	3.0%
	Asian	4,245	758.82	16.48	-0.35	0.16	3.4%	22.8%	61.1%	12.8%
	Black or African American	20,553	740.73	17.12	-0.04	0.56	17.5%	51.5%	29.2%	1.8%
	Hispanic or Latino	13,045	740.15	16.67	0.14	0.04	18.7%	52.0%	27.6%	1.7%
	Native Hawaiian or Pacific Islander	87	745.93	19.77	-1.06	2.41	10.3%	44.8%	42.5%	2.3%
	White	21,246	752.58	16.76	-0.24	0.20	5.7%	34.5%	53.3%	6.5%
	Multiracial	3,351	749.10	17.84	-0.18	0.51	8.5%	40.6%	44.9%	6.0%
	Not Specified	479	732.39	17.21	-0.26	1.55	31.7%	53.4%	14.0%	0.8%
Economically Disadvantaged	Yes	13,955	737.66	16.58	-0.09	1.08	21.7%	54.4%	22.8%	1.1%
	No	23,113	751.42	17.05	-0.21	0.12	6.7%	36.4%	51.0%	6.0%
	Not Specified	26,104	746.16	18.16	0.01	-0.19	12.6%	43.8%	39.1%	4.6%
Gender	Female	30,736	749.41	18.33	-0.08	-0.21	9.4%	39.9%	44.2%	6.5%
	Male	31,951	743.32	17.40	-0.13	0.31	15.1%	46.6%	36.0%	2.2%
	Non-Binary	30	--	--	--	--	--	--	--	--
	Not Specified	455	732.01	16.98	-0.32	1.69	31.9%	54.1%	13.4%	0.7%
LEP	Exited	5,096	749.38	14.10	0.04	0.54	3.4%	47.2%	46.4%	3.0%
	No	51,596	748.00	18.00	-0.15	0.16	10.4%	41.2%	43.4%	5.0%
	Yes	5,941	729.29	12.18	0.08	1.40	36.5%	58.0%	5.5%	0.0%
	Not Specified	539	731.41	17.86	-0.36	1.79	33.6%	52.1%	13.5%	0.7%
Special Education Services	Yes	7,248	729.51	14.89	0.08	2.03	39.2%	51.1%	9.4%	0.3%
	No	46,119	748.79	17.51	-0.07	-0.02	8.9%	41.5%	44.4%	5.2%
	Exited	1,941	747.31	16.16	-0.07	0.12	8.3%	46.5%	42.0%	3.2%
	Code 504 student	2,659	745.69	16.36	-0.33	0.87	10.0%	47.8%	39.9%	2.3%
	Exited, But Enrolled in 504	305	745.32	13.87	-0.11	-0.08	6.6%	53.1%	39.7%	0.7%
	Not Specified	4,900	746.48	17.26	-0.25	0.55	9.8%	45.4%	41.3%	3.4%

Table G-9. Spring 2023 ELA Grade 7 Total Scaled Score Statistics and Performance Level Percentages, as a Function of Subgroup

			Scaled Score Statistics				Performance Level Percentages			
Group	**Subgroup**	**N**	**Mean**	**SD**	**Skew**	**Kurtosis**	**1**	**2**	**3**	**4**
Overall	--	64,675	746.24	17.70	-0.16	0.29	11.0%	45.9%	39.6%	3.4%
Race/Ethnicity	American Indian or Alaskan Native	146	744.97	17.74	-0.31	-0.13	13.0%	45.2%	39.7%	2.1%
	Asian	4,353	759.03	15.99	-0.43	0.20	2.8%	23.2%	62.7%	11.3%
	Black or African American	21,183	741.24	16.56	-0.12	0.85	15.1%	54.5%	29.0%	1.4%
	Hispanic or Latino	13,448	740.26	16.81	-0.01	0.36	17.1%	54.0%	27.4%	1.5%
	Native Hawaiian or Pacific Islander	92	746.58	20.26	0.25	-0.29	17.4%	40.2%	34.8%	7.6%
	White	21,624	752.09	16.34	-0.34	0.48	5.2%	37.3%	52.6%	4.9%
	Multiracial	3,416	749.11	17.06	-0.24	0.46	7.5%	42.8%	45.6%	4.1%
	Not Specified	413	732.46	17.37	-0.84	3.99	27.4%	58.8%	13.6%	0.2%
Economically Disadvantaged	Yes	14,203	738.32	16.19	-0.19	1.33	18.7%	57.6%	22.8%	0.8%
	No	24,258	750.79	16.90	-0.30	0.32	6.7%	39.3%	49.5%	4.6%
	Not Specified	26,214	746.32	17.71	-0.11	0.11	10.9%	45.8%	39.6%	3.7%
Gender	Female	31,617	749.53	17.81	-0.25	0.23	8.6%	40.1%	46.2%	5.1%
	Male	32,638	743.19	16.95	-0.13	0.42	13.2%	51.5%	33.5%	1.8%
	Non-Binary	40	--	--	--	--	--	--	--	--
	Not Specified	380	732.29	17.23	-0.86	4.49	27.4%	59.5%	12.9%	0.3%
LEP	Exited	5,458	746.94	14.33	0.02	0.23	5.6%	52.7%	39.8%	1.9%
	No	53,885	747.95	17.41	-0.21	0.34	9.1%	43.9%	43.1%	3.9%
	Yes	4,869	727.91	12.59	-0.42	2.45	37.0%	59.0%	4.0%	0.0%
	Not Specified	463	732.08	17.58	-0.92	4.11	27.9%	59.0%	13.0%	0.2%
Special Education Services	Yes	7,119	730.41	14.45	-0.25	2.32	33.1%	58.5%	8.3%	0.1%
	No	46,572	748.74	17.17	-0.18	0.18	8.2%	42.9%	44.7%	4.2%
	Exited	2,140	747.28	16.09	-0.14	0.70	7.4%	48.0%	41.7%	2.8%
	Code 504 student	3,080	745.12	15.97	-0.37	1.20	9.2%	52.3%	37.0%	1.5%
	Exited, But Enrolled in 504	352	743.93	15.72	-0.40	1.99	8.0%	57.7%	32.7%	1.7%
	Not Specified	5,412	745.89	16.80	-0.26	0.89	9.6%	49.7%	38.2%	2.5%

Table G-10. Spring 2023 ELA Grade 8 Total Scaled Score Statistics and Performance Level Percentages, as a Function of Subgroup

			Scaled Score Statistics				Performance Level Percentages			
Group	**Subgroup**	**N**	**Mean**	**SD**	**Skew**	**Kurtosis**	**1**	**2**	**3**	**4**
Overall	--	66,518	745.52	22.00	-0.04	0.06	17.3%	40.2%	40.0%	2.5%
Race/Ethnicity	American Indian or Alaskan Native	210	743.54	21.43	0.09	0.06	17.6%	45.2%	33.8%	3.3%
	Asian	4,567	762.33	19.95	-0.45	0.57	4.2%	19.9%	67.7%	8.3%
	Black or African American	22,203	738.97	20.40	0.03	0.49	23.6%	47.4%	28.0%	1.0%
	Hispanic or Latino	13,196	738.57	20.73	0.05	0.28	25.7%	45.5%	27.8%	1.0%
	Native Hawaiian or Pacific Islander	95	751.42	21.91	-0.07	-0.11	10.5%	35.8%	48.4%	5.3%
	White	22,579	752.45	20.57	-0.17	0.14	9.1%	34.1%	53.2%	3.7%
	Multiracial	3,294	748.51	21.35	-0.08	-0.01	13.2%	38.9%	44.9%	3.1%
	Not Specified	374	729.87	20.68	-0.19	1.38	37.2%	47.3%	15.2%	0.3%
Economically Disadvantaged	Yes	14,369	735.24	19.60	-0.04	1.02	28.2%	50.2%	20.9%	0.6%
	No	25,091	750.53	21.23	-0.13	0.04	11.4%	35.8%	49.4%	3.4%
	Not Specified	27,058	746.34	22.08	-0.04	-0.10	16.9%	38.9%	41.5%	2.7%
Gender	Female	32,290	749.54	22.19	-0.15	0.04	13.6%	36.1%	46.7%	3.6%
	Male	33,815	741.82	21.08	0.02	0.19	20.6%	44.0%	33.9%	1.5%
	Non-Binary	69	758.64	19.78	0.25	-0.26	2.9%	36.2%	53.6%	7.2%
	Not Specified	344	730.01	20.78	-0.17	1.49	37.2%	47.1%	15.4%	0.3%
LEP	Exited	4,995	749.08	19.23	-0.14	0.67	9.2%	42.1%	46.6%	2.1%
	No	56,069	747.14	21.78	-0.07	0.08	15.1%	39.3%	42.8%	2.8%
	Yes	5,016	725.38	15.36	-0.23	1.40	47.9%	46.9%	5.2%	0.0%
	Not Specified	438	728.68	20.34	-0.10	1.33	40.4%	46.1%	13.2%	0.2%
Special Education Services	Yes	7,197	726.99	16.67	0.02	1.99	44.7%	47.4%	7.7%	0.2%
	No	47,741	748.64	21.65	-0.11	0.07	13.4%	38.0%	45.5%	3.1%
	Exited	2,276	746.32	19.92	0.07	0.02	13.7%	44.8%	39.5%	2.1%
	Code 504 student	3,383	743.71	20.75	-0.06	0.71	16.8%	45.0%	36.4%	1.8%
	Exited, But Enrolled in 504	396	743.81	18.90	-0.07	0.07	14.9%	47.5%	36.6%	1.0%
	Not Specified	5,525	743.61	20.50	-0.13	0.41	17.1%	44.1%	37.3%	1.4%

Table G-11. Spring 2023 ELA Grade 10 Total Scaled Score Statistics and Performance Level Percentages, as a Function of Subgroup

			Scaled Score Statistics				Performance Level Percentages			
Group	**Subgroup**	**N**	**Mean**	**SD**	**Skew**	**Kurtosis**	**1**	**2**	**3**	**4**
Overall	--	60,274	750.98	19.05	-0.26	0.42	8.7%	37.0%	44.8%	9.4%
Race/Ethnicity	American Indian or Alaskan Native	143	750.74	19.67	-0.33	1.30	7.0%	42.0%	42.7%	8.4%
	Asian	4,350	763.24	16.59	-0.54	1.00	2.2%	15.8%	59.1%	22.9%
	Black or African American	20,303	746.42	17.79	-0.23	0.69	10.7%	45.8%	38.8%	4.7%
	Hispanic or Latino	12,083	744.08	18.75	-0.25	0.70	15.0%	45.6%	35.2%	4.2%
	Native Hawaiian or Pacific Islander	97	754.43	18.64	0.16	-0.59	4.1%	36.1%	43.3%	16.5%
	White	20,324	756.82	17.80	-0.33	0.43	4.4%	28.0%	53.5%	14.1%
	Multiracial	2,699	754.06	18.63	-0.33	0.54	6.3%	33.0%	48.1%	12.6%
	Not Specified	275	733.64	17.40	-0.11	1.92	28.7%	56.0%	14.2%	1.1%
Economically Disadvantaged	Yes	11,422	742.80	17.91	-0.20	0.91	14.6%	50.4%	31.8%	3.2%
	No	22,632	754.59	18.50	-0.33	0.43	6.1%	31.4%	50.3%	12.2%
	Not Specified	26,220	751.43	18.93	-0.28	0.45	8.4%	36.1%	45.7%	9.8%
Gender	Female	29,468	754.69	18.60	-0.33	0.50	6.0%	31.4%	50.0%	12.6%
	Male	30,503	747.52	18.76	-0.22	0.48	11.2%	42.4%	40.0%	6.4%
	Non-Binary	51	760.45	16.79	-0.36	0.03	3.9%	19.6%	58.8%	17.6%
	Not Specified	252	734.11	17.78	-0.15	1.90	27.4%	56.0%	15.5%	1.2%
LEP	Exited	5,025	753.22	16.57	-0.42	1.54	4.4%	35.3%	51.8%	8.5%
	No	50,402	752.74	18.45	-0.25	0.38	6.7%	35.3%	47.5%	10.4%
	Yes	4,473	730.07	14.89	-0.66	3.01	34.1%	57.0%	8.8%	0.0%
	Not Specified	374	733.91	17.03	-0.02	1.48	28.6%	55.1%	15.2%	1.1%
Special Education Services	Yes	6,044	733.27	15.60	-0.33	2.14	27.5%	59.1%	13.0%	0.5%
	No	46,326	753.56	18.45	-0.33	0.56	6.5%	33.1%	49.3%	11.1%
	Exited	2,275	751.61	17.55	-0.06	0.05	5.8%	39.8%	45.1%	9.4%
	Code 504 student	3,461	750.71	17.63	-0.19	0.61	6.8%	40.2%	45.4%	7.5%
	Exited, But Enrolled in 504	500	750.40	16.51	-0.42	2.25	5.8%	41.8%	46.2%	6.2%
	Not Specified	1,668	743.37	15.90	-0.19	0.86	11.4%	53.8%	32.7%	2.1%

Table G-12. Spring 2023 Mathematics Grade 3 Total Scaled Score Statistics and Performance Level Percentages, as a Function of Subgroup

			Scaled Score Statistics				Performance Level Percentages			
Group	Subgroup	N	Mean	SD	Skew	Kurtosis	1	2	3	4
Overall	--	63,263	741.85	25.46	0.32	-0.04	27.7%	35.6%	33.1%	3.6%
Race/Ethnicity	American Indian or Alaskan Native	164	736.38	23.01	0.29	-0.30	35.4%	38.4%	25.6%	0.6%
	Asian	4,282	761.61	27.09	-0.07	0.40	8.9%	23.2%	53.9%	14.0%
	Black or African American	19,984	732.18	21.88	0.42	0.44	40.2%	39.1%	19.7%	1.0%
	Hispanic or Latino	13,891	732.43	21.28	0.51	0.57	38.9%	40.9%	19.2%	0.9%
	Native Hawaiian or Pacific Islander	100	745.01	23.66	-0.09	-0.13	19.0%	37.0%	42.0%	2.0%
	White	20,994	752.67	23.89	0.00	-0.03	12.8%	31.7%	49.8%	5.7%
	Multiracial	3,610	746.79	25.33	0.17	-0.19	21.3%	33.4%	40.4%	4.8%
	Not Specified	238	721.38	25.21	0.39	0.87	60.9%	25.6%	12.6%	0.8%
Economically Disadvantaged	Yes	15,496	730.72	20.98	0.43	0.52	42.3%	39.6%	17.4%	0.7%
	No	21,990	749.97	24.56	0.03	-0.02	16.2%	32.7%	46.0%	5.1%
	Not Specified	25,777	741.62	26.09	0.41	0.05	28.6%	35.7%	31.5%	4.2%
Gender	Female	30,843	741.43	24.64	0.36	0.04	27.3%	36.9%	32.6%	3.1%
	Male	32,206	742.39	26.16	0.29	-0.11	27.7%	34.5%	33.7%	4.1%
	Non-Binary	1	--	--	--	--	--	--	--	--
	Not Specified	213	720.99	25.10	0.42	0.97	62.0%	24.9%	12.2%	0.9%
LEP	Exited	1,006	757.22	24.21	0.03	0.34	7.8%	29.6%	54.2%	8.4%
	No	51,562	744.24	25.62	0.24	-0.11	24.4%	34.7%	36.6%	4.2%
	Yes	10,442	729.09	19.72	0.52	1.08	44.5%	40.8%	14.2%	0.5%
	Not Specified	253	719.92	24.32	0.29	0.56	62.8%	24.5%	12.3%	0.4%
Special Education Services	Yes	6,862	725.93	22.48	0.73	1.22	54.7%	31.3%	13.0%	1.0%
	No	52,789	743.93	25.12	0.30	-0.06	24.2%	36.1%	35.7%	4.0%
	Exited	1,395	744.96	24.21	0.28	0.67	20.6%	37.6%	38.5%	3.2%
	Code 504 student	1,639	743.08	24.26	0.34	-0.24	24.6%	38.6%	33.3%	3.5%
	Exited, But Enrolled in 504	143	744.57	21.28	0.54	0.45	17.5%	43.4%	37.1%	2.1%
	Not Specified	435	724.80	25.12	0.37	0.47	55.9%	28.0%	15.2%	0.9%

Table G-13. Spring 2023 Mathematics Grade 4 Total Scaled Score Statistics and Performance Level Percentages, as a Function of Subgroup

			Scaled Score Statistics				Performance Level Percentages			
Group	Subgroup	N	Mean	SD	Skew	Kurtosis	1	2	3	4
Overall	--	63,750	738.81	20.45	0.64	1.09	27.0%	44.8%	24.4%	3.8%
Race/Ethnicity	American Indian or Alaskan Native	151	737.38	18.99	0.62	-0.20	30.5%	41.1%	24.5%	4.0%
	Asian	4,393	755.99	23.88	0.57	1.25	8.4%	32.4%	42.8%	16.3%
	Black or African American	20,023	730.77	16.63	0.67	1.30	39.7%	46.9%	12.6%	0.8%
	Hispanic or Latino	13,699	731.18	16.61	0.66	1.83	39.1%	47.3%	12.7%	1.0%
	Native Hawaiian or Pacific Islander	85	738.14	19.22	0.51	0.17	21.2%	54.1%	21.2%	3.5%
	White	21,188	747.53	19.32	0.36	0.87	11.7%	43.8%	38.7%	5.8%
	Multiracial	3,674	742.69	20.15	0.50	0.72	18.8%	46.7%	29.5%	5.0%
	Not Specified	537	722.45	17.81	0.03	3.06	62.8%	30.4%	6.7%	0.2%
Economically Disadvantaged	Yes	14,431	730.46	16.43	0.61	1.33	40.1%	47.3%	11.9%	0.8%
	No	23,030	745.76	19.98	0.45	0.93	14.7%	44.3%	35.5%	5.6%
	Not Specified	26,289	737.30	20.83	0.79	1.48	30.7%	43.9%	21.5%	4.0%
Gender	Female	30,996	738.24	19.53	0.72	1.40	26.3%	47.8%	22.6%	3.2%
	Male	32,236	739.62	21.23	0.58	0.81	27.1%	42.1%	26.3%	4.5%
	Non-Binary	9	--	--	--	--	--	--	--	--
	Not Specified	509	722.17	17.38	0.12	3.14	64.0%	29.7%	6.1%	0.2%
LEP	Exited	1,789	749.20	18.65	0.87	2.46	6.9%	47.4%	39.2%	6.5%
	No	51,316	740.81	20.65	0.59	0.92	23.5%	44.7%	27.4%	4.4%
	Yes	10,082	727.69	14.76	0.57	2.78	46.7%	45.5%	7.4%	0.4%
	Not Specified	563	722.43	17.35	0.17	2.92	63.2%	30.2%	6.4%	0.2%
Special Education Services	Yes	7,189	726.41	16.81	1.31	3.61	55.3%	35.1%	8.4%	1.1%
	No	47,257	740.37	20.28	0.62	1.13	23.4%	46.3%	26.2%	4.2%
	Exited	1,842	741.81	19.07	0.62	0.95	19.4%	48.9%	28.1%	3.6%
	Code 504 student	1,983	739.71	19.64	0.40	0.67	23.7%	46.7%	25.9%	3.7%
	Exited, But Enrolled in 504	186	741.01	18.88	0.41	0.13	16.7%	52.7%	26.3%	4.3%
	Not Specified	5,293	740.27	21.57	0.48	1.16	25.3%	42.3%	28.0%	4.4%

Table G-14. Spring 2023 Mathematics Grade 5 Total Scaled Score Statistics and Performance Level Percentages, as a Function of Subgroup

			Scaled Score Statistics				Performance Level Percentages			
Group	Subgroup	N	Mean	SD	Skew	Kurtosis	1	2	3	4
Overall	--	64,992	737.34	18.52	0.57	1.08	26.1%	49.4%	22.9%	1.6%
Race/Ethnicity	American Indian or Alaskan Native	171	735.66	17.95	0.98	0.80	29.8%	49.1%	17.5%	3.5%
	Asian	4,424	754.01	21.13	0.37	1.59	7.3%	34.1%	50.1%	8.5%
	Black or African American	20,886	730.25	14.98	0.47	1.13	37.5%	52.0%	10.3%	0.2%
	Hispanic or Latino	13,718	730.55	15.14	0.49	1.48	37.3%	51.5%	10.8%	0.4%
	Native Hawaiian or Pacific Islander	77	738.18	14.45	0.73	0.50	15.6%	66.2%	16.9%	1.3%
	White	21,774	744.78	17.66	0.30	0.84	12.2%	48.8%	36.8%	2.2%
	Multiracial	3,473	740.94	18.93	0.58	1.31	19.5%	50.0%	28.0%	2.4%
	Not Specified	469	722.71	15.55	0.31	3.50	60.6%	34.3%	4.7%	0.4%
Economically Disadvantaged	Yes	14,585	729.26	14.32	0.45	1.20	39.8%	51.4%	8.7%	0.1%
	No	23,672	743.31	18.30	0.41	1.21	14.9%	49.5%	33.3%	2.3%
	Not Specified	26,735	736.46	18.90	0.63	1.13	28.5%	48.1%	21.5%	1.9%
Gender	Female	31,576	736.77	17.70	0.57	1.37	25.6%	51.9%	21.2%	1.3%
	Male	32,983	738.06	19.21	0.55	0.83	26.1%	47.1%	24.8%	2.0%
	Non-Binary	10	--	--	--	--	--	--	--	--
	Not Specified	423	722.67	15.23	0.50	3.16	60.5%	34.5%	4.5%	0.5%
LEP	Exited	2,897	744.68	17.87	0.72	2.55	10.7%	52.4%	34.1%	2.8%
	No	52,502	739.00	18.60	0.52	0.90	22.9%	49.5%	25.7%	1.9%
	Yes	9,098	726.20	12.97	0.16	2.69	47.2%	48.5%	4.2%	0.1%
	Not Specified	495	722.29	15.74	0.41	3.36	61.8%	33.1%	4.4%	0.6%
Special Education Services	Yes	7,475	725.95	14.53	0.80	3.34	50.8%	42.4%	6.4%	0.4%
	No	47,289	738.79	18.51	0.54	1.02	23.1%	50.0%	25.0%	1.9%
	Exited	2,050	739.45	17.67	0.49	0.94	19.1%	53.1%	26.8%	1.0%
	Code 504 student	2,674	737.88	17.37	0.30	0.20	23.3%	51.5%	24.0%	1.2%
	Exited, But Enrolled in 504	257	738.92	16.67	0.44	-0.20	20.6%	55.3%	23.3%	0.8%
	Not Specified	5,247	739.31	18.98	0.56	1.73	22.1%	50.4%	25.5%	2.1%

Table G-15. Spring 2023 Mathematics Grade 6 Total Scaled Score Statistics and Performance Level Percentages, as a Function of Subgroup

			Scaled Score Statistics				Performance Level Percentages			
Group	Subgroup	N	Mean	SD	Skew	Kurtosis	1	2	3	4
Overall	--	63,194	732.40	18.31	0.42	0.84	37.4%	44.4%	16.5%	1.7%
Race/Ethnicity	American Indian or Alaskan Native	166	731.42	17.74	0.80	0.75	39.2%	45.2%	13.9%	1.8%
	Asian	4,159	749.02	20.25	0.21	0.69	11.6%	39.1%	39.2%	10.0%
	Black or African American	20,471	725.90	15.15	0.38	1.28	51.7%	40.6%	7.4%	0.3%
	Hispanic or Latino	13,291	725.59	15.32	0.19	1.69	51.3%	41.5%	6.9%	0.3%
	Native Hawaiian or Pacific Islander	87	733.38	17.69	0.29	-0.44	29.9%	50.6%	18.4%	1.1%
	White	21,179	739.58	17.48	0.16	0.63	20.0%	51.1%	26.6%	2.3%
	Multiracial	3,325	735.22	18.72	0.37	0.90	31.3%	46.4%	20.0%	2.2%
	Not Specified	516	718.57	13.77	-0.14	2.80	72.3%	25.4%	2.3%	0.0%
Economically Disadvantaged	Yes	13,888	724.37	14.70	0.23	1.80	55.1%	39.1%	5.6%	0.2%
	No	22,997	738.16	18.02	0.22	0.41	24.2%	49.0%	24.4%	2.4%
	Not Specified	26,309	731.60	18.54	0.53	1.19	39.6%	43.2%	15.3%	1.9%
Gender	Female	30,767	732.60	17.90	0.45	0.88	36.4%	45.7%	16.3%	1.6%
	Male	31,910	732.41	18.67	0.39	0.77	37.8%	43.5%	16.9%	1.8%
	Non-Binary	30	--	--	--	--	--	--	--	--
	Not Specified	487	718.47	14.02	-0.36	3.70	72.9%	24.6%	2.5%	0.0%
LEP	Exited	5,069	734.05	16.41	0.64	1.72	29.4%	54.1%	14.9%	1.7%
	No	51,297	734.08	18.35	0.38	0.68	33.4%	46.0%	18.6%	1.9%
	Yes	6,256	718.54	12.40	-0.29	4.08	73.1%	25.4%	1.4%	0.0%
	Not Specified	572	718.63	14.09	-0.21	3.23	71.5%	25.9%	2.6%	0.0%
Special Education Services	Yes	7,214	721.54	13.46	0.40	3.83	64.9%	31.4%	3.5%	0.2%
	No	46,178	734.08	18.50	0.38	0.76	33.4%	46.1%	18.5%	2.0%
	Exited	1,934	734.09	16.85	0.30	-0.01	31.4%	50.0%	17.3%	1.2%
	Code 504 student	2,640	732.91	17.92	0.19	0.93	33.7%	48.1%	16.9%	1.4%
	Exited, But Enrolled in 504	302	732.73	16.49	0.40	0.20	33.1%	51.3%	13.6%	2.0%
	Not Specified	4,926	731.56	18.02	0.25	0.72	39.1%	43.4%	16.3%	1.2%

Table G-16. Spring 2023 Mathematics Grade 7 Total Scaled Score Statistics and Performance Level Percentages, as a Function of Subgroup

			Scaled Score Statistics				Performance Level Percentages			
Group	Subgroup	N	Mean	SD	Skew	Kurtosis	1	2	3	4
Overall	--	56,289	724.83	21.21	0.06	0.66	51.7%	35.8%	11.7%	0.8%
Race/Ethnicity	American Indian or Alaskan Native	129	725.60	22.74	0.38	1.49	51.9%	34.1%	12.4%	1.6%
	Asian	2,354	737.68	22.22	0.05	0.83	27.9%	42.9%	25.9%	3.4%
	Black or African American	19,717	718.87	19.08	-0.10	1.03	63.6%	31.0%	5.2%	0.2%
	Hispanic or Latino	12,815	719.41	19.31	-0.04	0.96	63.0%	30.7%	6.0%	0.3%
	Native Hawaiian or Pacific Islander	85	727.39	23.58	0.11	-0.13	47.1%	35.3%	16.5%	1.2%
	White	17,897	733.39	20.83	-0.06	0.48	33.9%	43.7%	20.8%	1.5%
	Multiracial	2,828	728.10	21.02	0.11	0.47	45.1%	39.5%	14.3%	1.1%
	Not Specified	464	711.37	19.61	-0.14	2.32	79.5%	17.2%	3.0%	0.2%
Economically Disadvantaged	Yes	13,582	717.68	19.48	-0.09	1.08	66.5%	28.2%	5.0%	0.2%
	No	20,439	731.48	21.59	-0.01	0.49	38.5%	41.0%	19.0%	1.5%
	Not Specified	22,268	723.08	20.07	0.04	0.77	54.8%	35.7%	9.0%	0.6%
Gender	Female	27,646	724.99	20.43	0.04	0.71	50.9%	37.4%	10.8%	0.8%
	Male	28,195	724.86	21.90	0.07	0.57	52.0%	34.5%	12.6%	0.9%
	Non-Binary	21	--	--	--	--	--	--	--	--
	Not Specified	427	711.47	19.86	-0.14	2.38	79.4%	17.1%	3.3%	0.2%
LEP	Exited	4,436	725.72	17.98	0.04	1.15	48.8%	42.0%	8.8%	0.5%
	No	46,163	726.58	21.26	0.03	0.61	47.9%	37.9%	13.2%	1.0%
	Yes	5,186	709.81	16.51	-0.31	1.98	85.1%	13.5%	1.3%	0.1%
	Not Specified	504	711.08	20.04	-0.18	2.04	79.2%	17.5%	3.2%	0.2%
Special Education Services	Yes	6,917	711.10	17.55	0.00	1.76	81.8%	16.0%	2.2%	0.1%
	No	40,775	727.57	21.10	0.02	0.67	45.8%	39.3%	13.9%	1.1%
	Exited	1,859	727.54	20.15	-0.02	0.57	46.5%	39.2%	13.6%	0.8%
	Code 504 student	2,689	725.57	20.54	0.01	0.54	49.9%	37.1%	12.2%	0.7%
	Exited, But Enrolled in 504	312	724.47	18.84	-0.02	0.79	51.9%	38.8%	9.3%	0.0%
	Not Specified	3,737	718.43	18.31	-0.31	1.25	64.5%	31.3%	4.1%	0.1%

Table G-17. Spring 2023 Mathematics Grade 8 Total Scaled Score Statistics and Performance Level Percentages, as a Function of Subgroup

			Scaled Score Statistics				Performance Level Percentages			
Group	Subgroup	N	Mean	SD	Skew	Kurtosis	1	2	3	4
Overall	--	41,269	721.58	20.64	-0.53	1.36	54.3%	38.8%	6.7%	0.2%
Race/Ethnicity	American Indian or Alaskan Native	136	722.64	19.35	-0.31	1.48	56.6%	37.5%	5.1%	0.7%
	Asian	1,086	732.60	22.31	-0.05	2.48	31.7%	50.0%	16.2%	2.1%
	Black or African American	16,392	717.30	19.70	-0.63	1.53	64.3%	32.1%	3.4%	0.1%
	Hispanic or Latino	10,257	718.78	19.89	-0.67	1.42	60.2%	35.5%	4.2%	0.1%
	Native Hawaiian or Pacific Islander	55	726.13	19.38	0.18	0.40	43.6%	47.3%	7.3%	1.8%
	White	11,076	729.49	19.78	-0.65	1.57	36.1%	50.8%	12.8%	0.3%
	Multiracial	1,877	723.18	20.51	-0.67	1.26	50.2%	41.8%	7.8%	0.1%
	Not Specified	390	711.21	21.05	-0.65	0.92	75.1%	22.1%	2.8%	0.0%
Economically Disadvantaged	Yes	11,547	717.18	19.89	-0.67	1.36	64.0%	32.6%	3.4%	0.0%
	No	13,330	726.64	20.20	-0.53	1.58	42.8%	46.5%	10.3%	0.3%
	Not Specified	16,392	720.57	20.65	-0.53	1.35	56.7%	37.0%	6.1%	0.2%
Gender	Female	19,496	722.39	19.66	-0.54	1.47	52.8%	40.6%	6.4%	0.1%
	Male	21,384	721.02	21.41	-0.51	1.24	55.2%	37.5%	7.0%	0.2%
	Non-Binary	26	--	--	--	--	--	--	--	--
	Not Specified	363	710.71	21.23	-0.74	0.96	75.2%	22.3%	2.5%	0.0%
LEP	Exited	2,265	724.50	18.33	-0.91	2.25	46.0%	48.4%	5.5%	0.0%
	No	33,533	722.94	20.64	-0.53	1.38	51.2%	40.9%	7.7%	0.2%
	Yes	5,022	712.30	18.64	-0.81	1.75	76.5%	22.2%	1.3%	0.0%
	Not Specified	449	709.44	21.41	-0.61	0.52	76.6%	21.4%	2.0%	0.0%
Special Education Services	Yes	6,475	712.27	19.51	-0.73	1.41	76.4%	21.8%	1.7%	0.0%
	No	28,422	723.87	20.36	-0.53	1.47	49.0%	42.6%	8.1%	0.2%
	Exited	1,360	724.59	20.36	-0.56	1.18	47.7%	42.7%	9.6%	0.0%
	Code 504 student	2,111	723.08	21.39	-0.70	1.32	49.4%	42.8%	7.6%	0.2%
	Exited, But Enrolled in 504	247	724.06	20.68	-1.01	2.33	45.3%	48.2%	6.1%	0.4%
	Not Specified	2,654	716.85	18.58	-0.75	1.78	64.3%	33.8%	1.8%	0.1%

Table G-18. Spring 2023 Mathematics Algebra I Total Scaled Score Statistics and Performance Level Percentages, as a Function of Subgroup

			Scaled Score Statistics				Performance Level Percentages			
Group	**Subgroup**	**N**	**Mean**	**SD**	**Skew**	**Kurtosis**	**1**	**2**	**3**	**4**
Overall	--	69,993	731.22	18.09	-0.05	1.98	36.1%	48.9%	13.9%	1.1%
Race/Ethnicity	American Indian or Alaskan Native	190	729.74	16.74	-0.11	3.49	35.3%	54.7%	8.9%	1.1%
	Asian	4,594	746.85	19.56	0.26	1.21	11.9%	44.3%	37.3%	6.6%
	Black or African American	23,515	725.47	15.47	-0.52	3.23	47.6%	47.0%	5.3%	0.2%
	Hispanic or Latino	14,926	724.43	16.22	-0.57	3.23	50.3%	44.0%	5.6%	0.2%
	Native Hawaiian or Pacific Islander	118	730.63	19.19	-0.81	3.14	34.7%	51.7%	12.7%	0.8%
	White	22,849	738.21	16.79	-0.12	1.32	20.3%	55.0%	23.3%	1.5%
	Multiracial	3,316	734.69	18.38	0.08	2.00	28.9%	51.0%	18.3%	1.8%
	Not Specified	485	718.44	15.09	-0.72	4.62	69.9%	28.5%	1.4%	0.2%
Economically Disadvantaged	Yes	14,457	724.05	15.73	-0.72	3.64	51.0%	44.6%	4.2%	0.2%
	No	26,812	735.72	18.17	-0.12	1.70	26.8%	51.6%	20.0%	1.6%
	Not Specified	28,724	730.62	17.88	0.09	2.02	37.4%	48.5%	13.1%	1.1%
Gender	Female	33,514	731.60	17.39	-0.13	2.12	33.9%	51.8%	13.5%	0.8%
	Male	36,007	730.99	18.70	0.01	1.85	37.8%	46.4%	14.5%	1.4%
	Non-Binary	65	736.66	15.50	0.21	-0.76	27.7%	50.8%	21.5%	0.0%
	Not Specified	407	718.79	14.99	-0.73	4.60	67.8%	30.5%	1.5%	0.2%
LEP	Exited	4,851	732.58	15.80	0.20	2.20	29.7%	56.8%	12.6%	0.9%
	No	58,117	732.78	17.85	-0.01	1.86	32.4%	50.8%	15.5%	1.2%
	Yes	6,440	717.22	15.51	-1.02	5.11	71.4%	27.1%	1.4%	0.1%
	Not Specified	585	719.05	14.75	-0.48	3.95	68.0%	30.1%	1.7%	0.2%
Special Education Services	Yes	7,209	719.96	14.77	-0.45	4.36	65.7%	31.6%	2.5%	0.2%
	No	50,532	732.99	18.24	-0.06	1.92	32.0%	50.6%	16.1%	1.3%
	Exited	2,395	732.33	16.78	-0.17	1.95	32.0%	53.5%	13.7%	0.8%
	Code 504 student	3,602	731.84	16.82	-0.13	1.73	33.2%	52.2%	13.8%	0.7%
	Exited, But Enrolled in 504	425	730.53	16.75	0.43	2.76	36.2%	50.6%	12.5%	0.7%
	Not Specified	5,830	728.95	16.52	-0.39	3.18	39.2%	51.3%	9.1%	0.5%

Table G-19. Spring 2023 Mathematics Algebra II Total Scaled Score Statistics and Performance Level Percentages, as a Function of Subgroup

			Scaled Score Statistics				Performance Level Percentages			
Group	**Subgroup**	**N**	**Mean**	**SD**	**Skew**	**Kurtosis**	**1**	**2**	**3**	**4**
Overall	--	10,179	736.27	15.43	0.09	1.46	21.8%	58.1%	18.4%	1.6%
Race/Ethnicity	American Indian or Alaskan Native	20	--	--	--	--	--	--	--	--
	Asian	1,320	748.12	16.29	0.24	1.33	7.3%	44.0%	41.4%	7.3%
	Black or African American	2,069	729.22	13.73	-0.30	2.54	35.4%	56.7%	7.6%	0.2%
	Hispanic or Latino	978	730.91	14.42	-0.25	1.79	32.8%	57.0%	9.8%	0.4%
	Native Hawaiian or Pacific Islander	19	--	--	--	--	--	--	--	--
	White	5,157	737.20	13.91	-0.06	1.14	17.8%	62.6%	18.8%	0.9%
	Multiracial	606	735.63	15.70	0.14	1.08	22.8%	58.4%	16.8%	2.0%
	Not Specified	10	--	--	--	--	--	--	--	--
Economically Disadvantaged	Yes	1,183	726.83	12.92	-0.70	3.47	40.0%	56.6%	3.4%	0.0%
	No	6,123	737.86	15.28	-0.02	1.00	18.9%	57.6%	21.8%	1.8%
	Not Specified	2,873	736.78	15.30	0.42	2.14	20.7%	59.9%	17.5%	1.9%
Gender	Female	5,034	735.67	14.60	-0.12	0.94	21.9%	59.9%	17.2%	1.0%
	Male	5,130	736.88	16.16	0.22	1.69	21.7%	56.4%	19.6%	2.3%
	Non-Binary	7	--	--	--	--	--	--	--	--
	Not Specified	8	--	--	--	--	--	--	--	--
LEP	Exited	147	737.99	17.56	0.28	2.62	21.8%	55.1%	19.7%	3.4%
	No	9,827	736.54	15.31	0.08	1.43	21.1%	58.6%	18.7%	1.6%
	Yes	191	722.66	12.94	-0.33	4.90	57.1%	39.8%	3.1%	0.0%
	Not Specified	14	--	--	--	--	--	--	--	--
Special Education Services	Yes	488	724.82	12.18	0.32	6.88	49.6%	46.7%	3.3%	0.4%
	No	8,687	737.29	15.35	0.06	1.43	19.6%	58.7%	20.0%	1.7%
	Exited	267	732.94	14.27	-0.58	3.18	27.3%	60.7%	10.9%	1.1%
	Code 504 student	597	733.37	14.60	0.10	2.05	25.3%	61.0%	12.9%	0.8%
	Exited, But Enrolled in 504	51	732.63	12.19	0.09	-0.49	29.4%	66.7%	3.9%	0.0%
	Not Specified	89	731.60	18.40	0.92	1.25	42.7%	39.3%	15.7%	2.2%

Table G-20. Spring 2023 Mathematics Geometry I Total Scaled Score Statistics and Performance Level Percentages, as a Function of Subgroup

			Scaled Score Statistics				Performance Level Percentages			
Group	Subgroup	N	Mean	SD	Skew	Kurtosis	1	2	3	4
Overall	--	16,647	737.17	18.55	-0.07	0.75	24.9%	49.3%	24.1%	1.6%
Race/Ethnicity	American Indian or Alaskan Native	39	--	--	--	--	--	--	--	--
	Asian	2,474	752.22	17.20	0.11	0.79	5.4%	37.3%	50.0%	7.4%
	Black or African American	3,259	726.35	16.84	-0.45	2.05	45.9%	46.3%	7.7%	0.1%
	Hispanic or Latino	1,606	732.41	16.37	-0.14	0.63	31.2%	53.3%	15.1%	0.4%
	Native Hawaiian or Pacific Islander	20	--	--	--	--	--	--	--	--
	White	8,195	737.92	16.64	-0.14	0.38	21.0%	53.7%	24.5%	0.8%
	Multiracial	1,040	736.92	18.76	-0.15	0.26	26.3%	47.4%	24.9%	1.4%
	Not Specified	14	--	--	--	--	--	--	--	--
Economically Disadvantaged	Yes	2,087	723.03	15.79	-0.85	3.59	52.9%	43.6%	3.4%	0.0%
	No	7,378	737.97	17.99	0.10	0.39	22.8%	51.0%	24.4%	1.8%
	Not Specified	7,182	740.44	17.99	-0.13	0.61	19.0%	49.2%	29.9%	1.9%
Gender	Female	8,036	736.80	17.94	-0.04	0.99	24.6%	51.5%	22.5%	1.4%
	Male	8,568	737.48	19.08	-0.09	0.56	25.2%	47.4%	25.6%	1.9%
	Non-Binary	30	--	--	--	--	--	--	--	--
	Not Specified	13	--	--	--	--	--	--	--	--
LEP	Exited	1,458	739.94	17.27	0.31	1.34	17.7%	54.4%	25.9%	2.0%
	No	15,004	737.10	18.58	-0.09	0.71	25.1%	49.1%	24.2%	1.6%
	Yes	149	721.53	17.03	0.57	1.40	66.4%	25.5%	7.4%	0.7%
	Not Specified	36	--	--	--	--	--	--	--	--
Special Education Services	Yes	809	721.49	18.23	0.49	2.21	65.4%	26.8%	6.9%	0.9%
	No	11,422	739.67	18.65	-0.15	0.76	20.5%	48.8%	28.6%	2.1%
	Exited	688	733.43	18.22	-0.08	2.85	29.5%	52.6%	17.3%	0.6%
	Code 504 student	890	735.47	18.29	-0.21	0.58	27.6%	49.8%	21.7%	0.9%
	Exited, But Enrolled in 504	151	731.32	14.66	0.52	0.65	33.1%	56.3%	9.9%	0.7%
	Not Specified	2,687	733.09	14.90	0.08	0.70	28.9%	57.0%	13.7%	0.4%

Table G-21. Spring 2023 MISA Grade 5 Total Scaled Score Statistics and Performance Level Percentages, as a Function of Subgroup

			Scaled Score Statistics				Performance Level Percentages			
Group	**Subgroup**	**N**	**Mean**	**SD**	**Skew**	**Kurtosis**	**1**	**2**	**3**	**4**
Overall	--	64,750	740.90	13.96	-0.58	0.52	19.6%	49.7%	30.4%	0.2%
Race/Ethnicity	American Indian or Alaskan Native	168	740.26	13.32	0.03	-0.03	21.4%	53.0%	25.0%	0.6%
	Asian	4,393	748.85	12.59	-1.26	3.09	7.5%	36.2%	55.7%	0.5%
	Black or African American	20,779	736.35	13.58	-0.41	0.50	28.2%	54.3%	17.5%	0.0%
	Hispanic or Latino	13,605	735.94	13.50	-0.39	0.77	28.9%	54.5%	16.5%	0.1%
	Native Hawaiian or Pacific Islander	76	742.75	12.55	-0.51	-0.38	18.4%	43.4%	38.2%	0.0%
	White	21,736	746.52	11.86	-0.89	1.25	8.6%	45.2%	45.9%	0.3%
	Multiracial	3,454	744.03	12.73	-0.57	0.06	12.5%	50.0%	37.2%	0.3%
	Not Specified	539	729.61	15.56	-0.87	3.88	47.5%	43.6%	8.9%	0.0%
Economically Disadvantaged	Yes	14,511	734.51	13.29	-0.38	0.60	32.6%	54.4%	13.0%	0.0%
	No	23,613	745.23	12.58	-0.80	0.82	11.1%	46.5%	42.2%	0.2%
	Not Specified	26,626	740.54	14.09	-0.57	0.77	20.2%	50.1%	29.6%	0.2%
Gender	Female	31,414	741.21	13.73	-0.57	0.61	18.6%	50.9%	30.4%	0.2%
	Male	32,867	740.76	14.10	-0.57	0.35	20.3%	48.7%	30.8%	0.1%
	Non-Binary	6	--	--	--	--	--	--	--	--
	Not Specified	463	729.50	15.27	-0.77	3.70	47.1%	43.8%	9.1%	0.0%
LEP	Exited	2,894	746.48	9.84	-0.54	0.53	4.4%	54.9%	40.5%	0.2%
	No	52,285	742.46	13.58	-0.66	0.59	16.4%	49.0%	34.4%	0.2%
	Yes	9,010	730.74	12.23	-0.47	1.82	41.4%	53.0%	5.6%	0.0%
	Not Specified	561	729.48	15.24	-0.59	2.93	48.8%	42.1%	9.1%	0.0%
Special Education Services	Yes	7,471	729.44	13.61	-0.05	0.73	49.5%	42.2%	8.3%	0.0%
	No	47,179	742.34	13.39	-0.64	0.71	16.0%	50.4%	33.4%	0.2%
	Exited	2,033	742.79	12.26	-0.65	1.42	12.7%	55.1%	32.0%	0.1%
	Code 504 student	2,615	742.31	12.41	-0.49	-0.29	15.4%	52.9%	31.6%	0.1%
	Exited, But Enrolled in 504	243	742.02	11.23	-0.29	-0.40	11.9%	58.8%	28.8%	0.4%
	Not Specified	5,209	742.80	13.39	-0.80	1.97	14.8%	50.9%	34.1%	0.3%

Table G-22. Spring 2023 MISA Grade 8 Total Scaled Score Statistics and Performance Level Percentages, as a Function of Subgroup

			Scaled Score Statistics				Performance Level Percentages			
Group	**Subgroup**	**N**	**Mean**	**SD**	**Skew**	**Kurtosis**	**1**	**2**	**3**	**4**
Overall	--	67,264	741.89	16.13	-0.53	0.42	17.6%	47.0%	34.9%	0.5%
Race/Ethnicity	American Indian or Alaskan Native	213	740.57	15.68	-1.10	4.47	15.5%	55.9%	28.6%	0.0%
	Asian	4,578	753.93	12.90	-1.05	1.94	3.8%	27.0%	66.9%	2.3%
	Black or African American	22,361	736.13	15.27	-0.36	0.53	25.6%	54.5%	19.8%	0.1%
	Hispanic or Latino	13,581	736.00	15.89	-0.47	1.11	27.3%	52.3%	20.3%	0.1%
	Native Hawaiian or Pacific Islander	98	744.96	16.39	-0.22	-0.93	15.3%	41.8%	42.9%	0.0%
	White	22,586	748.58	13.50	-0.77	0.72	6.9%	40.5%	51.9%	0.7%
	Multiracial	3,311	744.83	14.75	-0.59	0.34	11.2%	47.2%	41.1%	0.5%
	Not Specified	536	727.99	16.64	-0.19	1.03	50.7%	38.6%	10.6%	0.0%
Economically Disadvantaged	Yes	14,450	734.69	15.01	-0.37	0.75	28.2%	55.6%	16.1%	0.1%
	No	25,206	746.52	14.79	-0.69	0.45	10.3%	42.5%	46.5%	0.8%
	Not Specified	27,608	741.42	16.41	-0.55	0.64	18.9%	46.5%	34.2%	0.4%
Gender	Female	32,558	742.64	15.77	-0.54	0.54	15.9%	47.6%	36.0%	0.5%
	Male	34,191	741.35	16.34	-0.51	0.32	18.9%	46.5%	34.2%	0.5%
	Non-Binary	47	--	--	--	--	--	--	--	--
	Not Specified	468	727.88	16.77	-0.22	1.19	51.3%	38.0%	10.7%	0.0%
LEP	Exited	5,006	745.04	12.96	-0.54	1.32	7.5%	55.1%	36.9%	0.6%
	No	56,200	743.42	15.54	-0.54	0.25	14.6%	46.7%	38.1%	0.5%
	Yes	5,459	724.81	13.63	-0.83	4.28	54.3%	42.9%	2.7%	0.0%
	Not Specified	599	727.62	16.84	-0.12	0.91	51.4%	38.2%	10.2%	0.2%
Special Education Services	Yes	7,300	728.21	14.37	0.08	0.66	46.2%	46.0%	7.8%	0.0%
	No	48,340	743.72	15.64	-0.66	0.90	14.2%	46.3%	38.9%	0.5%
	Exited	2,271	743.53	14.80	-0.64	1.09	12.8%	49.6%	37.1%	0.4%
	Code 504 student	3,347	743.58	14.62	-0.64	0.57	12.4%	50.3%	37.0%	0.3%
	Exited, But Enrolled in 504	395	744.13	13.90	-0.49	0.13	11.4%	53.4%	34.7%	0.5%
	Not Specified	5,611	742.00	15.32	-0.44	0.11	15.7%	50.2%	33.5%	0.6%

Appendix H. Subscore Correlations

Table H-1. Subscore Correlations from the Fall 2022 Administration of ELA Grade 10 (N = 8,779)

	Total Test	Reading	Writing	Reading - RI	Reading - RL	Reading - RV	Writing - WC	Writing - WE
Total Test	1.00							
Reading	0.91	1.00						
Writing	0.84	0.66	1.00					
Reading - RI	0.80	0.88	0.57	1.00				
Reading - RL	0.77	0.84	0.58	0.62	1.00			
Reading - RV	0.70	0.77	0.50	0.57	0.58	1.00		
Writing - WC	0.83	0.66	0.97	0.57	0.57	0.49	1.00	
Writing - WE	0.83	0.65	0.97	0.57	0.57	0.49	0.93	1.00

Table H-2. Subscore Correlations from the Fall 2022 Administration of MCAP HS Algebra 1, Algebra 2, and Geometry 1

	Total Test	Mathematics Subclaim A	Mathematics Subclaim C	Mathematics Subclaim D
Algebra 1 (*N* = 6,909)				
Total Test	1.00			
Mathematics Subclaim A	0.91	1.00		
Mathematics Subclaim C	0.61	0.44	1.00	
Mathematics Subclaim D	0.70	0.48	0.40	1.00
Algebra 2 (*N* = 457)				
Total Test	1.00			
Mathematics Subclaim A	0.96	1.00		
Mathematics Subclaim C	0.52	0.39	1.00	
Mathematics Subclaim D	0.64	0.51	0.35	1.00
Geometry 1 (*N* = 612)				
Total Test	1.00			
Mathematics Subclaim A	0.97	1.00		
Mathematics Subclaim C	0.67	0.54	1.00	
Mathematics Subclaim D	0.57	0.47	0.44	1.00

Table H-3. Subscore Correlations from the Spring 2023 Administration of ELA Grade 3 (N = 62,802)

	Total Test	Reading	Writing	Reading - RF	Reading - RI	Reading - RL	Reading - RV	Writing - WC
Total Test	1.00							
Reading	0.95	1.00						
Writing	0.76	0.62	1.00					
Reading - RF	0.76	0.77	0.50	1.00				
Reading - RI	0.75	0.79	0.49	0.51	1.00			
Reading - RL	0.83	0.87	0.55	0.55	0.64	1.00		
Reading - RV	0.77	0.80	0.50	0.55	0.58	0.63	1.00	
Writing - WC	0.74	0.60	0.97	0.49	0.47	0.53	0.48	1.00
Writing - WE	0.78	0.65	0.81	0.52	0.52	0.58	0.53	0.72

Table H-4. Subscore Correlations from the Spring 2023 Administration of ELA Grade 4 (N = 63,287)

	Total Test	Reading	Writing	Reading - RI	Reading - RL	Reading - RV	Writing - WC	Writing - WE
Total Test	1.00							
Reading	0.91	1.00						
Writing	0.81	0.61	1.00					
Reading - RI	0.79	0.86	0.52	1.00				
Reading - RL	0.82	0.89	0.55	0.65	1.00			
Reading - RV	0.67	0.74	0.44	0.54	0.58	1.00		
Writing - WC	0.79	0.59	0.97	0.50	0.53	0.43	1.00	
Writing - WE	0.80	0.62	0.85	0.53	0.55	0.45	0.77	1.00

Table H-5. Subscore Correlations from the Spring 2023 Administration of ELA Grade 5 (N = 64,588)

	Total Test	Reading	Writing	Reading - RI	Reading - RL	Reading - RV	Writing - WC	Writing - WE
Total Test	1.00							
Reading	0.91	1.00						
Writing	0.79	0.60	1.00					
Reading - RI	0.80	0.88	0.53	1.00				
Reading - RL	0.75	0.83	0.50	0.60	1.00			
Reading - RV	0.65	0.71	0.42	0.56	0.50	1.00		
Writing - WC	0.78	0.59	0.95	0.52	0.49	0.42	1.00	
Writing - WE	0.76	0.58	0.88	0.51	0.48	0.40	0.77	1.00

Table H-6. Subscore Correlations from the Spring 2023 Administration of ELA Grade 6 (N = 63,172)

	Total Test	Reading	Writing	Reading - RI	Reading - RL	Reading - RV	Writing - WC	Writing - WE
Total Test	1.00							
Reading	0.92	1.00						
Writing	0.81	0.64	1.00					
Reading - RI	0.79	0.87	0.55	1.00				
Reading - RL	0.78	0.84	0.56	0.61	1.00			
Reading - RV	0.68	0.73	0.46	0.55	0.52	1.00		
Writing - WC	0.78	0.61	0.97	0.52	0.53	0.44	1.00	
Writing - WE	0.80	0.65	0.84	0.56	0.56	0.47	0.75	1.00

Table H-7. Subscore Correlations from the Spring 2023 Administration of ELA Grade 7 (N = 64,675)

	Total Test	Reading	Writing	Reading - RI	Reading - RL	Reading - RV	Writing - WC	Writing - WE
Total Test	1.00							
Reading	0.90	1.00						
Writing	0.83	0.62	1.00					
Reading - RI	0.78	0.87	0.54	1.00				
Reading - RL	0.76	0.83	0.53	0.59	1.00			
Reading - RV	0.73	0.81	0.50	0.58	0.57	1.00		
Writing - WC	0.80	0.61	0.98	0.52	0.52	0.49	1.00	
Writing - WE	0.78	0.59	0.82	0.51	0.50	0.47	0.75	1.00

Table H-8. Subscore Correlations from the Spring 2023 Administration of ELA Grade 8 (N = 66,518)

	Total Test	Reading	Writing	Reading - RI	Reading - RL	Reading - RV	Writing - WC	Writing - WE
Total Test	1.00							
Reading	0.85	1.00						
Writing	0.86	0.62	1.00					
Reading - RI	0.78	0.90	0.57	1.00				
Reading - RL	0.71	0.81	0.53	0.60	1.00			
Reading - RV	0.66	0.80	0.48	0.60	0.54	1.00		
Writing - WC	0.86	0.63	0.94	0.57	0.53	0.48	1.00	
Writing - WE	0.85	0.62	0.95	0.57	0.53	0.48	0.86	1.00

Table H-9. Subscore Correlations from the Spring 2023 Administration of ELA Grade 10 (N = 60,274)

	Total Test	Reading	Writing	Reading - RI	Reading - RL	Reading - RV	Writing - WC	Writing - WE
Total Test	1.00							
Reading	0.87	1.00						
Writing	0.85	0.63	1.00					
Reading - RI	0.76	0.87	0.57	1.00				
Reading - RL	0.75	0.86	0.55	0.62	1.00			
Reading - RV	0.68	0.80	0.49	0.59	0.60	1.00		
Writing - WC	0.85	0.63	0.97	0.57	0.54	0.49	1.00	
Writing - WE	0.84	0.62	0.94	0.56	0.54	0.48	0.89	1.00

Table H-10. Subscore Correlations from the Spring 2023 Administration of Mathematics Grade 3 (N = 63,263)

	Total Test	Mathematics Subclaim A	Mathematics Subclaim C	Mathematics Subclaim D
Total Test	1.00			
Mathematics Subclaim A	0.96	1.00		
Mathematics Subclaim C	0.76	0.66	1.00	
Mathematics Subclaim D	0.78	0.66	0.56	1.00

Table H-11. Subscore Correlations from the Spring 2023 Administration of Mathematics Grade 4 (N = 63,750)

	Total Test	Mathematics Subclaim A	Mathematics Subclaim C	Mathematics Subclaim D
Total Test	1.00			
Mathematics Subclaim A	0.96	1.00		
Mathematics Subclaim C	0.80	0.68	1.00	
Mathematics Subclaim D	0.76	0.64	0.58	1.00

Table H-12. Subscore Correlations from the Spring 2023 Administration of Mathematics Grade 5 (N = 64,992)

	Total Test	Mathematics Subclaim A	Mathematics Subclaim C	Mathematics Subclaim D
Total Test	1.00			
Mathematics Subclaim A	0.94	1.00		
Mathematics Subclaim C	0.72	0.59	1.00	
Mathematics Subclaim D	0.77	0.64	0.50	1.00

Table H-13. Subscore Correlations from the Spring 2023 Administration of Mathematics Grade 6 (N = 63,194)

	Total Test	Mathematics Subclaim A	Mathematics Subclaim C	Mathematics Subclaim D
Total Test	1.00			
Mathematics Subclaim A	0.94	1.00		
Mathematics Subclaim C	0.70	0.57	1.00	
Mathematics Subclaim D	0.72	0.58	0.46	1.00

Table H-14. Subscore Correlations from the Spring 2023 Administration of Mathematics Grade 7 (N = 56,289)

	Total Test	Mathematics Subclaim A	Mathematics Subclaim C	Mathematics Subclaim D
Total Test	1.00			
Mathematics Subclaim A	0.92	1.00		
Mathematics Subclaim C	0.70	0.52	1.00	
Mathematics Subclaim D	0.76	0.56	0.48	1.00

Table H-15. Subscore Correlations from the Spring 2023 Administration of Mathematics Grade 8 (N = 41,269)

	Total Test	Mathematics Subclaim A	Mathematics Subclaim C	Mathematics Subclaim D
Total Test	1.00			
Mathematics Subclaim A	0.92	1.00		
Mathematics Subclaim C	0.60	0.41	1.00	
Mathematics Subclaim D	0.57	0.40	0.31	1.00

Table H-16. Subscore Correlations from the Spring 2023 Administration of Algebra 1 (N = 69,993)

	Total Test	Mathematics Subclaim A	Mathematics Subclaim C	Mathematics Subclaim D
Total Test	1.00			
Mathematics Subclaim A	0.92	1.00		
Mathematics Subclaim C	0.67	0.50	1.00	
Mathematics Subclaim D	0.66	0.48	0.39	1.00

Table H-17. Subscore Correlations from the Spring 2023 Administration of Algebra 2 (N = 10,179)

	Total Test	Mathematics Subclaim A	Mathematics Subclaim C	Mathematics Subclaim D
Total Test	1.00			
Mathematics Subclaim A	0.92	1.00		
Mathematics Subclaim C	0.65	0.48	1.00	
Mathematics Subclaim D	0.71	0.57	0.40	1.00

Table H-18. Subscore Correlations from the Spring 2022 Administration of Geometry 1 (N = 16,647)

	Total Test	Mathematics Subclaim A	Mathematics Subclaim C	Mathematics Subclaim D
Total Test	1.00			
Mathematics Subclaim A	0.94	1.00		
Mathematics Subclaim C	0.72	0.58	1.00	
Mathematics Subclaim D	0.63	0.51	0.41	1.00

Table H-19. Subscore Correlations from the Spring 2023 Administration of MISA Grade 5 (N = 64,750)

	Total Test	Life Science	Physical Science	Earth and Space Science
Total Test	1.00			
Life Science	0.86	1.00		
Physical Science	0.84	0.62	1.00	
Earth and Space Science	0.81	0.59	0.56	1.00

Table H-20. Subscore Correlations from the Spring 2023 Administration of MISA Grade 5 (N = 67,264)

	Total Test	Life Science	Physical Science	Earth and Space Science
Total Test	1.00			
Life Science	0.87	1.00		
Physical Science	0.85	0.66	1.00	
Earth and Space Science	0.87	0.68	0.65	1.00