2016-17 Interim Assessments Technical Report

- Validity
- Reliability, Precision and Errors of Measurement
- Test Fairness
- Test Design
- Administration
- Reporting and Interpretation

Smarter Balanced Assessment Consortium

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Introduction and Overview

Technical Report Approach

The intent of this report is to provide evidence in support of the validity of the Smarter Balanced interim assessments. This report focuses on both interim test types—the interim comprehensive assessments (ICAs) and the interim assessment blocks (IABs). Information about the overall system is provided for context. At the outset, it should be recognized that demonstration of validity and reliability is an ongoing process. Validity and reliability evidence provided here from the initial pilot and the field test phases as well as evidence from more recent operational assessments.

Members do not provide response data or scores to the Consortium for analysis. Consequently, much of the evidence here focuses on the development of test items and characteristics of test forms. Interim tests, as noted above, are not secure. They may be administered in a standard manner or teachers may use interim items or tasks as a basis for class discussion or individual feedback. The interim assessments may be administered to the same students several times during the year. Evidence of reliability holds only for tests administered the first time in a standardized setting, assuming that students have not been exposed to the items and each student does his or her own work. When teachers use interim items or tasks as a basis for class discussion or individual feedback, information does not have the same properties of generalizability or relationship to the scale.

In some cases (e.g., Smarter Balanced, 2017), the Consortium provides a customizable template or a guidance document, that allows members to document their test administration practices. Members can usually find the appropriate customized version on their state's assessment portal.

To inform the Consortium, the *Standards for Educational and Psychological Testing* (American Educational Research Association [AERA], American Psychological Association [APA], & National Council on Measurement in Education [NCME], 2014), hereafter referred to as the *Standards*, was used as the foundation for developing the necessary validity evidence. With respect to Smarter Balanced, this information is necessary for understanding the degree to which the Consortium is meeting its goals, and in some cases, what further tasks remain to improve the system as it evolves operationally.

Overview of Smarter Balanced Assessment System

The Smarter Balanced Assessment Consortium's (Smarter Balanced) Assessment System includes a set of balanced components designed to meet diverse student needs for all Consortium members. This system provides valid, reliable, and fair assessments of the deep disciplinary understanding and higher-order thinking skills increasingly demanded by a knowledge-based global economy. The system is based on the belief that assessment must support ongoing improvements in instruction and learning experiences for students that lead to outcomes valued by all stakeholders. Smarter Balanced supports the goals of its members who seek to ensure that all students leave high school prepared for postsecondary success in college or a career through a planned sequence of educational experiences and opportunities. The system was grounded in the strong foundational assessments, policies and procedures of its members including supports and resources from institutions of higher education (IHEs) and workplace representatives. The Consortium expanded on these proven successes to create a high quality, balanced, multistate assessment system based on the Common Core State Standards (CCSS) in English language arts/literacy (ELA/literacy) and

mathematics. The intent of this report is to provide evidence in support of the validity of the Smarter Balanced interim assessments. This report focuses on both interim assessment types—the interim comprehensive assessments (ICAs) and the interim assessment blocks (IABs). Information about the overall system is provided for context.

The Consortium staff provide expert guidance and facilitate member driven decisions regarding the maintenance and enhancement of the system as required to fulfill its mission to improve teaching and learning. Smarter Balanced members retain flexibility regarding how to customize the system so that it may best be used as part of their approach to improving their local educational systems. The Smarter Balanced assessment system strategically uses a variety of item types including performance tasks to measure the full range of the CCSS. The Consortium also deploys essential accessibility resources that are embedded in the test to ensure fair and accurate assessment of all students, including students with disabilities, English language learners, and low- and high-performing students. Smarter Balanced implemented a system that features

- Summative assessments that determine students' progress toward college and career readiness in ELA/literacy and mathematics. The summative assessments are given at the end of the school year and consist of two parts: a computer adaptive test and a performance task. These secure summative assessments incorporate a variety of item types including technology-enhanced items, items that require constructed response and performance tasks. Items are deliberatively designed to measure specific content. The assessments include writing at every grade and ask students to solve multi-step, real world problems in mathematics.
- Interim assessments that allow teachers to check student progress throughout the year, providing them information that they can use to improve instruction and help students meet the challenge of college- and career-ready standards. These tools are used at the discretion of schools and districts, and teachers can employ them to check students' progress at mastering specific concepts at strategic points during the school year. There are two types of interim assessments: the interim comprehensive assessments (ICAs) that test the same content and report scores on the same scale as the summative assessment and the interim assessment blocks (IABs) that focus on smaller sets of related concepts and provide more detailed information for instructional purposes. The interim assessments incorporate items that are developed along with and according to the same processes as the items in the summative assessment. This means that items are not identified as intended for use on the interim or summative assessments during the item development process. The interim assessments provide more flexible administration options to assist educations in determining what students know and can do in relation to the CCSS. In contrast to the summative assessment, these interim assessments are only available in fixed form.
- A digital library that is an online collection of high-quality instructional and professional learning resources contributed by educators for educators. These resources are aligned with the intent of the CCSS and help educators implement the formative assessment process to improve teaching and learning. Educators can use the materials to engage in professional learning communities, differentiate instruction for diverse learners, engage students in their own learning, improve assessment literacy, and design professional development opportunities. The Digital Library also incorporates features to provide educators opportunities to comment on and rate resources and share their expertise with colleagues across the country in online discussion forums.
- Open sourced technology that members can use to deliver assessments and report results to educators, parents and students.
- Cross-member communications to inform stakeholders about Smarter Balanced activities and to ensure a common focus on the goal of college- and career-readiness for all students.

The innovative and efficient use of technology serves as a central feature of this balanced assessment system. Some central notions concerning technology use are:

1. the Smarter Balanced system uses computer adaptive testing to increase the precision and efficiency of the summative tests,
2. the expanded use of technology enables the development of innovative and realistic item types that measure student achievement across a wide performance continuum providing opportunities for educator and administrator professional development and local capacity building, and
3. through the use of an interoperable electronic platform and leveraging of cross-member state resources, Smarter Balanced delivers assessments and produces standardized reports that are cost effective, timely, and useful for a range of audiences in tracking and analyzing student progress toward college- and career-readiness at the individual student, student subgroup, classroom, school, district, and state levels.

In summary, the Smarter Balanced learning and assessment system is grounded in a sound theory of action. This system promotes research-supported classroom practice and incorporates a balanced set of technology-enabled tools, innovative assessments, and classroom support materials intended to work coherently to facilitate teaching and learning.

Overview and Background of the Smarter Balanced Theory of Action

The Smarter Balanced Assessment Consortium supports the development and implementation of learning and assessment systems that reshape education in member states to improve student outcomes. Through expanded use of technology and targeted professional development, the Theory of Action calls for the integration of learning and assessment systems, leading to more informed decision-making and higher-quality instruction and ultimately increasing the number of students who are well prepared for college and careers.

The ultimate goal of Smarter Balanced is to ensure that all students leave high school prepared for postsecondary success in college or a career as a result of increased student learning and improved teaching. This approach suggests that enhanced learning will result when high-quality assessments support ongoing improvements in instruction and learning. A quality assessment system strategically "balances" summative, interim, and formative components (Darling-Hammond & Pecheone, 2010). An assessment system must provide valid measurement across the full range of performance on common academic content, including assessment of deep disciplinary understanding and higher-order thinking skills increasingly demanded by a knowledge-based economy.

Six Principles of Smarter Balanced Underlying the Theory of Action

The Smarter Balanced assessment system is guided by a set of six principles shared by systems in high-achieving nations and a number of high-achieving states in the U.S.

1. Assessments are grounded in a thoughtful, standards-based curriculum and managed as part of an integrated system of standards, curriculum, assessment, instruction, and teacher development. Curriculum and assessments are organized around a well-defined set of learning progressions along multiple dimensions within subject areas. Interim assessments and formative tools and resources are conceptualized in tandem with summative assessments; all of them are linked to the CCSS and supported by a unified technology platform.

4. Assessments produce evidence of student performance on challenging tasks that measure the CCSS. Instruction and assessments seek to teach and evaluate knowledge and skills that generalize and can transfer to higher education and multiple work domains. These assessments emphasize deep knowledge of core concepts and ideas within and across the disciplines—along with analysis, synthesis, problem solving, communication, and critical thinking—thereby requiring a focus on complex performances as well as on specific concepts, facts, and skills.
5. Teachers are integrally involved in the development and scoring of the assessments. Most items in the interim assessments are scored via the computer. However, there are some constructed response items and performance tasks, including the full write, or essay, that need to be hand-scored. The Smarter Balanced Teacher Hand-scoring System or a member-designated alternate system allows educators to score student responses using the same scoring rules as the summative assessment. Smarter Balanced provides hand-scoring training materials that include rubrics and sample responses to be used by educators who will score student responses. Hand-scoring is a valuable professional development activity that provides educators with an understanding of the scoring process and the expectations for student learning.
6. The development and implementation of the Smarter Balanced assessment system is a member-led effort with a transparent and inclusive governance structure. Assessments are structured to improve teaching and learning. Assessments as, of, and for learning are designed to develop understanding of content standards, what constitutes high-quality work, to what degree is growth occurring, and what is needed for further student learning.
7. Assessment, reporting, and accountability systems provide useful information on multiple measures that is educative for all stakeholders. Reporting of assessment results is timely and meaningful—offering specific information about areas of performance so that teachers can follow up with targeted instruction, students can better target their own efforts, and administrators and policymakers can fully understand what students know and can do—in order to guide curriculum and professional development decisions.
8. Design and implementation strategies adhere to established professional standards. The development of an integrated, balanced assessment system is an enormous undertaking, requiring commitment to established quality standards in order for the system to be credible, fair, and technically sound. Smarter Balanced continues to be committed to developing an assessment system that meets critical elements required by the U.S. Department of Education peer review process relying heavily on the Standards as its core resource for quality design.

The primary rationale of the Smarter Balanced assessments is that these aspects can interact to improve the intended student outcomes (i.e., college- and career-readiness).

Purposes of the Smarter Balanced Assessment System

The Smarter Balanced purpose statements refer to three categories: (a) summative assessments, (b) interim assessments, and (c) formative assessment and digital library tools and resources. This report provides information about the interim assessments. The purposes of the summative and formative assessments and digital library resources are also stated in this section to provide context for interim assessments as a component of the assessment system.

The purposes of the Smarter Balanced **summative** assessments are to provide valid, reliable, and fair information about

- students' ELA/literacy and mathematics achievement with respect to the CCSS measured by the ELA/literacy and mathematics summative assessments in grades 3 to 8 and high school;
- whether students prior to grade 11 have demonstrated sufficient academic proficiency in ELA/literacy and mathematics to be on track for achieving college readiness;
- whether grade 11 students have sufficient academic proficiency in ELA/literacy and mathematics to be ready to take credit-bearing, transferable college courses after completing their high school coursework;
- students' annual progress toward college- and career-readiness in ELA/literacy and mathematics;
- how instruction can be improved at the classroom, school, district, and state levels;
- students' ELA/literacy and mathematics proficiencies for federal accountability purposes and potentially for state and local accountability systems; and
- students' achievement in ELA/literacy and mathematics that is equitable for all students and subgroups of students.

The purposes of the Smarter Balanced **interim** assessments are to provide valid, reliable, and fair information about

- student progress toward mastery of the skills in ELA/literacy and mathematics measured by the summative assessment;
- student performance at the claim or cluster of assessment targets so teachers and administrators can track student progress throughout the year and adjust instruction accordingly;
- individual and group (e.g., school, district) performance at the claim level in ELA/literacy and mathematics to determine whether teaching and learning are on target;
- teacher-moderated scoring of performance events as a professional development vehicle to enhance teacher capacity to evaluate student work aligned to the standards; and
- student progress toward the mastery of skills measured in ELA/literacy and mathematics across all students and subgroups.

The purposes of the Smarter Balanced **formative** assessment and **digital library** resources are to provide tools and resources to

- improve teaching and learning;
- to help teachers monitor their students' progress throughout the school year,
- illustrate how teachers and other educators can use assessment data to engage students in monitoring their own learning;
- help teachers and other educators align instruction, curricula, and assessments;
- assist teachers and other educators in using the summative and interim assessments to improve instruction at the individual and classroom levels; and
- offer professional development and resources for how to use assessment information to improve teacher decision-making in the classroom.

Overview of Report Chapters

The structure of the Interim Assessment Technical Report follows that of the summative with the exception that there is no chapter on scales scores and norms in this interim technical report (chapter 5 in the summative technical report). The chapters shown below are also found in the summative technical report and include the same essential elements as prescribed by the Standards (AERA, APA, & NCME, 2014):

CH#	Chapter title
1	Validity
2	Reliability/Precision and Error of Measurement
3	Test Fairness
4	Test Design
5	Test Administration
6	Reporting and Interpretation

Brief synopses of the chapters contained in this Interim Assessment Technical Report are given below in order to direct further review. At the suggestion of our members, we have written practical descriptions of the purpose of evidence in each chapter to provide context for teachers, parents and other stakeholders.

Chapter 1: Validity

In a sense, all of the information in this Technical Report provides validity evidence. This chapter provides information about test purposes and the overall approach to showing how scores are appropriate for those purposes. The information in this chapter answers questions such as:

- For what purposes was the summative assessment designed to be used?
- What evidence shows that test scores are appropriate for these uses?
- What are the intended test score interpretations for specific uses?

Chapter 2: Reliability/Precision and Errors of Measurement

The degree of accuracy and precision of scores contributes to evidence about appropriate test score interpretation and use. Decisions must be made with full knowledge of measurement error and reliability. Chapter 2 presents information about how the test performs in terms of measurement precision, reliability, classification consistency, and other technical criteria. The information is based on simulation studies and operational test data from the item pool and school year identified in the title of this report. Information presented in this chapter can answer questions such as:

- How do we know that scores are accurate?
- How do we know they are reliable and equally precise for all students?

Chapter 3: Test Fairness

Test fairness concerns whether score interpretations are valid for all relevant subgroups that minimizes construct irrelevant variance. The evidence for test fairness can be logical (e.g., bias review of items) or statistical in nature (e.g., differential item functioning) and includes availability of resources that increase participation and improve assessment of skills. Chapter 3 presents the Smarter Balanced Conceptual Framework for Usability, Accessibility, and Accommodations, bias and sensitivity reviews conducted during item and task development. Information is presented about the development and use of test accommodations and accessibility features. Statistical information pertaining to differences in item functioning (DIF) across demographic groups is presented. Information presented in this chapter can answer questions such as:

- How were test questions and tasks developed to ensure fairness to all students?
- How is the test administered so that each student can demonstrate their skills?
- How do we know that the test is fair to all students?

Chapter 4: Test Design

Test design is predominantly focused on the content validity of the test. Tasks and items must represent the domain of knowledge and skill as intended. For Smarter Balanced assessments, test design includes the relationship of claims and targets to the underlying CCSS and how adaptive and performance task components work together. The full test design also encompasses the delivery algorithm and the method of scoring the test. This chapter includes a description of item pool and task development supporting test design. Chapter 4 provides evidence that the items students receive are appropriate in terms of both content and difficulty. It also describes test structure (claims, targets) and its relationship to the CCSS, item and task development and alignment studies. Chapter 4 also has information about the operational blueprints, adaptive algorithm, test scoring method and application and pool analysis. Information in Chapter 4 can answer questions such as:

- What's on the test? Is it consistent with stated test purposes?
- Does each student get a set of questions that fully represents the content domain?
- How does each student get a test with an appropriate level of difficulty?

Chapter 5: Test Administration

Part of test validity rests on the assumption that assessments are administered in a standard manner. Because Smarter Balanced tests are given on such a large scale, in different policy and operational contexts, the Consortium provides a common administration template that members customize for specific use. Chapter 6 describes the customizable Smarter Balanced Online Test Administration Manual. It presents operational item exposure rates and blueprint fidelity. Embedded field test results, including item scoring processes and inter-rater reliability of field tested items are shown. The information in Chapter 6 can answer questions such as:

- What are conditions for test administration to assure that every student was afforded the same chance for success?
- How was the test administered to allow for accessibility for all students?
- Was the test administration secure?
- Do test records show that the test was administered as intended?
- Were field tested items successful?

Chapter 6: Reporting and Interpretation

Reports based on test scores are among the most public-facing features of an assessment program. They must be useful as well as accurate – supporting the decisions and purposes for which the assessment was designed, while discouraging inappropriate conclusions and comparisons. Chapter 6 provides examples of the Smarter Balanced suite of reports and interpretive information, and discusses intended uses of report information. Information in Chapter 6 can answer questions such as:

Acknowledgments

Outside Groups and Organizations that Collaborated with the Smarter Balanced Assessment Consortium. Below is a partial list of individuals and groups that contributed time and expertise to the work of the Consortium.

2016-17 Technical Advisory Committee.

The Technical Advisory Committee (TAC) provides guidance on technical assessment matters pertaining to validity and reliability, accuracy, and fairness. Members of the TAC are highly regarded national experts who have been widely published in their fields. Areas of expertise include: assessment design; computer adaptive testing (CAT); assessment accommodations; uses of tests; mathematics, and English language arts/literacy. Following is a list of committee members and their affiliations.

- Randy Bennett, Ph.D. — *ETS*
- Derek C. Briggs, Ph.D. — *University of Colorado*
- Gregory J. Cizek, Ph.D. — University of North Carolina
- Shelbi Cole, Ph.D. — Student Achievement Partners
- David T. Conley, Ph.D. — *University of Oregon*
- Brian Gong, Ph.D. — The Center for Assessment
- Edward Haertel, Ph.D. — Stanford University
- Gerunda Hughes, Ph.D. — *Howard University*
- G. Gage Kingsbury, Ph.D. — *Psychometric Consultant*
- Joseph Martineau, Ph.D. — The Center for Assessment
- James W. Pellegrino, Ph.D. — University of Illinois, Chicago
- W. James Popham, Ph.D. — *UCLA, Emeritus*
- Joseph Ryan, Ph.D. — Arizona State University
- Guillermo Solano-Flores, Ph.D. — Stanford University
- Martha Thurlow, Ph.D. — University of Minnesota/NCEO
- Sheila Valencia, Ph.D. — University of Washington
- Joe Willhoft, Ph.D. — Consultant

English Language Learners Advisory Committee

The English Language Learners Advisory Committee is comprised of national experts in ELL assessment, bilingual education, and language acquisition. This committee will provide feedback to Smarter Balanced staff, work groups, and contractors to ensure that the assessments provide valid, reliable, and fair measures of achievement and growth for English learners. Following is a list of committee members.

- Stephanie Cawthon, Ph.D.
- Magda Chia, Ph.D.
- Gary Cook, Ph.D.
- Kathy Escamilla, Ph.D.
- James Green, Ph.D.
- Kenji Hakuta, Ph.D.
- Robert Linquanti
- Guillermo Solano-Flores, Ph.D.
- Guadalupe Valdés, Ph.D.

Students with Disabilities Advisory Committee

The Students with Disabilities Advisory Committee is comprised of national experts in learning disabilities, assistive technology, and accessibility and accommodations policy. This committee will provide feedback to Smarter Balanced staff, work groups, and contractors to ensure that the assessments provide valid, reliable, and fair measures of achievement and growth for students with disabilities. Following is a list of committee members.

- Donald D. Deshler, Ph.D.
- Barbara Ehren, Ed.D.
- Cheryl Kamei-Hannan, Ph.D.
- Jacqueline F. Kearns, Ed.D.
- Susan Rose, Ph.D.
- Jim Sandstrum
- Ann C. Schulte, Ph.D.
- Richard Simpson, Ed.D.
- Stephen W. Smith, Ph.D.
- Martha L. Thurlow, Ph.D.

Performance and Practice Committee

The Performance and Practice Committee is comprised of nearly 20 educators from around the nation who were nominated by state chiefs. This committee will assess the efficiency of Smarter Balanced assessments to meet their designed purpose and to deepen overall stakeholder investment. Following is a list of committee members and their member affiliation.

- Kandi Greaves (Vermont)
- Mary Jo Faust (Delaware)
- Shannon Mashinchi (Oregon)
- Susan Green (California)
- Steve Seal (California)
- Tanya Golden (California)
- Crista Anderson (Montana)
- Melissa Speetjens (Hawaii)
- Tiffany Seibel (Nevada)
- Mike Nelson (Idaho)
- Guyla Ness (South Dakota)
- Abby Olinger Quint (Connecticut)
- Michelle Center (California)
- Todd Bloomquist (Oregon)

- Jim O'Neill (Montana)
- Jen Paul (Michigan)
- Eva Payne (Oregon)
- Toni Wheeler (Washington)
- Joe Willhoft (Technical Advisory Committee)

References

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Chapter 1: **Validity**

Introduction

This chapter provides an evaluative framework for the validation of the Smarter Balanced interim assessment. Validity evidence for the interim assessments overlaps substantially with the validity evidence for the summative assessments. The reader will be pointed to supporting evidence in other parts of the technical report and other sources that seek to demonstrate that the Smarter Balanced Assessment System adheres to guidelines for fair and high quality assessment.

Validity refers to the degree to which a specific interpretation or use of a test score is supported by the accumulated evidence (AERA, APA, & NCME, 2014; ETS, 2002). Validity is the central notion underlying the development, administration, and scoring of a test and the uses and interpretations of test scores.

Validation is the process of accumulating evidence to support each proposed score interpretation or use. This validation process does not rely on a single study or gathering one type of evidence. Rather, validation involves multiple investigations and different kinds of supporting evidence (AERA, APA, & NCME, 2014; Cronbach, 1971; ETS, 2002; Kane, 2006). It begins with test design and is implicit throughout the assessment process, which includes development, field-testing and analyses of items, test scaling and linking, scoring, and reporting.

The validity argument begins with a statement of interim assessment intended purposes, followed by the evidentiary framework supporting the validity argument. Evidence is organized around the principles in the AERA, APA, and NCME's *Standards for Educational and Psychological Testing* (2014), hereafter referred to as *the Standards*, and the Smarter *Balanced Assessment Consortium: Comprehensive Research Agenda* (Sireci, 2012).

The *Standards* are considered to be "the most authoritative statement of professional consensus regarding the development and evaluation of educational and psychological tests" (Linn, 2006, p. 27) currently available. The 2014 *Standards* differ from earlier versions in the emphasis given to the increased prominence of technology in testing, including computer adaptive testing (CAT). Sireci based the work on the research agenda on the Standards and his work in operational interpretation of validity argumentation (Sireci, 2013).

Purposes of the Smarter Balanced System for Interim Assessments

To derive the statements of purpose listed below, panels consisting of Smarter Balanced leadership, including the Executive Director, Smarter Balanced staff, Dr. Stephen Sireci and key personnel from Consortium states were convened. There are two types of interim assessments, each with different purposes. These assessments are the Interim Comprehensive Assessments (ICAs) and the Interim Assessment Blocks (IABs). The ICAs use the same blueprints as the summative assessments and assess the same standards. When administered under standard conditions, the ICAs deliver a valid overall score and associated error and an indicator of performance at the claim level. Unlike the summative tests, ICAs are fixed form, non-adaptive. The IABs focus on smaller sets of targets associated with an instructional block or unit. They are short fixed-form tests that can be used more flexibly to support instruction. Importantly, items on the ICAs and IABs are not initially identified as items for the interim assessment and are instead chosen from a general pool of items that have been treated identically in development.

Interim assessments can be used in a variety of ways. They can be administered under standard conditions, as described in the Smarter Balanced Test Administration Manual. They can also be administered repeatedly to a class or individual. In addition, they may be used as a basis for class discussion or feedback at the item level. Information about the reliability and meaning of scores applies only to the first time a test is administered under standard conditions. Subsequent

administrations, or results from collaborating with a class or teacher alter the interpretation of results. The purposes below apply to the initial standard test administration.

The purposes of the Smarter Balanced interim assessments are to provide valid, reliable, and fair information about:

1. student progress toward mastery of the skills measured in ELA/literacy and mathematics by the summative assessments;
2. students' performance at the content cluster level, so that teachers and administrators can adjust instruction accordingly;
3. individual and group (e.g., school, district) performance at the claim level in ELA/literacy and mathematics, to determine whether teaching and learning are on target; and
4. student progress toward the mastery of skills measured in ELA/literacy and mathematics across all students and subgroups of students.

The crux of the argument presented here is that the technical quality of the interim assessments supports these purposes. Content specifications and test blueprints show that the Smarter Balanced ICAs cover the breadth and depth of assessable standards. The assessments contain expanded item types that allow response processes designed to elicit a wide range of skills and knowledge. IABs are designed to deliver information suitable for informing instructional decisions when combined with other information. IAB and ICA score reports indicate directions for gaining further instructional information through classroom assessment and observation.

Sources of Validity Evidence

The intended purposes must be supported by evidence. The *Standards* describe a process of validation, often characterized as a validity argument (Kane, 1992; Kane, 2006), that consists of developing a sufficiently convincing, empirically-based argument that the interpretations and actions based on test scores are sound.

> A sound validity argument integrates various strands of evidence into a coherent account of the degree to which existing evidence and theory support the intended interpretation of test scores for specific uses. Ultimately, the validity of an intended interpretation of test scores relies on all the available evidence relevant to the technical quality of a testing system (AERA et al., 2014, p. 21-22).

The sources of validity evidence described in the *Standards* (AERA et al. 2014, pp. 26-31) are:

1. Evidence Based on Test Content
2. Evidence Based on Response Processes
3. Evidence Based on Internal Structure
4. Evidence Based on Relations to Other Variables
5. Evidence Based on Consequences of Testing[1].

[1] This report does not provide evidence related to the consequences of testing. Ultimate use of test scores is determined by consortium members. Each member decides the purpose and interpretation of scores and each has crafted its own system of reporting and accountability. The Consortium provides information about test content and technical quality but does not interfere in member use of scores. The consortium does not endorse or critique member uses.

These sources of validity evidence are briefly described below:

1. Validity evidence based on *test content* refers to traditional forms of content validity evidence, such as the rating of test specifications and test items (Crocker, Miller, & Franks, 1989; Sireci, 1998), as well as "alignment" methods for educational tests that evaluate the interactions between curriculum frameworks, testing, and instruction (Rothman, Slattery, Vranek, & Resnick, 2002; Bhola, Impara & Buckendahl, 2003; Martone & Sireci, 2009). The degree to which (a) the Smarter Balanced test specifications captured the Common Core State Standards and (b) the items adequately represent the domains delineated in the test specifications, were demonstrated in the alignment studies. The major assumption here is that the knowledge, skills, and abilities measured by the Smarter Balanced assessments are consistent with the ones specified in the Common Core State Standards. Administration and scoring can be considered as aspects of content-based evidence.
2. Validity evidence based on *response processes* refers to "evidence concerning the fit between the construct and the detailed nature of performance or response actually engaged in by examinees" (AERA et al., 1999 p. 12). This evidence might include documentation of such activities as interviewing students concerning their responses to test items (i.e., speak alouds) systematic observations of test response behavior; evaluation of the criteria used by judges when scoring performance tasks, analysis of student item-response-time data, features scored by automated algorithms; and evaluation of the reasoning processes students employ when solving test items (Emberetson, 1983; Messick, 1989; Mislevy, 2009). This type of evidence was used to confirm that the Smarter Balanced assessments are measuring the cognitive skills that are intended to be the objects of measurement and that students are using these targeted skills to respond to the items.
3. Validity evidence based on *internal structure* refers to statistical analyses of item and score subdomains to investigate the primary and secondary (if any) dimensions measured by an assessment. Procedures for gathering such evidence include factor analysis or multidimensional IRT scaling (both exploratory and confirmatory). With a vertical scale, a consistent primary dimension or construct shift across the levels of the test should be maintained. Internal structure evidence also evaluates the "strength" or "salience" of the major dimensions underlying an assessment using indices of measurement precision such as test reliability, decision accuracy and consistency, generalizability coefficients, conditional and unconditional standard errors of measurement, and test information functions. In addition, analysis of item functioning using Item Response Theory (IRT) and differential item functioning (DIF) fall under the internal structure category. For Smarter Balanced, a dimensionality study was conducted in the Pilot Test to determine the factor structure of the assessments and the types of scales developed as well as the associated IRT models used to calibrate them.
4. Evidence based on *relations to other variables* refers to traditional forms of criterion-related validity evidence such as concurrent and predictive validity, as well as more comprehensive investigations of the relationships among test scores and other variables such as multitrait-multimethod studies (Campbell & Fiske, 1959).
5. Finally, evidence based on *consequences of testing* refers to the evaluation of the intended and unintended consequences associated with a testing program. Examples of evidence

> based on testing consequences include investigations of adverse impact, evaluation of the effects of testing on instruction, and evaluation of the effects of testing on issues such as high school dropout rates. With respect to educational tests, the *Standards* stress the importance of evaluating test consequences. For example, they state,

This Technical Report provides a partial account of validity evidence that may be gathered within this framework. A large amount of validity evidence for the interim assessments overlaps with validity evidence for the summative assessments and is therefore presented in the summative assessment technical report exclusively.

Also, as many observers have noted, validity is an ongoing process with continuous addition of evidence from a variety of contributors. Each Consortium member determines how to use interim assessments and may collect unique validity evidence specific to a particular use. The Consortium provides guidance to members on appropriate uses of interim assessment scores and provides evidence of validity and technical quality for recommended uses. In many cases, validity evidence for a particular use will come from an outside auditor or from an external study or will simply not be available for inclusion in consortium documents.

When educational testing programs are mandated, the ways in which test results are intended to be used should be clearly described. It is the responsibility of those who mandate the use of tests to monitor their impact and to identify and minimize potential negative consequences. Consequences resulting from the use of the test, both intended and unintended, should also be examined by the test user (AERA et al., 2014, p. 145).

Investigations of testing consequences relevant to the Smarter Balanced goals include analyses of students' opportunity to learn with regard to the Common Core State Standards, and analyses of changes in textbooks and instructional approaches. Unintended consequences, such as changes in instruction, diminished morale among teachers and students, increased pressure on students leading to increased dropout rates, or the pursuit of college majors and careers that are less challenging, can be evaluated. These studies are beyond the scope of this report.

Validity Evidence for Interim Assessments by Source and Purpose

Validity evidence for the interim assessments is organized by source of validity evidence within purpose. Table 1-1 shows the combinations of source by purpose covered by validity evidence pertaining to the interim assessments.

TABLE 1-1 SOURCES OF VALIDITY ELEMENTS

Purpose (abbreviated)	Source of Validity Evidence for Interim Assessments				
	Test Content	Response Processes	Internal Structure	Relations to Other Variables	Testing consequences
Measurement of student progress towards mastery of skills measured by the summative assessments.	✓	✓	✓		
Measurement of student progress at the cluster level.	✓	✓	✓		
Measurement of student progress at the claim level.	✓	✓	✓		
Measurement of student progress towards mastery of skills across all students and subgroups.		✓	✓		

Interim Assessment Purpose 1

> *Provide valid, reliable, and fair information about students' progress toward mastery of the skills measured in ELA/literacy and mathematics by the summative assessments.*

To support this purpose, validity evidence should confirm that the knowledge and skills being measured by the interim assessments cover the knowledge and skills measured on the summative assessments and that the interim assessment scores are on the same scale as those from the summative assessments. The ICAs cover the depth and breadth of the knowledge and skills measured on the summative assessments. The IABs are not comprehensive, but rather provide information about areas of interest within each subject. The interim assessment scores are on the same scale as those on the summative assessments.

As indicated in Table 1-1, the studies providing this evidence are primarily based on test content, internal structure, and response processes. The structure of ICAs comes from the Content Specifications documents (Smarter Balanced Assessment Consortium, 2017a, 2017b), which relate the Smarter Balanced claim and target structure to the CCSS.

Validity Studies Based on Test Content. The content validity studies conducted for the summative assessments provide information relevant to the interim assessments. It is important to note that during the item development process, items were developed without being designated for use on the interim or summative assessments The ICA blueprint reflects the content coverage and proportions on the summative test. For IABs, content experts designed blueprints around target groupings most likely to comprise an instructional unit. IABs provide a general link back to the Smarter Balanced scale, providing a direction for additional probing with formative feedback. When combined with a teacher's knowledge, IAB reports add a valuable component to the full picture of students' knowledge and skills.

Validity Studies Based on Response Processes. Interim Assessment Purpose 1 relates to skills measured on the summative assessments, and so the validity studies based on response processes that were described for the summative assessments are relevant here to confirm that the items are measuring higher-order skills. Smarter Balanced provides training and validity papers for all items requiring hand scoring.

Validity Studies Based on Internal Structure. Scores from the ICAs are on the same scale as those from the summative assessments, to best measure students' progress toward mastery of the knowledge and skills measured on those assessments.

Items on interim assessments are field tested as part of the general pool. They are not identified as interim items initially, but are chosen from a general pool of items that have been treated identically in development, field testing and acceptance processes. They meet the same measurement criteria as items on the summative test. The procedure for field-testing is described in the 2014 and 2015 summative assessment technical reports (Smarter Balanced, 2014, 2016), which can be accessed on the Smarter Balanced website.

The structure of ICAs follows that of the summative tests, with a nested hierarchical relationship between claims and targets and some global constraints applied at the test or claim level. IAB designs are based on expected instructional groupings as shown in IAB blueprints.

Also under the realm of internal structure is evidence regarding the reliability or measurement precision of scores from the interim assessments. Less measurement precision relative to that of the summative assessments is tolerable because (a) the stakes are lower, (b) there are multiple assessments, (c) these assessments supplement the summative assessments and (d) results are combined with formative information when used instructionally. This report provides the reliabilities and errors of measurement (see Chapter 2) associated with ICA scores reported from the interim assessments so that they can be properly interpreted.

The Consortium does not collect raw or scored data from interim assessments, so only the properties of test forms are analyzed.

Interim Assessment Purpose 2

> *Provide valid, reliable, and fair information about students' performance at the content cluster level, so that teachers and administrators can track student progress throughout the year and adjust instruction accordingly.*

As shown in Table 1.1, validity evidence to support this purpose of the interim assessments relies on studies of test content, response processes, and internal structure. The rationale and evidence pertaining to these types of validity evidence is the same as for Purpose 1. Information regarding the reliability and measurement error of cluster-level (IAB) score reporting is provided in Chapter 2 of this report.

Interim Assessment Purpose 3

> *Provide valid, reliable, and fair information about individual performance at the claim level in ELA/literacy and mathematics, to determine whether teaching and learning are on target.*

As shown in Table 1.1, validity evidence to support this purpose of the interim assessments relies on studies of test content, response processes, and internal structure. The rationale and evidence pertaining to these types of validity evidence is the same as for Purpose 1. Information regarding the reliability and measurement error of claim-level score reporting based on ICAs is provided in Chapter 2 of this report.

Interim Assessment Purpose 4

> *Provide valid, reliable, and fair information about student progress toward the mastery of skills measured in ELA/literacy and mathematics across all students and subgroups of students.*

Validity evidence in support of this purpose is specifically addressed through the information about how the interim assessments can be expected to perform psychometrically for specific demographic groups in Chapter 2, and through results of differential item functioning analyses in Chapter 3.

Essential Validity Evidence Derived from the Standards.

The *Standards* (AERA et al. 2014, p.22) also present a set of essential validity elements consistent with evidence typically reported for large-scale educational assessments. The essential validity elements present a traditional synopsis of validity evidence, which form the basis for the evidence demonstrated for the 2014-15 Smarter Balanced initial operational administration of the summative assessments

The *Standards* describe these essential validity elements as

A. evidence of careful test construction;
B. adequate score reliability;
C. appropriate test administration and scoring;
D. accurate score scaling, equating, and standard setting; and
E. attention to fairness, equitable participation and access.

The Smarter Balanced technical reports provide comprehensive evidence for these essential validity elements. Table 1-2 provides a brief description of what kinds of validity evidence is provided for each of these essential elements and where the evidence for interim assessments can be found in the Smarter Balanced technical reports. In many cases, detailed evidence may exist only in external reports which are cited in the technical report chapters.

In locating validity evidence for a particular purpose, it might be helpful to note the substantial overlap between the purposes of the assessments, the sources of validity evidence, and the essential elements of validity evidence. Most essential elements fall under the “test content” and “internal structure” sources of validity evidence. Measurement of progress across all students and subgroups (interim assessment purpose 4) pertains to the essential validity element, “attention to fairness, equitable participation and access”.

TABLE 1-2 SYNOPSIS OF ESSENTIAL VALIDITY EVIDENCE DERIVED FROM STANDARDS (AERA ET AL., 2014, P. 22)

Essential Element	Type of Associated Validation Evidence	Source
Evidence of careful test construction.	Description of test development steps, including construct definition (test specifications and blueprints), item writing and review, item data analysis, alignment studies	Chapter 4 of both the Interim and Summative Technical Reports.
Adequate score reliability.	Analysis of test information, conditional standard errors of measurement, decision accuracy and consistency, and reliability estimates.	Chapter 2
Appropriate test administration and scoring.	Test administration procedures, including protocols for test irregularities; availability and assignment of test accommodations. Scoring procedures and rater agreement analyses.	Chapter 5
Adequate score scaling, equating, and standard setting.	Documentation of test design, IRT model choice, scaling and equating procedures, standard setting. Comprehensive standard setting documentation, including procedural, internal, and external validity evidence.	Chapter 5 in Summative Technical Report.
Attention to fairness, equitable participation, and access.	Accommodation policy guidelines, implementation of accommodations, sensitivity review, DIF analyses, analyses of accommodated tests; analysis of participation rates, availability of translations.	Chapter 3

Conclusion for Interim Test Validity

Validation is an ongoing, essentially perpetual endeavor in which additional evidence can be provided but one can never absolutely "assert" an assessment is perfectly valid (Haertel, 1999). This is particularly true for the many purposes typically placed on tests. Program requirements are often subject to change and the populations assessed change over time. Nonetheless, at some point decisions must be made regarding whether sufficient evidence exists to justify the use of a test for a particular purpose. A review of the purpose statements and the available validity evidence determines the degree to which the principles outlined here have been realized. Most of this report focuses on describing some of the essential validity elements required for necessary evidence. The essential validity elements presented here constitute critical evidence "relevant to the technical quality of a testing system" (AERA et al., 2014, p. 22).

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Chapter 2: Reliability, Precision, and Error of Measurement

Introduction

This chapter addresses the technical quality of the interim assessments available in the 2016-2017 school year and the functioning of these assessments in terms of expected precision and reliability. Part of the test validity argument is that scores must be consistent and precise enough to be useful for intended purposes. If scores are to be meaningful, tests should deliver the same results under repeated administrations or for students of the same ability. In addition, the range of uncertainty around the score should be small enough to support educational decisions.

Because states do not routinely collect or report item responses on the interim assessments, estimates of precision and reliability are based on statistical attributes of the test items and test forms under the assumption that the interim assessments are administered to groups of students similar to those taking the 2016-2017 summative assessment.

It is also important to note that information about precision and reliability holds only for the first standard administration of the tests. Reliability in physical instruments is typically checked by repeated measurement. For example, the reliability of an instrument for measuring weight is verified by seeing that the instrument always gives the same weight for the same object. For interim assessments, it is not possible to give the test more than once to the same student without the experience changing that student in a way that would affect their performance on the test if they were to take it again.

Evaluating precision and reliability

A test's precision is represented by its measurement error which, for an individual student, is called the standard error of measurement (SEM). The SEM for a given student depends on the student's achievement score. This dependence gives rise to the notation $SEM(\Theta_i)$, which means "the SEM for a student whose achievement is represented by the quantity θ_i", where *i* is a number representing the student. The θ–scale is an item-response theory scale and generally ranges from -4 (extremely low achievement) to +4 (extremely high achievement) with a mean of zero. Ultimately, measures of achievement and SEMs on the θ–scale are transformed to the reporting scale as described in Chapter 5 of the summative technical report.

The formula for the standard error of measurement for a student, *i*, whose achievement is Θ_i, is:

$$SEM(\theta_i) = \frac{1}{\sqrt{I(\theta_i)}}, \quad (1)$$

where $I(\theta_i)$ is the test information for student *i*, is based on the items taken by the student, and is calculated as:

$$I(\theta_i) = \sum_{j=1}^{I} D^2 a_j^2 \left(\frac{\sum_{l=1}^{m_j} l^2 Exp(\sum_{k=1}^{l} Da_j(\theta_i - b_{jk}))}{1+\sum_{l=1}^{m_j} Exp(\sum_{k=1}^{l} Da_j(\theta_i - b_{jk}))} - \left(\frac{\sum_{l=1}^{m_j} lExp(\sum_{k=1}^{l} Da_j(\theta_i - b_{jk}))}{1+\sum_{l=1}^{m_j} Exp(\sum_{k=1}^{l} Da_j(\theta_i - b_{jk}))} \right)^2 \right), \quad (2)$$

where m_j is the maximum possible score point (starting from 0) for the *j*th item, and D is the scale factor, 1.7. Values of a_j and b_{jk} are IRT item parameters for item *j* and score level *k*.

The test information, $I(\theta_i)$, and conditional standard error of measurement, $SEM(\Theta_i)$ is plotted over a θ-range of -4 to +4. These grade and subject-specific plots are shown in Figure 2-1 to Figure 2-6. The shading in these plots show the distribution of θ based on students who took the Smarter Balanced summative assessments in 2016-2017. The means and standard deviations of these θ-distributions are shown in Table 2-1.

2-1 Population Parameters Used to Generate Ability Distributions for Simulated Test Administrations

Grade	ELA/Literary		Mathematics	
	Mean	SD	Mean	SD
3	-1.11	1.02	-1.16	1.00
4	-0.62	1.07	-0.66	1.02
5	-0.15	1.08	-0.31	1.13
6	0.11	1.06	-0.05	1.27
7	0.37	1.12	0.15	1.36
8	0.60	1.10	0.34	1.45
11	1.05	1.26	0.57	1.56

The measurement precision of the interim comprehensive assessments (ICAs) for students having the θ-distributions represented in Table 2-1 (and illustrated in Figure 2-1 to Figure 2-6) is represented by the marginal reliability coefficient and the root mean standard error (RMSE). These indices are shown in Table 2-2 (ELA/Literacy) and Table 2-3 (mathematics). The mean squared error, MSE, is the average of $SEM(\Theta_i)^2$ for a given θ-distribution. The RMSE is the square root of this average. The reliability coefficient is:

$$\bar{\rho} = 1 - \frac{MSE}{\sigma_\theta^2}, \tag{3}$$

where σ_θ^2 is the population variance of true scores. The square of the SDs in Table 2-1 was used for σ_θ^2 . The reliability coefficient, $\bar{\rho}$, was calculated for the overall score and claim scores for the ICAs. Reliability and MSE are not reported for the assessment blocks of the IABs because scale scores are not reported. IAB results are reported in terms of whether the student is below, near, or above standard, where the level 3 cut score is the standard. For computing the reliability of claim scores, student measures of true 'claim' achievement were assumed to have the same θ-distribution as overall student achievement (Table 2-1 Population parameters used to generate ability distributions for simulated test administrations).

Simulation was used to estimate the MSE. For each grade within subject, true θ values for 1000 examinees were simulated from a normal distribution with mean and variance equal to the values shown in Table 2-1. Population parameters used to generate ability distributions for simulated test administrations. Then for each value of true θ, scores for the items on the test under study were generated using the test items' IRT parameters. An estimate of θ was then obtained via maximum likelihood estimation and the generated score vector. The data simulation and scoring were carried out with flexMIRT software (Cai, 2017). For a given test, the MSE was then estimated as:

$$MSE = \frac{\sum_{i=1}^{N}(\hat{\theta}_i - \theta_i)^2}{N}, \tag{4}$$

where N=the number of simulated examinees (1000).

As expected, reliability coefficients for the ICA are high and the RMSEs are small and in the acceptable range for a large scale test. Reliability estimates at the claim level are lower, and SEM is

As expected, reliability coefficients for the ICA are high and the RMSEs are small and in the acceptable range for a large scale test. Reliability estimates at the claim level are lower, and SEM is higher. Figure 2-1 to Figure 2-6 show plots of the test information function and SEM for the ICA for each grade and subject area.

Reliability estimates are even lower and SEM is highest for the ICA claim-level scores. Claims with fewer items and fewer points exhibit the lowest reliability and the highest SEM.

The reliability of a test is partly a function of its precision and partly a function of true differences in ability among students.

A reliability coefficient of 0 indicates that measured differences among students are completely unreliable. A reliability coefficient of 1 indicates that the measured differences, or rank-order, among students is completely reliable.

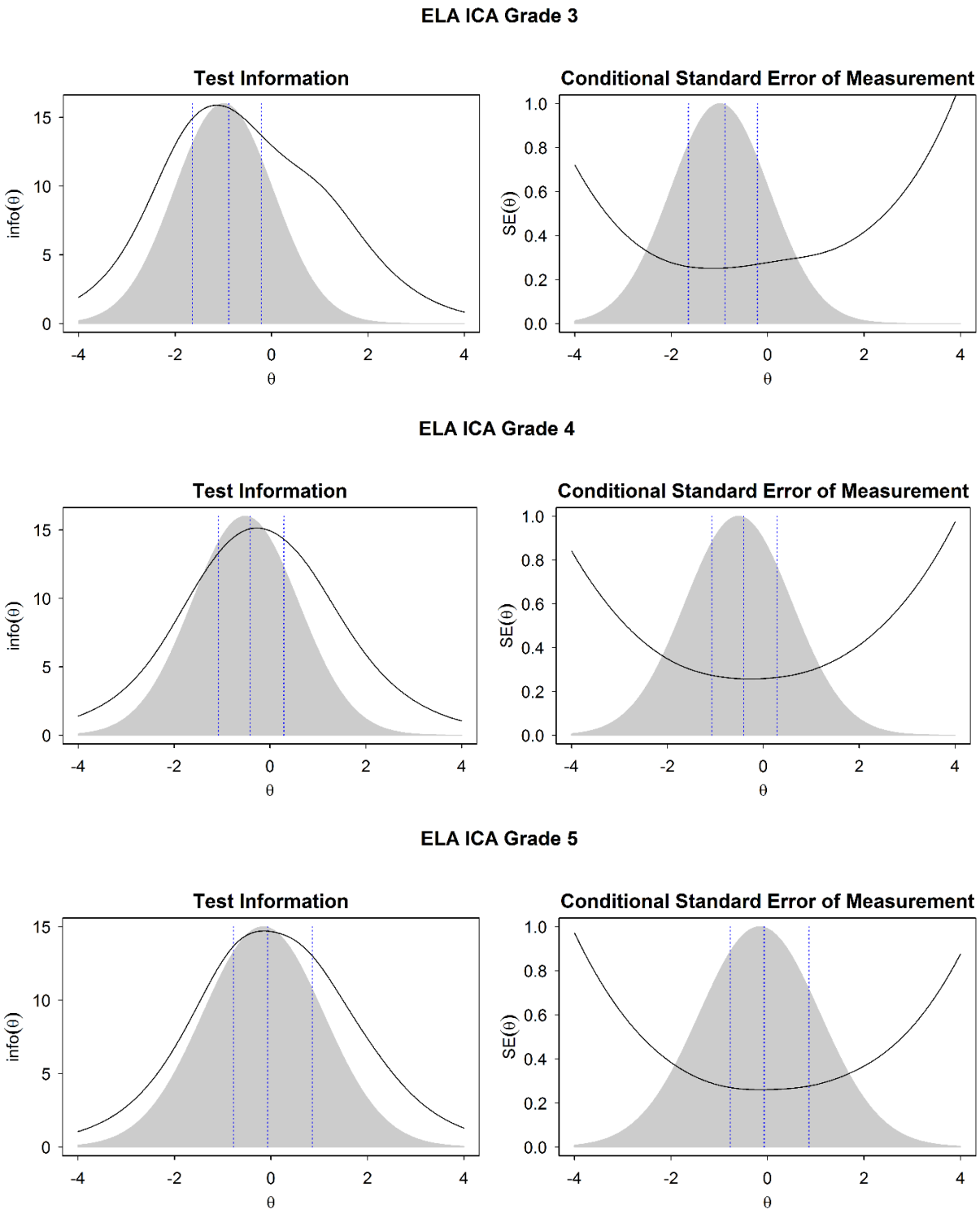
TABLE 2-2 RELIABILITY AND PRECISION FOR INTERIM COMPREHENSIVE ASSESSMENTS, ELA/LITERACY

ELA/literacy											
		Full Test		Claim 1		Claim 2		Claim 3		Claim 4	
Grade	N items	Reliability	RMSE	Reliability	RMSE	Reliability	RMSE	Reliability	SEM	Reliability	RMSE
3	48	0.92	0.29	0.80	0.46	0.76	0.50	0.44	0.76	0.35	0.82
4	49	0.92	0.30	0.80	0.47	0.72	0.56	0.26	0.91	0.54	0.71
5	48	0.93	0.30	0.80	0.50	0.74	0.57	0.47	0.82	0.62	0.69
6	49	0.93	0.32	0.78	0.56	0.80	0.53	0.43	0.90	0.54	0.81
7	49	0.93	0.34	0.82	0.53	0.79	0.57	0.34	1.02	0.36	1.00
8	50	0.94	0.32	0.85	0.50	0.79	0.60	0.24	1.14	0.67	0.75
11	46	0.92	0.41	0.78	0.67	0.71	0.78	0.50	1.01	0.53	0.98

TABLE 2-3 RELIABILITY AND PRECISION FOR INTERIM COMPREHENSIVE ASSESSMENTS, MATHEMATICS

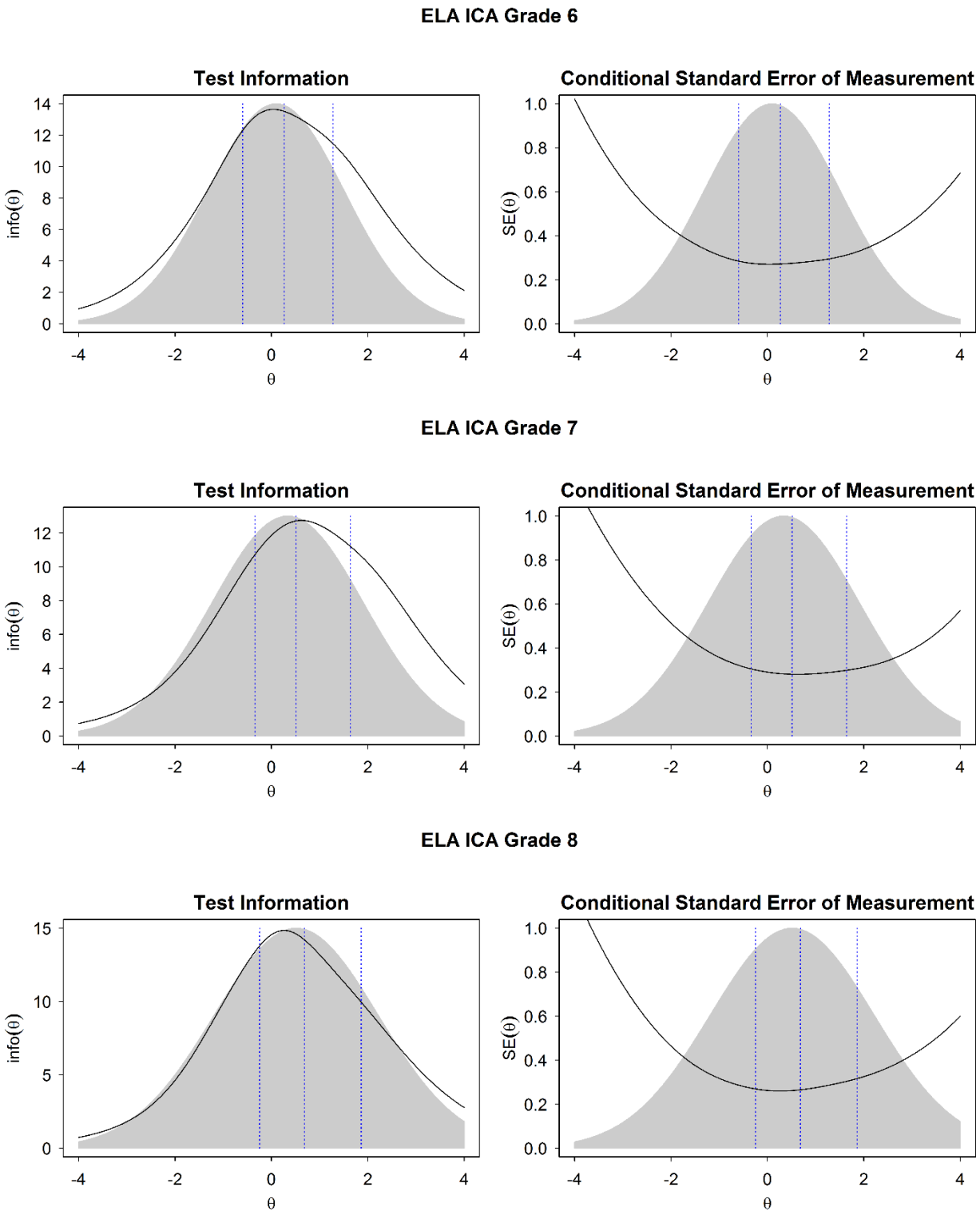
Mathematics									
		Full Test		Claim 1		Claim 2/4		Claim 3	
Grade	N items	Reliability	RMSE	Reliability	RMSE	Reliability	RMSE	Reliability	RMSE
3	37	0.92	0.31	0.85	0.42	0.51	0.77	0.59	0.70
4	36	0.92	0.33	0.85	0.45	0.62	0.71	0.31	0.95
5	37	0.91	0.37	0.80	0.54	0.53	0.83	0.62	0.75
6	36	0.91	0.38	0.83	0.53	0.45	0.96	0.50	0.91
7	37	0.90	0.42	0.81	0.59	0.55	0.91	0.56	0.90
8	37	0.90	0.44	0.82	0.61	0.66	0.83	0.48	1.02
11	38	0.90	0.50	0.80	0.68	0.58	1.01	0.43	1.17

FIGURE 2-1 TEST INFORMATION FUNCTIONS AND SEM FOR ELA/LITERACY ICA, GRADES 3,,4, AND 5



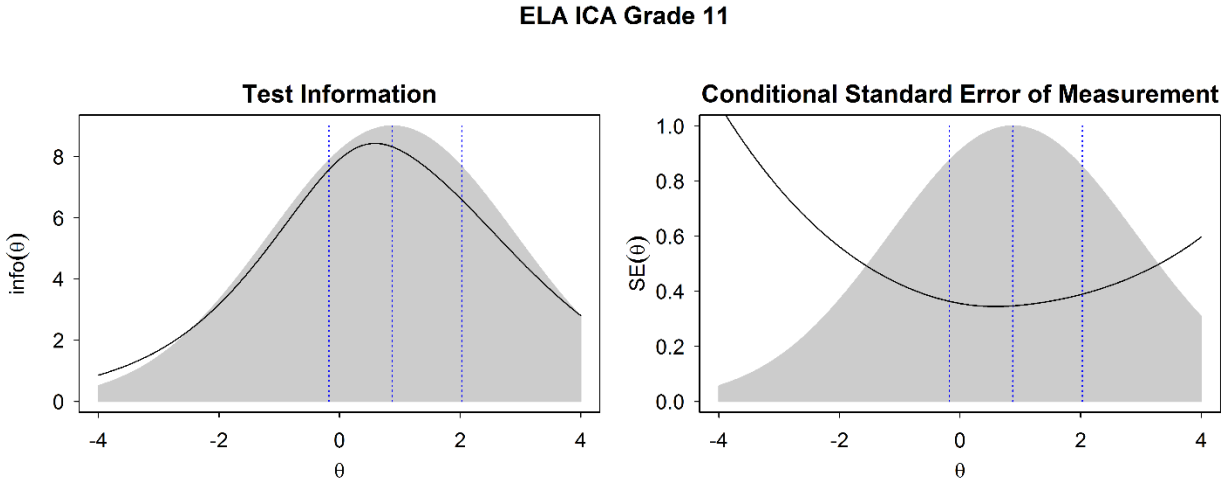
Note. The dotted lines indicate the cut scores. The shaded distribution is the population distribution for that grade.

FIGURE 2-2 TEST INFORMATION FUNCTIONS AND SEM FOR ELA/LITERACY ICA, GRADES 6, 7, AND 8



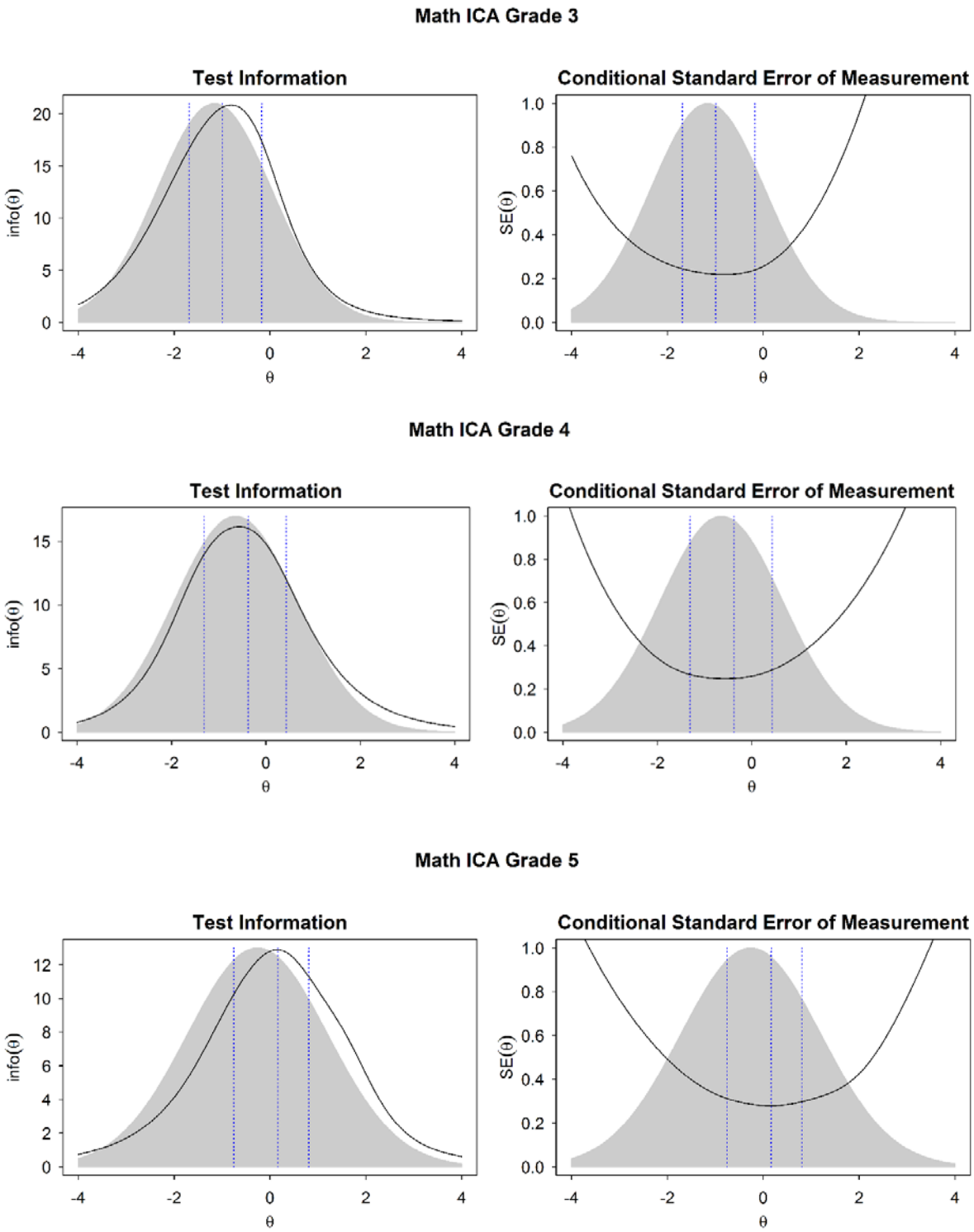
Note. The dotted lines indicate the cut scores. The shaded distribution is the population distribution for that grade.

FIGURE 2-3 TEST INFORMATION FUNCTIONS AND SEM FOR ELA/LITERACY ICA, GRADE 11



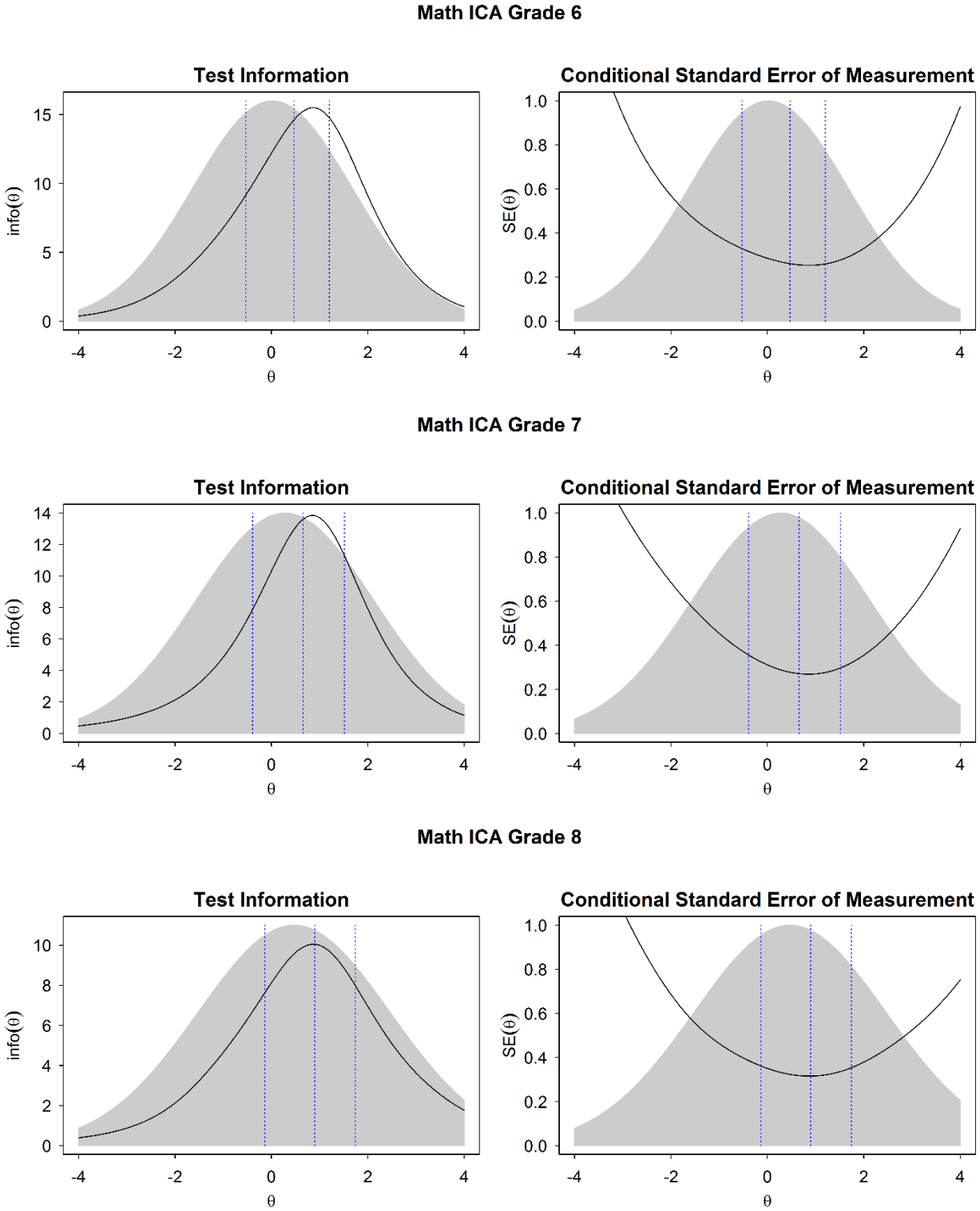
Note. The dotted lines indicate the cut scores. The shaded distribution is the population distribution for that grade.

FIGURE 2-4 TEST INFORMATION FUNCTIONS AND SEM FOR MATHEMATICS ICA, GRADES 3, 4, AND 5



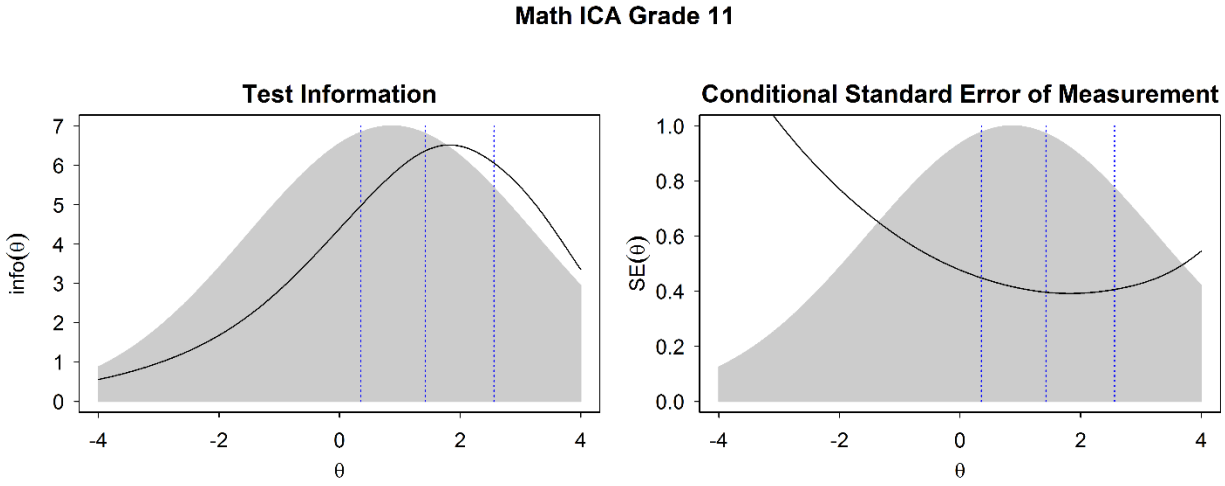
Note. The dotted lines indicate the cut scores. The shaded distribution is the population distribution for that grade.

FIGURE 2-5 TEST INFORMATION FUNCTIONS AND SEM FOR MATHEMATICS ICA, GRADES 6, 7 AND 8



Note. The dotted lines indicate the cut scores. The shaded distribution is the population distribution for that grade.

FIGURE 2-6 TEST INFORMATION FUNCTIONS AND SEM FOR MATHEMATICS ICA, GRADE 11



Note. The dotted lines indicate the cut scores. The shaded distribution is the population distribution for that grade.

Classification Accuracy

Classification accuracy is defined as the degree of consistency between the observed Achievement Level (from the observed scores) and the true Achievement Level (from the population distribution). To calculate the classification accuracy, a simulation study was conducted using item-level information and information about the population parameters (mean and standard deviation). The simulation study allows us to understand classification accuracy without having student-level data at hand. First, true scores for 1000 simulees were generated from the mean and standard deviations shown in Table 2-1. Then, responses from the simulees to the items in the fixed forms (IABs and ICAs) were generated, using the parameters and item response models used in the scoring of these items. From these simulated item responses, scale scores, standard errors, and achievement-level classifications were obtained, according to the Smarter Balanced scoring specification (Smarter Balanced Assessment Consortium, 2015). Correct classification by level was computed as the proportion of students among those assigned to a particular level whose true Achievement Level (based on the simulated true score) and assigned Achievement Level (based on the estimated score) matched. The overall correct classification rate is the proportion of students among those assigned to any level who are correctly assigned. For the claim scores and Interim Assessment Blocks (IABs), we assume that the true claim or IAB scores are equivalent to the true overall scores. Therefore, we use the true overall score as the true claim or IAB score in calculating correct classification rates.

For overall scores, we used a weighted Kappa to describe the accuracy of classifications into the four Achievement Levels. Claim and IAB scores were evaluated with respect to the cut score between Levels 2 and 3, which represents the minimum standard for being deemed proficient for the subject and grade level. For each claim, students are classified as being “above” or “below” the standard when the estimated score is at least 1.5 standard errors above or below the cut score. When the estimated score is within 1.5 standard errors, the student is classified as being “at or near” the standard. Claim or IAB scores with larger average standard errors can thus be expected to have a greater proportion of students classified as “at or near” the standard. Because such classifications cannot be treated as a misclassification (as no student’s true score is “at” the cut score, and “near” is only defined in terms of the standard error of measurement), the proportions correctly classified focus on those students who were classified as “above” or “below.”

Table 2-4 shows the cut scores used for classifying examinees into achievement levels based on their overall test performance. The Level 2/3 cut score is also used to classify students by their performance on items specific to a claim – by their claim scores – and by their performance on the IABs.

TABLE 2-4 CUT SCORES FOR ACHIEVEMENT LEVELS

Grade	Subject	Level 1/2	Level 2/3	Level 3/4
3	ELA/literacy	-1.646	-0.888	-0.212
4	ELA/literacy	-1.075	-0.410	0.289
5	ELA/literacy	-0.772	-0.072	0.860
6	ELA/literacy	-0.597	0.266	1.280
7	ELA/literacy	-0.340	0.510	1.641
8	ELA/literacy	-0.247	0.685	1.862
11	ELA/literacy	-0.177	0.872	2.026
3	Mathematics	-1.689	-0.995	-0.175
4	Mathematics	-1.310	-0.377	0.430
5	Mathematics	-0.755	0.165	0.808
6	Mathematics	-0.528	0.468	1.199
7	Mathematics	-0.390	0.657	1.515
8	Mathematics	-0.137	0.897	1.741
11	Mathematics	0.354	1.426	2.561

Table 2-5 and Table 2-6 show the classification accuracy for the IAB scores in ELA/literacy and mathematics for all grades. Each table shows the proportion of simulees assigned to each category with respect to the level 3 cut score standard as well as the proportion among those assigned to each category and overall—who were correctly classified.

TABLE 2-5 OVERALL LEVEL CLASSIFICATION ACCURACY FOR INTERIM ASSESSMENT BLOCKS, ELA/LITERACY

Grade	Block Name	mean # Items	Proportion Assigned			Proportion Correctly Classified			
			Below	At/Near	Above	Below	At/Near	Above	Overall
3	Brief Writes	6	0.00	0.96	0.04	—	NA	0.98	0.98
	Editing	15	0.28	0.53	0.19	0.97	NA	0.95	0.96
	Language and Vocabulary Use	15	0.29	0.51	0.20	0.98	NA	0.98	0.98
	Listen/Interpret	15	0.26	0.54	0.20	0.98	NA	0.96	0.97
	Performance Task (Opinion)	5	0.00	0.97	0.03	---	NA	1.00	1.00
	Read Informational Texts	16	0.26	0.54	0.20	0.98	NA	0.94	0.96
	Read Literary Texts	15	0.30	0.48	0.22	0.99	NA	0.97	0.98
	Research	18	0.30	0.48	0.22	0.99	NA	0.98	0.99
	Revision	15	0.28	0.51	0.21	0.99	NA	0.96	0.98
4	Brief Writes	6	0.18	0.81	0.01	0.82	NA	1.00	0.84
	Editing	15	0.25	0.58	0.17	0.99	NA	0.98	0.99
	Language and Vocabulary Use	15	0.27	0.51	0.22	0.97	NA	0.96	0.97
	Listen/Interpret	15	0.27	0.57	0.16	0.97	NA	0.98	0.98
	Performance Task (Narrative)	5	0.00	0.95	0.06	—	NA	0.98	0.98
	Read Informational Texts	14	0.23	0.56	0.21	0.98	NA	0.98	0.98
	Read Literary Texts	15	0.30	0.48	0.22	0.98	NA	0.96	0.97
	Research	18	0.29	0.50	0.21	1.00	NA	0.99	0.99
	Revision	15	0.25	0.58	0.17	0.98	NA	0.96	0.97
5	Brief Writes	6	0.25	0.75	0.00	0.76	NA	—	0.76
	Editing	14	0.25	0.53	0.23	0.97	NA	0.97	0.97
	Language and Vocabulary Use	15	0.28	0.52	0.21	0.99	NA	0.98	0.98
	Listen/Interpret	14	0.25	0.57	0.19	0.98	NA	0.96	0.97
	Performance Task (Narrative)	5	0.30	0.68	0.02	0.82	NA	1.00	0.84
	Read Informational Texts	15	0.16	0.64	0.20	0.98	NA	0.97	0.97
	Read Literary Texts	15	0.27	0.52	0.21	0.98	NA	0.97	0.97
	Research	18	0.31	0.45	0.25	0.99	NA	0.98	0.99
	Revision	15	0.28	0.52	0.20	0.98	NA	0.98	0.98

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TABLE 2.5 (CONTINUED)

Grade	Block Name	mean # Items	Proportion Assigned			Proportion Correctly Classified			
			Below	At/Near	Above	Below	At/Near	Above	Overall
6	Brief Writes	6	0.06	0.92	0.02	**0.82**	**NA**	**1.00**	**0.87**
	Editing	15	0.24	0.57	0.20	**0.97**	**NA**	**0.98**	**0.98**
	Language and Vocabulary	15	0.29	0.54	0.17	**0.97**	**NA**	**0.98**	**0.97**
	Listen/Interpret	15	0.28	0.52	0.21	**0.99**	**NA**	**0.97**	**0.98**
	Performance Task (Argument)	4	0.29	0.69	0.02	**0.79**	**NA**	**1.00**	**0.80**
	Read Informational Texts	16	0.28	0.53	0.19	**0.97**	**NA**	**0.98**	**0.97**
	Read Literary Texts	15	0.25	0.59	0.16	**0.97**	**NA**	**0.96**	**0.96**
	Research	18	0.30	0.46	0.24	**0.99**	**NA**	**0.98**	**0.99**
	Revision	15	0.27	0.57	0.16	**0.98**	**NA**	**0.97**	**0.98**
7	Brief Writes	6	0.28	0.72	0.00	**0.80**	**NA**	**—**	**0.80**
	Editing	14	0.16	0.70	0.15	**0.97**	**NA**	**0.96**	**0.97**
	Language and Vocabulary	15	0.29	0.49	0.23	**0.99**	**NA**	**0.99**	**0.99**
	Listen/Interpret	15	0.28	0.54	0.18	**0.99**	**NA**	**0.96**	**0.98**
	Performance Task (Explanatory)	5	0.24	0.74	0.03	**0.77**	**NA**	**1.00**	**0.80**
	Read Informational Texts	16	0.33	0.46	0.21	**0.99**	**NA**	**0.99**	**0.99**
	Read Literary Texts	16	0.35	0.45	0.20	**0.99**	**NA**	**0.98**	**0.99**
	Research	18	0.23	0.55	0.22	**0.98**	**NA**	**0.97**	**0.97**
	Revision	15	0.27	0.56	0.18	**0.98**	**NA**	**0.99**	**0.98**
8	Brief Writes	6	0.24	0.76	0.00	**0.78**	**NA**	**—**	**0.78**
	Edit/Revise	14	0.32	0.51	0.16	**0.99**	**NA**	**0.96**	**0.98**
	Listen/Interpret	15	0.30	0.53	0.16	**0.97**	**NA**	**0.97**	**0.97**
	Performance Task (Explanatory)	5	0.42	0.58	0.01	**0.73**	**NA**	**1.00**	**0.73**
	Read Informational Texts	16	0.27	0.52	0.22	**0.98**	**NA**	**0.99**	**0.98**
	Read Literary Texts	16	0.35	0.44	0.22	**0.99**	**NA**	**0.98**	**0.99**
	Research	18	0.30	0.48	0.22	**0.99**	**NA**	**0.97**	**0.98**
11	Brief Writes	6	0.38	0.62	0.00	**0.70**	**NA**	**—**	**0.70**
	Editing	15	0.22	0.56	0.22	**0.97**	**NA**	**0.96**	**0.97**
	Language and Vocabulary	15	0.25	0.54	0.21	**0.98**	**NA**	**0.98**	**0.98**
	Listen/Interpret	15	0.27	0.55	0.19	**0.97**	**NA**	**0.97**	**0.97**
	Performance Task (Explanatory)	4	0.17	0.83	0.00	**0.79**	**NA**	**—**	**0.79**
	Read Informational Texts	15	0.28	0.49	0.23	**0.98**	**NA**	**0.98**	**0.98**
	Read Literary Texts	16	0.23	0.53	0.24	**0.99**	**NA**	**0.98**	**0.98**
	Research	18	0.24	0.48	0.28	**0.99**	**NA**	**0.97**	**0.98**
	Revision	15	0.26	0.51	0.23	**0.99**	**NA**	**0.97**	**0.98**

TABLE 2-6 OVERALL LEVEL CLASSIFICATION ACCURACY FOR INTERIM ASSESSMENT BLOCKS, MATHEMATICS

Grade	Block Name	mean # Items	Proportion Assigned			Proportion Correctly Classified			
			Below	At/Near	Above	Below	At/Near	Above	Overall
3	Measurement and Data	15	0.00	0.96	0.04	**NaN**	**NA**	**0.98**	**0.98**
	Number and Operations in Base Ten	14	0.28	0.53	0.19	**0.97**	**NA**	**0.95**	**0.96**
	Number and Operations -- Fractions	14	0.29	0.51	0.20	**0.98**	**NA**	**0.98**	**0.98**
	Operations and Algebraic Thinking	15	0.26	0.54	0.20	**0.98**	**NA**	**0.96**	**0.97**
	Mathematics Performance Task	6	0.00	0.97	0.03	---	**NA**	**1.00**	**1.00**
4	Geometry	11	0.26	0.54	0.20	**0.98**	**NA**	**0.94**	**0.96**
	Measurement and Data	15	0.30	0.48	0.22	**0.99**	**NA**	**0.97**	**0.98**
	Number and Operations in Base Ten	15	0.30	0.48	0.22	**0.99**	**NA**	**0.98**	**0.99**
	Number and Operations -- Fractions	15	0.28	0.51	0.21	**0.99**	**NA**	**0.96**	**0.98**
	Operations and Algebraic Thinking	16	0.18	0.81	0.01	**0.82**	**NA**	**1.00**	**0.84**
	Mathematics Performance Task	6	0.25	0.58	0.17	**0.99**	**NA**	**0.98**	**0.99**
5	Geometry	13	0.27	0.51	0.22	**0.97**	**NA**	**0.96**	**0.97**
	Measurement and Data	14	0.27	0.57	0.16	**0.97**	**NA**	**0.98**	**0.98**
	Number and Operations in Base Ten	15	0.00	0.95	0.06	—	**NA**	**0.98**	**0.98**
	Number and Operations -- Fractions	15	0.23	0.56	0.21	**0.98**	**NA**	**0.98**	**0.98**
	Operations and Algebraic Thinking	15	0.30	0.48	0.22	**0.98**	**NA**	**0.96**	**0.97**
	Mathematics Performance Task	6	0.29	0.50	0.21	**1.00**	**NA**	**0.99**	**0.99**
6	Expressions and Equations	16	0.25	0.58	0.17	**0.98**	**NA**	**0.96**	**0.97**
	Geometry	14	0.25	0.75	0.00	**0.76**	**NA**	—	**0.76**
	The Number System	15	0.25	0.53	0.23	**0.97**	**NA**	**0.97**	**0.97**
	Mathematics Performance Task	6	0.28	0.52	0.21	**0.99**	**NA**	**0.98**	**0.98**
	Ratios and Proportional Relationships	13	0.25	0.57	0.19	**0.98**	**NA**	**0.96**	**0.97**
	Statistics and Probability	13	0.30	0.68	0.02	**0.82**	**NA**	**1.00**	**0.84**

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TABLE 2.6 (CONTINUED)

Grade	Block Name	mean # Items	Proportion Assigned			Proportion Correctly Classified			
			Below	At/Near	Above	Below	At/Near	Above	Overall
7	Expressions and Equations	15	0.28	0.72	0.00	**0.80**	**NA**	**NaN**	**0.80**
	Geometry	13	0.16	0.70	0.15	**0.97**	**NA**	**0.96**	**0.97**
	The Number System	14	0.29	0.49	0.23	**0.99**	**NA**	**0.99**	**0.99**
	Mathematics Performance Task	6	0.28	0.54	0.18	**0.99**	**NA**	**0.96**	**0.98**
	Ratios and Proportional Relationships	13	0.24	0.74	0.03	**0.77**	**NA**	**1.00**	**0.80**
	Statistics and Probability	15	0.33	0.46	0.21	**0.99**	**NA**	**0.99**	**0.99**
8	Expressions & Equations I	14	0.35	0.45	0.20	**0.99**	**NA**	**0.98**	**0.99**
	Expressions & Equations II	13	0.23	0.55	0.22	**0.98**	**NA**	**0.97**	**0.97**
	Functions	15	0.27	0.56	0.18	**0.98**	**NA**	**0.99**	**0.98**
	Geometry	15	0.24	0.76	0.00	**0.78**	**NA**	**NaN**	**0.78**
	Mathematics Performance Task	6	0.32	0.51	0.16	**0.99**	**NA**	**0.96**	**0.98**
11	Algebra and Functions I – Linear Functions, Equations, Inequalities	15	0.30	0.53	0.16	**0.97**	**NA**	**0.97**	**0.97**
	Algebra and Functions II – Quadratic Functions, Equations and Inequalities	15	0.42	0.58	0.01	**0.73**	**NA**	**1.00**	**0.73**
	Geometry and the Right Triangle Trigonometry	15	0.27	0.52	0.22	**0.98**	**NA**	**0.99**	**0.98**
	Mathematics Performance Task	6	0.35	0.44	0.22	**0.99**	**NA**	**0.98**	**0.99**
	Statistics and Probability	12	0.30	0.48	0.22	**0.99**	**NA**	**0.97**	**0.98**

Table 2-7 and Table 2-8 show the accuracy of the Interim Comprehensive Assessments (ICA) for classifying students into achievement levels (L1 to L4) based on students' overall test performance. Each table shows the proportion of simulees assigned to each achievement level as well as the proportion who were correctly classified. For example, a proportion of 0.29, or 29% of the simulated student cases for the grade 3 ELA/Literacy ICA were assigned to achievement level 1 (L1). Of these, a proportion of 0.86, or 86%, were truly at achievement level 1 based on the values of the thetas used for them in the simulation.

TABLE 2-7 OVERALL LEVEL CLASSIFICATION ACCURACY FOR INTERIM COMPREHENSIVE ASSESSMENTS, ELA/LITERACY

Grade	Mean # Items	Proportion Assigned				Proportion Correctly Classified					kappa
		L1	L2	L3	L4	L1	L2	L3	L4	Overall	
3	48	0.29	0.28	0.22	0.21	0.86	0.74	0.65	0.81	0.77	0.90
4	49	0.33	0.23	0.23	0.21	0.86	0.71	0.66	0.83	0.77	0.91
5	48	0.33	0.24	0.26	0.18	0.88	0.75	0.79	0.82	0.81	0.92
6	49	0.31	0.28	0.25	0.16	0.89	0.76	0.79	0.81	0.81	0.92
7	49	0.32	0.25	0.27	0.16	0.89	0.76	0.79	0.79	0.82	0.92
8	50	0.31	0.26	0.29	0.15	0.88	0.77	0.77	0.82	0.81	0.91
11	46	0.25	0.28	0.27	0.21	0.87	0.75	0.74	0.82	0.79	0.91

TABLE 2-8 OVERALL LEVEL CLASSIFICATION ACCURACY FOR INTERIM COMPREHENSIVE ASSESSMENTS, MATHEMATICS

Grade	Mean # Items	% Assigned to Level				Proportion Correctly Classified					kappa
		L1	L2	L3	L4	L1	L2	L3	L4	Overall	
3	37	0.34	0.24	0.24	0.18	0.87	0.70	0.80	0.86	0.81	0.92
4	36	0.31	0.30	0.22	0.17	0.86	0.78	0.74	0.83	0.81	0.91
5	37	0.37	0.29	0.16	0.18	0.89	0.75	0.60	0.85	0.80	0.92
6	36	0.37	0.28	0.19	0.16	0.87	0.77	0.67	0.90	0.81	0.92
7	37	0.35	0.28	0.20	0.18	0.87	0.78	0.73	0.85	0.81	0.92
8	37	0.37	0.27	0.18	0.18	0.85	0.71	0.67	0.82	0.78	0.91
11	38	0.40	0.26	0.20	0.13	0.86	0.65	0.69	0.80	0.76	0.89

Table 2-9 and Table 2-10 show the classification accuracy for ICA claim scores. These tables show the proportion of simulees assigned to each category of achievement with respect to the Level 3 cut score (standard) – below, at/near, or above – and for each of the 'above' and 'below' categories, the proportion of those assigned to that category whose thetas were truly above or below the standard.

TABLE 2-9 CLAIM LEVEL CLASSIFICATION ACCURACY FOR INTERIM COMPREHENSIVE ASSESSMENTS, ELA/LITERACY

Grade	Claim	# of items	Proportion Assigned			Proportion Correctly Classified			
			Below	At/Near	Above	Below	At/Near	Above	Overall
Claim 1									
3	1	11	0.333	0.445	0.222	0.973	NA	0.95	0.964
4	1	9	0.181	0.685	0.134	0.983	NA	0.948	0.968
5	1	12	0.346	0.431	0.223	0.98	NA	0.973	0.977
6	1	9	0.212	0.655	0.133	0.981	NA	0.992	0.986
7	1	12	0.358	0.404	0.238	0.989	NA	0.987	0.988
8	1	12	0.366	0.402	0.232	0.989	NA	0.974	0.983
11	1	7	0.233	0.51	0.257	0.94	NA	0.949	0.945
Claim 2									
3	2	9	0.183	0.655	0.162	0.984	NA	0.969	0.977
4	2	12	0.326	0.437	0.237	0.979	NA	0.949	0.966
5	2	19	0.334	0.406	0.26	0.991	NA	0.977	0.985
6	2	12	0.377	0.411	0.212	0.984	NA	0.972	0.98
7	2	8	0.095	0.704	0.201	0.968	NA	0.955	0.959
8	2	8	0.321	0.457	0.222	0.991	NA	0.955	0.976
11	2	11	0.28	0.492	0.228	0.986	NA	0.978	0.982
Claim 3									
3	3	8	0.027	0.798	0.175	0.852	NA	0.949	0.936
4	3	20	0.354	0.41	0.236	0.992	NA	0.992	0.992
5	3	9	0.231	0.633	0.136	0.991	NA	0.941	0.973
6	3	7	0.118	0.666	0.216	0.949	NA	0.958	0.955
7	3	9	0.227	0.646	0.127	0.974	NA	0.906	0.949
8	3	9	0.255	0.745	0	0.957	NA	NaN	0.957
11	3	19	0.297	0.46	0.243	0.976	NA	0.979	0.978
Claim 4									
3	4	20	0.333	0.429	0.238	0.979	NA	0.975	0.977
4	4	8	0.113	0.677	0.21	0.982	NA	0.962	0.969
5	4	8	0.237	0.522	0.241	0.979	NA	0.95	0.964
6	4	21	0.344	0.443	0.213	0.985	NA	0.972	0.98
7	4	20	0.369	0.374	0.257	0.986	NA	0.973	0.981
8	4	21	0.393	0.346	0.261	0.985	NA	0.985	0.985
11	4	9	0.245	0.583	0.172	0.976	NA	0.994	0.983

TABLE 2-10 CLAIM LEVEL CLASSIFICATION ACCURACY FOR INTERIM COMPREHENSIVE ASSESSMENTS, MATHEMATICS

Grade	Claim	# of items	% Assigned to Level			% Correctly Classified			
			Below	At/Near	Above	Below	At/Near	Above	Overall
Claim 1									
3	1	20	0.413	0.329	0.258	0.995	NA	0.988	0.993
4	1	20	0.458	0.304	0.238	0.998	NA	0.975	0.990
5	1	20	0.46	0.363	0.177	0.996	NA	0.994	0.995
6	1	19	0.47	0.333	0.197	0.998	NA	0.975	0.991
7	1	20	0.438	0.327	0.235	0.986	NA	0.983	0.985
8	1	20	0.472	0.321	0.207	0.992	NA	1.000	0.994
11	1	9	0.333	0.515	0.152	0.991	NA	0.947	0.977
Claim 2 & 4									
3	2	9	0	0.745	0.255	NA	NA	0.984	0.984
4	2	9	0.294	0.492	0.214	0.990	NA	0.963	0.978
5	2	9	0.182	0.638	0.18	1.000	NA	0.978	0.989
6	2	8	0.167	0.668	0.165	0.982	NA	0.976	0.979
7	2	9	0.266	0.508	0.226	0.989	NA	0.973	0.982
8	2	9	0.381	0.451	0.168	1.000	NA	0.982	0.995
11	2	21	0.448	0.385	0.167	0.989	NA	0.988	0.989
Claim 3									
3	3	8	0.184	0.6	0.216	1.000	NA	0.991	0.995
4	3	7	0	0.855	0.145	NA	NA	0.972	0.972
5	3	8	0.392	0.471	0.137	0.992	NA	0.971	0.987
6	3	9	0.074	0.718	0.208	1.000	NA	0.976	0.982
7	3	8	0.298	0.54	0.162	0.987	NA	0.981	0.985
8	3	8	0.285	0.58	0.135	0.975	NA	0.970	0.974
11	3	8	0.247	0.605	0.148	0.996	NA	0.966	0.985

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Chapter 3: Test Fairness

Introduction

The Smarter Balanced Assessment Consortium (Smarter Balanced) has designed the assessment system to provide all eligible students with a fair assessment and equitable opportunity to participate in the Smarter Balanced Assessments. Issues around test fairness apply to the entire assessment system including the summative and interim assessments. Ensuring test fairness is a fundamental part of validity, starting with test design, and is an important feature built into each step of the test development process, such as item writing, test administration, and scoring. The 2014 *Standards for Educational and Psychological Testing* (AERA, APA, & NCME,2014, p. 49) state, "The term fairness has no single technical meaning, and is used in many ways in public discourse." It also suggests that fairness to all individuals in the intended population is an overriding and fundamental validity concern. As indicated in the *Standards* (2014, p. 63), "The central idea of fairness in testing is to identify and remove construct-irrelevant barriers to maximal performance for any examinee."

The Smarter Balanced assessment system is designed to provide a valid, reliable, and fair measure of student achievement based on the Common Core State Standards[2] (CCSS). The validity and fairness of the measures of student achievement are influenced by a multitude of factors; central among them are:

- a clear definition of the construct—the knowledge, skills, and abilities—that are intended to be measured;
- the development of items and tasks that are explicitly designed to assess the construct that is the target of measurement;
- delivery of items and tasks that enable students to demonstrate their achievement of the construct, and
- the capture and scoring of responses to those items and tasks.

Smarter Balanced uses several processes to address reliability, validity, and fairness. The interim assessments use the same content specifications as the summative assessments and are fully accessible. This means that students have access to the same resources on the interim assessments that are available on the summative assessments. The knowledge, skills, and abilities assessed by Smarter Balanced tests and their relationship to the CCSS are described in the *Content specifications for the summative assessment of the common core state standards for English language arts and literacy in history/social studies, science, and technical subjects* (Smarter Balanced, 2017a) and the *Content specifications for the summative assessment of the common core state standards for mathematics* (Smarter Balanced, 2017c). These documents describe the major constructs—identified as "Claims"—within ELA/literacy and mathematics for which evidence of student achievement is gathered and which form the basis for reporting student performance. Each claim is accompanied by a set of assessment targets that provide more detail about the range of content and Depth of Knowledge levels. The targets serve as the building blocks of test blueprints.

Much of the evidence presented in this chapter pertains to fairness to students during the testing process and design elements and procedures that serve to minimize measurement bias. Fairness in item and test design processes and the design of accessibility supports (i.e., universal tools, designated supports and accommodations) in content development are also addressed.

Attention to bias and sensitivity in test development. A According to the *Standards*, bias is "construct underrepresentation or construct-irrelevant components of tests scores that differentially affect the

[2] http://www.corestandards.org/

performance of different groups of test takers and consequently the reliability/precision and validity of interpretations and uses of their test scores." (AERA, APA, & NCME, 2014, p. 216). "Sensitivity" refers to an awareness of the need to avoid explicit bias in assessment. In common usage, reviews of tests for bias and sensitivity help ensure that test items and stimuli are fair for various groups of test takers (AERA, APA, & NCME, 2014, p. 64).

The goal of fairness in assessment is to assure that test materials are as free as possible from unnecessary barriers to the success of diverse groups of students. Smarter Balanced developed *Bias and Sensitivity Guidelines* (ETS, 2012) to help ensure that the assessments are fair for all groups of test takers, despite differences in characteristics including, but not limited to, disability status, ethnic group, gender, regional background, native language, race, religion, sexual orientation, and socioeconomic status. Unnecessary barriers can be reduced by following some fundamental rules:

- measuring only knowledge or skills that are relevant to the intended construct
- not angering, offending, upsetting, or otherwise distracting test takers, and
- treating all groups of people with appropriate respect in test materials.

These rules help ensure that the test content is fair for test takers as well as acceptable to the many stakeholders and constituent groups within Smarter Balanced member organizations. Fairness must be considered in all phases of test development and use. Smarter Balanced strongly relied on the *Bias and Sensitivity Guidelines* in the development and design phases of the Smarter Balanced assessments, including the training of item writers, item writing and review. Smarter Balanced's focus and attention on bias and sensitivity comply with Chapter 3, Standard 3.2 of the *Standards* states that: "Test developers are responsible for developing tests that measure the intended construct and for minimizing the potential for tests being affected by construct-irrelevant characteristics such as linguistic, communicative, cognitive, cultural, physical or other characteristics." (AERA, APA, & NCME., 2014, p. 64).

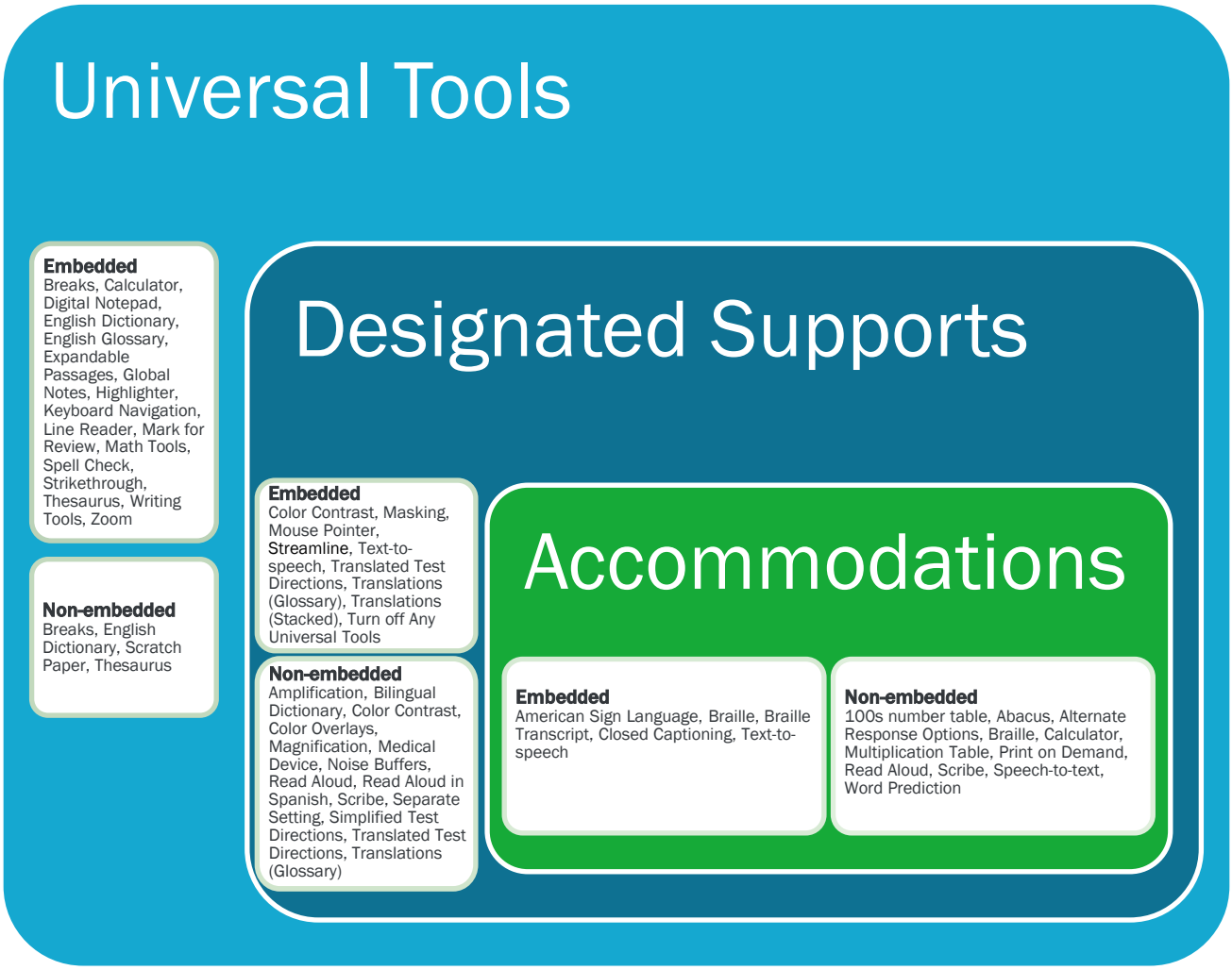
The Smarter Balanced Accessibility and Accommodations Framework

Smarter Balanced has built a framework of accessibility for all students, including English Learners (ELs), students with disabilities, and ELs with disabilities, but not limited to those groups. Three resources—the Smarter Balanced *Item and Task Specifications Bibliography* (2016c), the Smarter Balanced *General Accessibility Guidel*ines (2012), and the Smarter Balanced *Bias and Sensitivity Guidelines* (ETS, 2012)—are used to guide the development of the assessments, items and tasks to ensure that they accurately measure the targeted constructs. Recognizing the diverse characteristics and needs of students who participate in the Smarter Balanced assessments, the states worked together through the Smarter Balanced Test Administration and Student Access Work Group to develop an *Accessibility and Accommodations Fra*mework (Smarter Balanced, 2016b) that guided the Consortium as it worked to reach agreement on the specific universal tools, designated supports, and accommodations available for the assessments. This work also incorporated research and practical lessons learned through Universal Design, accessibility tools, and accommodations (Thompson, Johnstone, & Thurlow, 2002).

In the process of developing its next-generation assessments to measure students' knowledge and skills as they progress toward college and career readiness, Smarter Balanced recognized that the validity of assessment results depends on each student having appropriate universal tools, designated supports, and accommodations when needed, based on the constructs being measured by the assessment. The Smarter Balanced Assessment System uses technology intended to deliver assessments that meet the needs of individual students to help ensure that the test is fair. Online/electronic delivery of the assessments helps ensure that students are administered a test individualized to meet their needs while still measuring the same construct. During the administration of tests, items and tasks are delivered using a variety of accessibility resources and

accommodations that can be administered to students automatically based on their individual profiles. Accessibility resources include but are not limited to foreground and background color flexibility, tactile presentation of content (e.g., braille), and translated presentation of assessment content in signed form and selected spoken languages. The complete list of universal tools, designated supports and accommodations with a description of each and recommendations for use can be found in the *Usability, Accessibility, and Accommodations Guidelines* (Smarter Balanced, 2018a). The conceptual model underlying the *Guidelines* is shown in Figure 3-1.

FIGURE 3-1 CONCEPTUAL MODEL UNDERLYING THE SMARTER BALANCED USABILITY, ACCESSIBILITY, AND ACCOMMODATIONS GUIDELINES.



Smarter Balanced adopted a common set of universal tools, designated supports and accommodations. As a starting point, Smarter Balanced surveyed all members to determine their past practices. From these data, Smarter Balanced worked with members and used a deliberative analysis strategy as described in *Accommodations for English Language Learners and Students with Disabilities: A Research-Based Decision Algorithm* (Abedi & Ewers, 2013) to determine which accessibility resources should be made available during the assessment and whether access to these resources should be moderated by an adult. As a result, some accessibility resources that states traditionally had identified as accommodations were instead embedded in the test or

otherwise incorporated into the Smarter Balanced assessments as universal tools or Designated Supports. Other resources were not incorporated into the assessment because access to these resources were not grounded in research or were determined to interfere with the construct measured. The final list of accessibility resources and the recommended use of the resources can be found in the *Usability, Accessibility, and Accommodations Guidelines* (2018).

A fundamental goal was to design an assessment that is accessible for all students, regardless of English language proficiency, disability, or other individual circumstances. The three components (Universal tools, designed supports, and accommodations) of the *Accessibility and Accommodations Framework* are designed to meet that need. The intent was to:

- Design and develop items and tasks to ensure that all students have access to the items and tasks designed to measure the targeted constructs. In addition, deliver items, tasks, and the collection of student responses in a way that maximizes validity for each student.
- Adopt the conceptual model embodied in the Accessibility and Accommodations Framework that describes accessibility resources of digitally delivered items/tasks and acknowledges the need for some adult-monitored accommodations. The model also characterizes accessibility resources as a continuum from those available to all students ranging to ones that are implemented under adult supervision available only to those students with a documented need.
- Implement the use of an individualized and systematic needs profile for students, or Individual Student Assessment Accessibility Profile (ISAAP), that promotes the provision of appropriate access and tools for each student. Smarter created an ISAAP process that helps education teams systematically select the most appropriate accessibility resources for each student and the ISAAP tool, which helps teams note the accessibility resources chosen.

The conceptual framework that serves as the basis underlying the *Usability, Accessibility, and Accommodations Guidelines* is shown in Figure 3.1. This figure portrays several aspects of the Smarter Balanced assessment resources—universal tools (available for all students), designated supports (available when indicated by an adult or team), and accommodations as documented in an Individualized Education Program (IEP) or 504 plan. It also displays the additive and sequentially inclusive nature of these three aspects. Universal tools are available to all students, including those receiving designated supports and those receiving accommodations. Designated supports are available only to students who have been identified as needing these resources (as well as those students for whom the need is documented). Accommodations are available only to those students with documentation of the need through a formal plan (e.g., IEP, 504). Those students also may access designated supports and universal tools.

A universal tool or a designated support may also be an accommodation, depending on the content target and grade. This approach is consistent with the emphasis that Smarter Balanced has placed on the validity of assessment results coupled with access. Universal tools, designated supports, and accommodations are all intended to yield valid scores. Also shown in Figure 3.1 are the universal tools, designated supports, and accommodations for each category of accessibility resources. Accessibility resources may be embedded or non-embedded; the distinction is based on how the resource is provided (either within digitally delivered components of the test or outside of the test delivery system).

The specific universal tools, designated supports, and accommodations approved by Smarter Balanced may change in the future if additional tools, supports or accommodations are identified for the assessment based on member experience and research findings. The Consortium has established a standing committee, including representatives from Governing members that review suggested additional universal tools, designated supports, and accommodations to determine if

changes are warranted. Proposed changes to the list of universal tools, designated supports, and accommodations are brought to Governing members for review, input, and vote for approval.

Meeting the Needs of Traditionally Underrepresented Populations.

In the development of Smarter Balanced assessments, a policy decision was to make accessibility resources available to all students based on need rather than eligibility status or student subgroup categorical designation. This decision reflects a belief among Consortium states that unnecessarily restricting access to accessibility resources threatens the validity of the assessment results and places students under undue stress and frustration. Additionally, accommodations are available for students who qualify for them. The Consortium utilizes a needs-based approach to providing accessibility resources. A description as to how this benefits ELs, students with disabilities, and ELs with disabilities is presented here.

How the Framework Meets Needs of Students Who Are ELs.

Students who are ELs have needs that are different from students with disabilities, including language-related disabilities. The needs of ELs are not the result of a language-related disability, but instead are specific to the student's current level of English language proficiency. The needs of ELs are diverse and are influenced by the interaction of several factors, including their current level of English language proficiency, their prior exposure to academic content and language in their native language, the languages to which they are exposed outside of school, the length of time they have participated in the U.S. education system, and the language(s) in which academic content is presented in the classroom. Given the unique background and needs of each student, the conceptual framework is designed to focus on students as individuals and to provide several accessibility resources that can be combined in a variety of ways. Some of these digital tools, such as using a highlighter to highlight key information and an audio presentation of test navigation features, are available to all students, including those at various stages of English language development. Other tools, such as the audio presentation of items and glossary definitions in English, may also be assigned to any student, including those at various stages of English language development. Still other tools, such as embedded glossaries that present translations of construct irrelevant terms, are intended for those students whose prior language experiences would allow them to benefit from translations into another language. Collectively, the conceptual framework for usability, accessibility, and accommodations embraces a variety of accessibility resources that have been designed to meet the needs of students at various stages in their English language development.

How the Framework Meets Needs of Students with Disabilities.

Federal law ((Individuals with Disabilities Education Act, 2004) requires that students with disabilities who have a documented need receive accommodations that address those needs, and that they participate in assessments. The intent of the law is to ensure that all students have appropriate access to instructional materials and are held to the same high standards. When students are assessed, the law ensures that students receive appropriate accommodations during testing so they can appropriately demonstrate what they know and can do so that their achievement is measured accurately.

The *Accessibility and Accommodations Framework* (Smarter Balanced, 2016b) addresses the needs of students with disabilities in three ways. First, it provides for the use of digital test items that are purposefully designed to contain multiple forms of the item, each developed to address a specific access need. By allowing the delivery of a given item to be tailored based on each student's accommodation, the Framework fulfills the intent of federal accommodation legislation. Embedding

universal accessibility digital tools, however, addresses only a portion of the access needs required by many students with disabilities. Second, by embedding accessibility resources in the digital test delivery system, additional access needs are met. This approach fulfills the intent of the law for many, but not all, students with disabilities, by allowing the accessibility resources to be activated for students based on their needs. Third, by allowing for a wide variety of digital and locally provided accommodations (including physical arrangements), the Framework addresses a spectrum of accessibility resources appropriate for mathematics and ELA/literacy assessment. Collectively, the Framework adheres to federal regulations by allowing a combination of universal design principles, universal tools, designated supports and accommodations to be embedded in a digital delivery system and assigned and provided based on individual student needs. Therefore, a student with a disability benefits from the system, because they may be eligible to have access to resources from any of the 3 categories as necessary to create an assessment tailored to their individual need.

The Individual Student Assessment Accessibility Profile (ISAAP).

Typical practice frequently required schools and educators to document, a priori, the need for specific student accommodations and then to document the use of those accommodations after the assessment. For example, most programs require schools to document a student's need for a large-print version of a test for delivery to the school. Following the test administration, the school documented (often by bubbling in information on an answer sheet) which of the accommodations, if any, a given student received, whether the student actually used the large-print form, and whether any other accommodations were provided.

Universal tools are available by default in the Smarter Balanced test delivery system. These tools can be deactivated if they create an unnecessary distraction for the student. Embedded Designated Supports and Accommodations must be enabled by an informed educator or group of educators, with the student when appropriate. To facilitate the decision making process around individual student accessibility needs, Smarter Balanced has established an individual student assessment accessibility profile (ISAAP). The ISAAP Tool is designed to facilitate selection of the universal tools, designated supports and accommodations that match student access needs for the Smarter Balanced assessments, as supported by the *Smarter Balanced Usability, Accessibility, and Accommodations Guidelines* (Smarter Balanced, 2018a). Smarter Balanced recommends that the ISAAP Tool[3] be used in conjunction with the *Smarter Balanced Usability, Accessibility and Accommodations Guidelines* and state regulations and policies related to assessment accessibility as a part of the ISAAP process. For students requiring one or more accessibility resources, schools are able to document this need prior to test administration. Furthermore, the ISAAP can include information about universal tools that may need to be eliminated for a given student. By documenting needs prior to test administration, a digital delivery system is able to activate the specified options when the student logs in to an assessment. In this way, the profile permits school-level personnel to focus on each individual student, documenting the accessibility resources required for valid assessment of that student in a way that is efficient to manage.

The conceptual framework shown in Figure 3.1 provides a structure that assists in identifying which accessibility resources should be made available for each student. In addition, the conceptual framework is designed to differentiate between universal tools available to all students and accessibility resources that must be assigned before the administration of the assessment. Consistent with recommendations from Shafer and Rivera (2011), Thurlow, Quenemoen, and Lazarus (2011), Fedorchak (2012), and Russell (2011), Smarter Balanced is encouraging school-

[3] http://52.11.155.96/static/isaap/index.html

level personnel to use a team approach to make decisions concerning each student's ISAAP. Gaining input from individuals with multiple perspectives, including the student, likely results in appropriate decisions about the assignment of accessibility resources. Consistent with these recommendations is the avoidance of selecting too many accessibility resources for a student. The use of too many unneeded accessibility resources can decrease student performance.

Usability, Accessibility, and Accommodations Guidelines: Intended Audience and Recommended Applications.

Smarter Balanced (2018a) developed the *Usability, Accessibility, and Accommodations Guidelines* (UAAG) for its members to guide the selection and administration of universal tools, designated supports, and accommodations. All ICAs and IABs are fully accessible and offer all accessibility resources as appropriate by grade and content area including ASL, Braille, and Spanish. It is intended for school-level personnel and decision-making teams, particularly Individualized Education Program (IEP) teams, as they prepare for and implement the Smarter Balanced summative and interim assessments. The UAAG provides information for classroom teachers, English development educators, special education teachers, and related services personnel in selecting and administering universal tools, designated supports, and accommodations for those students who need them. The UAAG is also intended for assessment staff and administrators who oversee the decisions that are made in instruction and assessment. It emphasizes an individualized approach to the implementation of assessment practices for those students who have diverse needs and participate in large-scale assessments. This document focuses on universal tools, designated supports, and accommodations for the Smarter Balanced summative and interim assessments in ELA/literacy and mathematics. At the same time, it supports important instructional decisions about accessibility for students. It recognizes the critical connection between accessibility in instruction and accessibility during assessment. The UAAG is also incorporated into the Smarter Balanced Test Administration Manuals (Smarter Balanced, 2017a; see also Chapter 5).

DIF Analyses and Flagging Criteria

As part of the validity evidence from internal structure, differential item functioning (DIF) analyses are conducted on items using data from field testing and embedded field testing in operational assessments. Table 3-1 shows the demographic groups that are used in Smarter Balanced DIF analyses. In any given analysis, there is one focal group (e.g., females) and one reference group (e.g., males). The focal group is typically the minority or the group considered more likely to be affected by item bias. The analysis measures the differential performance of the reference and focal groups on each item within achievement strata. That is, performance of the focal group on the item is compared to performance of the reference group only among focal and reference students who have the same overall scale score.

TABLE 3-1 DEFINITION OF FOCAL AND REFERENCE GROUPS

Group Type	Focal Groups	Reference Groups
Gender	Female	Male
Ethnicity	African American	White
	Asian/Pacific Islander	
	Native American/Alaska Native	
	Hispanic	
Special Populations	Limited English Proficient (LEP)	English Proficient
	Individualized Education Program (IEP)	No IEP
	Title 1	Not Title 1

Items are classified into three DIF categories of "A," "B," or "C" according to the criteria described in Table 3-2 and Table 3-3. The statistical procedures and flagging criteria for one-point items (Table 3-2) differ from those for items worth more than one point (Table 3-3). For details on the method of computing DIF statistics and criteria for flagging items by their DIF, please see the summative technical report for the 2016-2017 assessment (Smarter Balanced, 2018b) or any previous operational assessment (Smarter Balanced, 2014, 2016a). DIF Category A items contain negligible DIF, Category B items exhibit slight or moderate DIF, and Category C items have moderate to large values of DIF. Positive values mean that the focal group performs better on the item than the reference group. Negative values mean the reference group does better on the item than the focal group. DIF analyses may not be conducted, or may not be capable of detecting DIF, if the sample size for either the reference group or the focal group is too small. Sample size requirements were 100 for each group (focal and reference) and 400 in total.

TABLE 3-2 DIF FLAGGING CRITERIA FOR 1-POINT ITEMS

DIF Category	Definition
A (negligible)	Absolute value of the MH D-DIF is not significantly different from zero, or is less than one.
B (slight to moderate)	Absolute value of the MH D-DIF is significantly different from zero but not from one, and is at least one; or Absolute value of the MH D-DIF is significantly different from one, but less than 1.5. Positive values are classified as "B+" and negative values as "B-"
C (moderate to large)	Absolute value of the MH D-DIF is significantly different from 1, and is at least 1.5; and Absolute value of the MH D-DIF is larger than 1.96 times the standard error of MH D-DIF. Positive values are classified as "C+" and negative values as "C-"

TABLE 3-3 DIF FLAGGING CRITERIA FOR ITEMS WORTH MORE THAN 1-POINT

DIF Category	Definition
A (negligible)	Mantel p-value >0.05 or chi-square $\lvert SMD/SD \rvert \leq 0.17$
B (slight to moderate)	Mantel chi-square p-value <0.05 and $\lvert SMD/SD \rvert > 0.17$, but ≤ 0.25
C (moderate to large)	Mantel chi-square p-value <0.05 and $\lvert SMD/SD \rvert > 0.25$

If an item is more difficult for one demographic group than another, even after taking overall achievement into account, the item may not necessarily be unfair. For example, if an item were intended to measure the ability to comprehend a reading passage in English, score differences between groups based on real differences in comprehension of English would be valid and, therefore, fair. As Cole and Zieky (2001, p. 375) noted, "If the members of the measurement community currently agree on any aspect of fairness, it is that score differences alone are not proof of bias." Fairness does not require that all groups have the same average item score. Fairness requires assuring that differences in response patterns to be valid. Evaluations of validity include examination of differences in responses for groups of students matched on overall ability. An item would be unfair if the source of the difficulty were not a valid aspect of the item. For example, an item would be unfair if members of a group of test takers were distracted by an aspect of the item that they found highly offensive. If the difference in difficulty reflected real and relevant differences in the group's level of mastery of the tested CCSS, the item should be considered fair.

Subsequent reviews by content experts and bias/sensitivity committees are required to determine the source and meaning of DIF for items that are flagged. If the item is differentially more difficult for an identifiable subgroup when conditioned on ability, it may be measuring something different from the intended construct. However, it is important to recognize that DIF-flagged items might be related

to actual differences in relevant knowledge or statistical Type I error. Final decisions about the resolution of item DIF are made by a multi-disciplinary panel of content experts.

DIF Analysis Results for Interim Assessment Items

A relatively small number of items on the interim assessments showed performance differences between student groups as indicated by C-DIF flagging criteria. Table 3-4 and table 3-5 show the number of items flagged for all categories of DIF for ELA/literacy and mathematics in grades 3 to 8 and 11 for the ICAs. Table 3-6 and Table 3-7 show the number of items flagged for all categories of DIF for ELA/literacy and mathematics in grades 3 to 8 and 11 for the IABs. Category "NA" DIF represents items for which sample sizes did not meet the minimum requirement for estimating DIF.

All items on the interim assessments had undergone and passed bias and sensitivity reviews before they were even field tested. After DIF statistics were obtained for these items, qualified subject matter and bias sensitivity experts reviewed items classified into category C of DIF. Only items approved by a multi-disciplinary panel of content and sensitivity experts are eligible to be used on Smarter Balanced summative or interim assessments.

TABLE 3-4 NUMBER OF DIF ITEMS IN ITEM POOLS FLAGGED BY CATEGORY – ELA/LITERACY ICAS.

Grade	DIF Category	Focal group/Referent Group							
		Female/ Male	Asian/ White	Black/ White	Hispanic/ White	Native American/ White	IEP/Non IEP	LEP/Non LEP	Title1/ Non Title1
3	N/A	0	3	1	0	15	0	0	0
3	A	46	41	46	47	32	47	47	48
3	B-	0	1	1	1	1	0	1	0
3	B+	2	3	0	0	0	1	0	0
3	C-	0	0	0	0	0	0	0	0
3	C+	0	0	0	0	0	0	0	0
4	N/A	0	0	0	0	13	0	0	0
4	A	48	48	49	49	34	48	49	49
4	B-	0	1	0	0	2	1	0	0
4	B+	1	0	0	0	0	0	0	0
4	C-	0	0	0	0	0	0	0	0
4	C+	0	0	0	0	0	0	0	0
5	N/A	0	1	0	0	18	0	0	0
5	A	47	45	46	45	27	48	47	48
5	B-	0	2	2	2	2	0	1	0
5	B+	1	0	0	1	1	0	0	0
5	C-	0	0	0	0	0	0	0	0
5	C+	0	0	0	0	0	0	0	0
6	N/A	0	3	1	0	18	0	2	0
6	A	46	45	48	49	30	48	46	49
6	B-	0	0	0	0	1	1	0	0
6	B+	2	1	0	0	0	0	1	0
6	C-	0	0	0	0	0	0	0	0
6	C+	1	0	0	0	0	0	0	0
7	N/A	0	1	1	0	14	1	1	0
7	A	46	46	45	49	35	48	48	49
7	B-	1	0	0	0	0	0	0	0
7	B+	2	2	3	0	0	0	0	0
7	C-	0	0	0	0	0	0	0	0
7	C+	0	0	0	0	0	0	0	0
8	N/A	0	0	0	0	11	0	0	0
8	A	47	47	49	49	37	50	49	50
8	B-	0	1	0	1	1	0	0	0
8	B+	2	2	1	0	1	0	0	0
8	C-	0	0	0	0	0	0	1	0
8	C+	1	0	0	0	0	0	0	0
11	N/A	0	0	0	0	34	0	1	0
11	A	44	44	45	43	12	43	44	46
11	B-	1	1	0	2	0	2	0	0
11	B+	1	1	1	1	0	1	0	0
11	C-	0	0	0	0	0	0	1	0
11	C+	0	0	0	0	0	0	0	0

TABLE 3-5 NUMBER OF DIF ITEMS IN ITEM POOLS FLAGGED BY CATEGORY – MATHEMATICS ICAS.

Grade	DIF Category	Focal group/Referent Group							
		Female/ Male	Asian/ White	Black/ White	Hispanic/ White	Native American /White	IEP/Non IEP	LEP/Non LEP	Title1/ Non Title1
3	N/A	0	0	0	0	30	0	0	0
3	A	37	34	34	35	7	37	36	37
3	B-	0	0	1	0	0	0	0	0
3	B+	0	3	2	1	0	0	0	0
3	C-	0	0	0	1	0	0	1	0
3	C+	0	0	0	0	0	0	0	0
4	N/A	0	1	0	0	6	0	0	0
4	A	35	33	35	36	28	36	36	36
4	B-	0	1	0	0	2	0	0	0
4	B+	1	1	1	0	0	0	0	0
4	C-	0	0	0	0	0	0	0	0
4	C+	0	0	0	0	0	0	0	0
5	N/A	0	0	0	0	10	0	0	0
5	A	37	32	36	37	27	37	36	37
5	B-	0	1	0	0	0	0	1	0
5	B+	0	4	1	0	0	0	0	0
5	C-	0	0	0	0	0	0	0	0
5	C+	0	0	0	0	0	0	0	0
6	N/A	0	0	0	0	35	0	0	0
6	A	36	36	36	36	1	36	36	36
6	B-	0	0	0	0	0	0	0	0
6	B+	0	0	0	0	0	0	0	0
6	C-	0	0	0	0	0	0	0	0
6	C+	0	0	0	0	0	0	0	0
7	N/A	0	0	0	0	37	0	0	0
7	A	35	35	37	36	0	34	35	37
7	B-	1	0	0	0	0	0	2	0
7	B+	1	2	0	1	0	3	0	0
7	C-	0	0	0	0	0	0	0	0
7	C+	0	0	0	0	0	0	0	0
8	N/A	0	2	0	0	36	0	0	0
8	A	37	29	36	35	1	36	36	37
8	B-	0	3	0	2	0	0	0	0
8	B+	0	2	1	0	0	1	1	0
8	C-	0	1	0	0	0	0	0	0
8	C+	0	0	0	0	0	0	0	0
11	N/A	0	3	1	0	38	2	3	0
11	A	36	32	35	38	0	34	34	38
11	B-	1	1	1	0	0	0	1	0
11	B+	1	1	1	0	0	2	0	0
11	C-	0	0	0	0	0	0	0	0
11	C+	0	1	0	0	0	0	0	0

TABLE 3-6 NUMBER OF DIF ITEMS IN ITEM POOLS FLAGGED BY CATEGORY – ELA/LITERACY IABS.

Grade	DIF Category	Focal group/Referent Group							
		Female/ Male	Asian/ White	Black/ White	Hispanic/ White	Native American /White	IEP/Non IEP	LEP/Non LEP	Title1/ Non Title1
3	N/A	0	23	15	0	70	14	8	0
3	A	115	90	101	114	46	100	107	120
3	B-	1	3	2	4	4	2	4	0
3	B+	4	4	2	0	0	4	1	0
3	C-	0	0	0	2	0	0	0	0
3	C+	0	0	0	0	0	0	0	0
4	N/A	0	19	5	0	60	6	3	0
4	A	115	95	111	116	56	110	113	118
4	B-	0	1	1	1	2	2	2	0
4	B+	2	2	1	1	0	0	0	0
4	C-	0	0	0	0	0	0	0	0
4	C+	1	1	0	0	0	0	0	0
5	N/A	0	24	8	0	68	7	8	0
5	A	109	88	106	114	46	110	106	116
5	B-	4	3	3	3	2	0	3	1
5	B+	4	2	0	0	1	0	0	0
5	C-	0	0	0	0	0	0	0	0
5	C+	0	0	0	0	0	0	0	0
6	N/A	0	18	7	0	72	7	10	0
6	A	115	96	110	116	47	108	107	118
6	B-	1	2	0	2	0	2	1	1
6	B+	3	2	2	1	0	2	1	0
6	C-	0	1	0	0	0	0	0	0
6	C+	0	0	0	0	0	0	0	0
7	N/A	0	14	7	2	67	7	9	0
7	A	113	99	110	116	53	112	107	120
7	B-	3	3	0	1	0	0	4	0
7	B+	4	4	2	1	0	1	0	0
7	C-	0	0	1	0	0	0	0	0
7	C+	0	0	0	0	0	0	0	0
8	N/A	0	9	4	0	34	5	8	0
8	A	85	77	85	85	55	84	78	90
8	B-	1	1	0	4	1	1	2	0
8	B+	4	1	1	1	0	0	1	0
8	C-	0	2	0	0	0	0	1	0
8	C+	0	0	0	0	0	0	0	0
11	N/A	0	20	18	0	98	22	40	0
11	A	114	90	98	111	21	92	76	119
11	B-	4	4	1	7	0	4	2	0
11	B+	1	4	2	1	0	1	0	0
11	C-	0	0	0	0	0	0	1	0
11	C+	0	1	0	0	0	0	0	0

TABLE 3-7 NUMBER OF DIF ITEMS IN ITEM POOLS FLAGGED BY CATEGORY – MATHEMATICS IABS.

Grade	DIF Category	Focal group/Referent Group							
		Female/ Male	Asian/ White	Black / White	Hispanic/ White	Native American /White	IEP/Non IEP	LEP/Non LEP	Title1/ Non Title1
3	N/A	0	4	0	0	55	0	0	0
3	A	63	56	60	61	9	64	61	63
3	B-	1	0	1	2	0	0	1	1
3	B+	0	4	2	1	0	0	2	0
3	C-	0	0	1	0	0	0	0	0
3	C+	0	0	0	0	0	0	0	0
4	N/A	0	3	1	0	39	0	0	0
4	A	77	68	75	77	37	77	77	78
4	B-	0	2	0	0	0	1	0	0
4	B+	1	4	2	1	2	0	1	0
4	C-	0	0	0	0	0	0	0	0
4	C+	0	1	0	0	0	0	0	0
5	N/A	0	2	6	0	41	0	1	0
5	A	77	68	69	78	35	77	74	78
5	B-	1	1	1	0	0	1	2	0
5	B+	0	5	2	0	2	0	1	0
5	C-	0	0	0	0	0	0	0	0
5	C+	0	2	0	0	0	0	0	0
6	N/A	0	2	5	0	75	1	0	0
6	A	76	71	69	75	2	75	75	76
6	B-	1	0	2	1	0	1	2	1
6	B+	0	2	1	1	0	0	0	0
6	C-	0	1	0	0	0	0	0	0
6	C+	0	1	0	0	0	0	0	0
7	N/A	0	6	6	0	71	3	4	0
7	A	72	62	67	75	5	69	70	76
7	B-	1	2	1	0	0	0	2	0
7	B+	2	5	2	1	0	4	0	0
7	C-	1	0	0	0	0	0	0	0
7	C+	0	1	0	0	0	0	0	0
8	N/A	0	9	8	0	62	2	5	0
8	A	61	49	54	62	1	58	56	62
8	B-	2	3	0	1	0	2	2	0
8	B+	0	1	1	0	0	1	0	0
8	C-	0	1	0	0	0	0	0	1
8	C+	0	0	0	0	0	0	0	0
11	N/A	0	18	17	0	63	23	25	0
11	A	57	40	45	60	0	38	37	63
11	B-	3	1	0	3	0	2	1	0
11	B+	3	4	1	0	0	0	0	0
11	C-	0	0	0	0	0	0	0	0
11	C+	0	0	0	0	0	0	0	0

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Chapter 4: Test Design

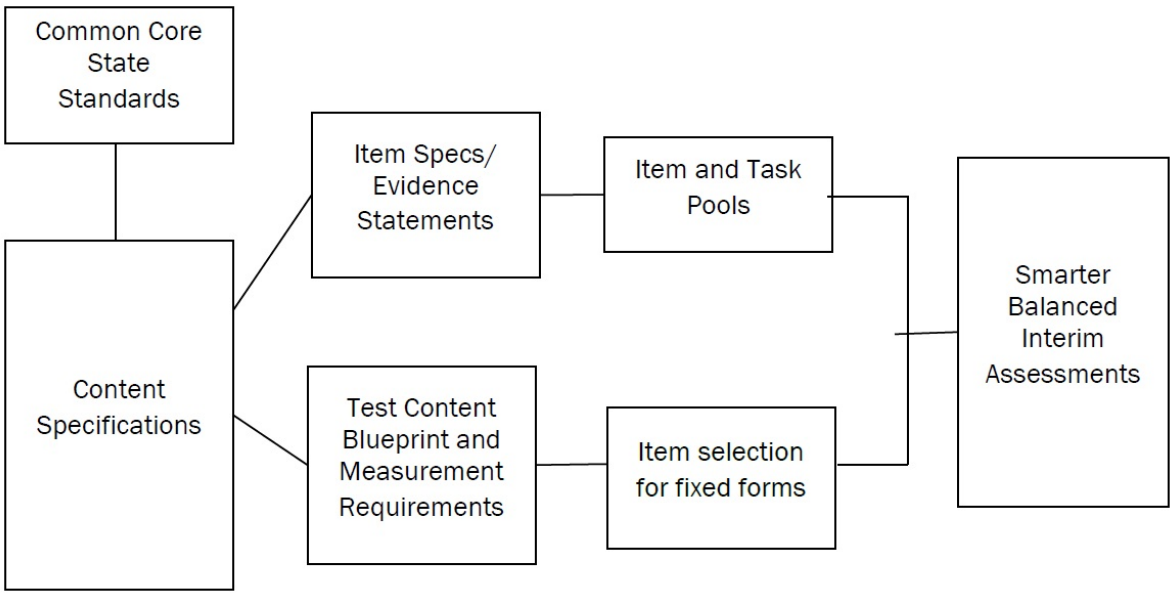
Introduction

The intent of this chapter is to show how the assessment design supports the purposes of Smarter Balanced interim assessments. Test design entails developing a test philosophy (i.e., Theory of Action), identifying test purposes, and determining the targeted examinee populations, test specifications, item pool design, and other features such as test delivery (Schmeiser & Welch, 2006). The Smarter Balanced Theory of Action, test purposes, and the targeted examinee population were outlined in the introduction of this report and in Chapter 1. The following section provides information about how content specifications, item specifications, and item pool design were established for the interim assessments

Content Structure

Figure 4-1 briefly encapsulates the Smarter Balanced interim test design process. An early goal in the development of Smarter Balanced assessments was to align the assessment with the expectations of content, rigor, and performance that comprise the Common Core State Standards (CCSS). Because the CCSS were not specifically developed for assessment, they contain extensive rationale and information concerning instruction. Therefore, adopting previous practices used by many state programs, Smarter Balanced content experts produced Content Specifications in ELA/literacy and mathematics, distilling assessment-focused elements from the CCSS. The Smarter Balanced *Content Specifications for the* Interim Comprehensive Assessment (ICA) and the Interim Assessment Blocks (IABs) are the same as those for the summative assessments and can be found in *Summative Assessment of the CCSS for English Language Arts/Literacy* (Smarter Balanced, 2017g) and *Content Specifications for the Summative Assessment of the CCSS for Mathematics* (Smarter Balanced, 2017h).

FIGURE 4-1 COMPONENTS OF SMARTER BALANCED TEST DESIGN



Item specifications are then based on Content Specifications. Each item is aligned to a specific claim and target and to a Common Core standard.

Within each of the two subject areas (ELA/literacy and mathematics) in grades 3 to 8 and high school, there are four broad claims. Within each claim, there are a number of assessment targets. The claims in ELA/literacy and mathematics are given in Table 4-1.

TABLE 4-1 CLAIMS FOR ELA/LITERACY AND MATHEMATICS

Claim	ELA/Literacy	Mathematics
1	Reading	Concepts and Procedures
2	Writing	Problem Solving
3	Speaking/Listening	Communicating Reasoning
4	Research	Modeling and Data Analysis

Currently, only the listening part of ELA/literacy Claim 3 is assessed. For the ICA in mathematics, Claims 2 and 4 are reported together which results in three reporting categories for mathematics. For the IABs, the claim/target structure is used in test specification, and results are reported for the overall IAB.

Because of the breadth in coverage of the individual claims, targets and target clusters within each claim, evidence statements define more specific performance expectations. The relationship between targets and Common Core State Standards elements is made explicit in the Smarter Balanced content specifications (Smarter Balanced, 2017g, h). The claim/target hierarchy is the basis for summative and ICA test structure. IABs are based on target clusters or content domains that correspond to skill clusters commonly taught as a group.

Item and Task Development

All items and tasks in the interim assessments were drawn from the same pool of items that are used for the summative assessments. Please refer to the sections on item and task development and field testing in Chapter 4 of the 2016-2017 Summative Technical Report (Smarter Balanced, 2018) for details.

Test Blueprints

Test specifications and blueprints define the knowledge, skills, and abilities intended to be measured on each student's test event. A blueprint also specifies how skills are sampled from a set of content standards (i.e., the CCSS). Other important factors such as Depth of Knowledge (DOK) are also specified. Specifically, a test blueprint is a formal document that guides the development and assembly of an assessment by explicating the following types of essential information:

- content (claims and assessment targets) that are included for each assessed subject and grade, across various levels of the system (student, classroom, school, district, state);
- the relative emphasis of content standards generally indicated as the number of items or percentage of points per claim and assessment target;
- item types used or required, which communicate to item developers how to measure each claim and assessment target, and to teachers and students about learning expectations; and

- Depth of Knowledge (DOK), indicating the complexity of item types for each claim and assessment target.

The following sections provide more details about the interim test blueprints.

Performance Task (PT) and non-Performance Task (non-PT) Components

Each ICA and some IABs contain performance tasks. Performance tasks measure a student's ability to integrate knowledge and skills across multiple standards. Performance tasks measure capacities such as essay writing, research skills, and complex analysis, which are not as easy to assess with individual, discrete items. Each ELA/literacy performance task has a set of related stimuli presented with two or three research items and an essay. Each Mathematics performance task has 4 to 6 items relating to a central problem or stimulus.

The ICA for each subject consists of two parts: a performance task (PT) part, and a non-performance task (non-PT) part. Both parts are online. The non-PT section in an ICA is the counterpart of the computer adaptive section in the summative assessment. As with the summative assessment, no order is imposed on ICA components; either the non-PT or PT portion can be administered to students first.

Performance tasks on IABs are usually stand-alone tasks with 4-6 items. They are given separately from non-PT IABs and are provided primarily to provide practice for students and professional development for teachers in hand-scoring and in understanding task demands.

Interim Comprehensive Assessments (ICAs)

The ICA blueprints are very similar to the summative blueprints with exceptions generally due to the fact that ICAs are fixed forms, while the summative assessments are computer-adaptive. Typically, blueprints for computer adaptive tests specify a range, rather than an exact number of items, or points, that must be delivered for each area of test content. Blueprints for fixed forms can specify an exact number. Summative and ICA blueprints for 2016-2017 are available online (Smarter Balanced, 2017a, b, c, d).

For each designated grade range (3 to 5, 6 to 8, and high school), the blueprints document the claim score\reporting category, content category, stimuli used, number of items by non-PT or PT, and the total number of items by claim. Details are given separately for each grade and include claim, assessment target, DOK, assessment type (non-PT/PT), and the total number of items. Assessment targets are nested within claims and represent a more detailed specification of content. Note that in addition to the nested hierarchical structure, each blueprint also specifies a number of rules applied at global or claim levels. Most of these specifications are in the footnotes, which constitute important parts of the test designs.

Due to their extensive volume, a complete set of ICA blueprints is not included in this technical report, but is available online (Smarter Balanced, 2017c, d). An example of a mathematics ICA blueprint is given in Figure 4-2. The ICA in this example is the Grade 6 mathematics ICA. The blueprint states the required number of items by target or group of targets within claim and classifies the item requirements by PT or non-PT segment of the test. DOK requirements are also stated in terms of DOK levels that can be met usually by a combination of PT and non-PT items. The total number of required items per claim is given in the right-most column of the table.

FIGURE 4-2 BLUEPRINT FOR GRADE 6 MATHEMATICS ICA SHOWING DETAILED CONTENT STRUCTURE (ASSESSMENT TARGETS)

Mathematics Grade 6						
Claim	Content Category	Assessment Targets	DOK*	Items		Total Items
				NON PT	PT	
1. Concepts and Procedures	Priority Cluster	E. Apply and extend previous understandings of arithmetic to algebraic expressions.	1	6	0	19
		F. Reason about and solve one-variable equations and inequalities.	1, 2			
		A. Understand ratio concepts and use ratio reasoning to solve problems.	1, 2	4		
		G. Represent and analyze quantitative relationships between dependent and independent variables.	2	2		
		B. Apply and extend previous understandings of multiplication and division to divide fractions by fractions.	1, 2			
		D. Apply and extend previous understandings of numbers to the system of rational numbers.	1, 2	2		
	Supporting Cluster	C. Compute fluently with multi-digit numbers and find common factors and multiples.	1, 2	5		
		H. Solve real-world and mathematical problems involving area, surface area, and volume.	1, 2			
		I. Develop understanding of statistical variability.	2			
		J. Summarize and describe distributions.	1, 2			

*DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.

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FIGURE 4.2 (CONTINUED)

Mathematics Grade 6						
Claim	Content Category	Assessment Targets	DOK	Items		Total Items
				NON PT	PT	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving (drawn across content domains)	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2,3	3	2	9
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3	1		
	Modeling and Data Analysis (drawn across content domains)	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context or a situation.	2, 3	0	2	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvement to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4	0		
		C. State logical assumptions being used. F. Identify understanding of statistical variability.	1, 2, 3	1		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4	0		
3. Communicating Reasoning	Communicating Reasoning (drawn across content domains)	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2,3	2	2	8
		B. Construct, autonomously, chains or reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and-if there is a flaw in the argument-explain what it is.	2, 3, 4	2		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3	2		

- DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.

Interim Assessment Blocks (IABs)

Interim Assessment Blocks are designed by teams of content experts to reflect groups of skills most likely to be addressed in instructional units. These tests are short and contain a focused set of skills. They provide an indicator of whether a student is clearly above or below standard, or whether information is not sufficient to make a judgement with regard to meeting the standard.

Blueprints are specified for all IABs. Each IAB blueprint contains information about the claim(s), assessment target(s), and depth of knowledge level(s) addressed by the items in that block, as well as the numbers of items allocated to each of those categories. Other more subject specific information is also included. For example, the ELA/literacy blueprint incorporates details on passage length and scoring of responses, while the mathematics blueprint specifies to what extent the relevant task models are represented in each block. Details are given separately for each grade. The details include claim, assessment target, DOK, assessment type (non-PTs/PT), and the total number of items (Smarter Balanced, 2015c; Smarter Balanced, 2015d).

Due to their extensive volume, IAB blueprints are not included in this report but are available online (Smarter Balanced, 2017e, f). Figure 4-3 shows an example of the Grade 6 mathematics IAB titled "Ratio and Proportional Relationships."

FIGURE 4-3 BLUEPRINT FOR GRADE 6 MATHEMATICS IAB SHOWING DETAILED CONTENT STRUCTURE

Grade 6 –Ratio and Proportional Relationships (13 items)					
Claim	Content Category	Assessment Targets	DOK	Numbers of Items	Total Items per Reporting Category
1. Concepts and Procedures	RP	A. Understand ratio concepts and use ratio reasoning to solve problems.	1,2	11	11
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	1
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context or a situation.	2, 3	0	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvement to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	1	1
		B. Construct, autonomously, chains or reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and-if there is a flaw in the argument-explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

A test map is also provided for every IAB. Due to the large number of IABs, a complete set of IAB test maps is available online. Table 4-2 is the test map for the Grade 4 IAB titled "Read Literary Texts" in ELA/Literacy.

TABLE 4-2 TEST MAP FOR GRADE 4 ELA/LITERACY IAB "READ LITERARY TEXTS"

Item Sequence	Claim	Target	DOK	Item Type	Point Value
1	1	5	4	MC4	1
2	1	3	2	MC4	1
3	1	6	2	MC4	1
4	1	4	3	EBSR4	1
5	1	2	2	MC4	1
6	1	1	2	HTQ	1
7	1	2	2	MC4	1
8	1	1	2	MC4	1
9	1	4	3	EBSR4	1
10	1	3	2	MS6	1
11	1	4	3	SA	2
12	1	3	1	MS5	1
13	1	2	2	MC4	1
14	1	7	3	MS5	1
15	1	1	1	HTQ	1

Composition of Interim Item Pools

This section presents counts of items in the IABs and ICAs by claim and item type and also presents a summary of item statistics (difficulty and discrimination) for each IAB and ICA. For each interim assessment, the number of items by claim matches the blueprint specifications.

Composition by Claim

The numbers of items per claim in each IAB is shown in Table 4-3 and Table 4-4. The number of items by claim in each ICA is shown in Table 4-5.

TABLE 4-3 COMPOSITION OF INTERIM ASSESSMENT BLOCKS, ELA/LITERACY

GRADE	Interim Assessment Block Name	CLAIMS				Total # Items
		1	2	3	4	
3	Brief Writes	0	6	0	0	6
	Editing	0	15	0	0	15
	Language and Vocabulary Use	0	15	0	0	15
	Listen/Interpret	0	0	15	0	15
	Performance Task	0	2	0	3	5
	Read Informational Texts	16	0	0	0	16
	Read Literary Texts	15	0	0	0	15
	Research	0	0	0	18	18
	Revision	0	15	0	0	15
4	Brief Writes	0	6	0	0	6
	Editing	0	15	0	0	15
	Language and Vocabulary Use	0	15	0	0	15
	Listen/Interpret	0	0	15	0	15
	Performance Task	0	2	0	3	5
	Read Informational Texts	14	0	0	0	14
	Read Literary Texts	15	0	0	0	15
	Research	0	0	0	18	18
	Revision	0	15	0	0	15
5	Brief Writes	0	6	0	0	6
	Editing	0	14	0	0	14
	Language and Vocabulary Use	0	15	0	0	15
	Listen/Interpret	0	0	14	0	14
	Performance Task	0	2	0	3	5
	Read Informational Texts	15	0	0	0	15
	Read Literary Texts	15	0	0	0	15
	Research	0	0	0	18	18
	Revision	0	15	0	0	15
6	Brief Writes	0	6	0	0	6
	Editing	0	15	0	0	15
	Language and Vocabulary Use	0	15	0	0	15
	Listen/Interpret	0	0	15	0	15
	Performance Task	0	2	0	2	4
	Read Informational Texts	16	0	0	0	16
	Read Literary Texts	15	0	0	0	15
	Research	0	0	0	18	18
	Revision	0	15	0	0	15

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TABLE 4-3 (CONTINUED)

GRADE	Interim Assessment Block Name	CLAIMS				Total # Items
		1	2	3	4	
7	Brief Writes	0	6	0	0	6
	Editing	0	14	0	0	14
	Language and Vocabulary Use	0	15	0	0	15
	Listen/Interpret	0	0	15	0	15
	Performance Task	0	2	0	3	5
	Read Informational Texts	16	0	0	0	16
	Read Literary Texts	16	0	0	0	16
	Research	0	0	0	18	18
	Revision	0	15	0	0	15
8	Brief Writes	0	6	0	0	6
	Edit/Revise	0	14	0	0	14
	Listen/Interpret	0	0	15	0	15
	Performance Task	0	2	0	3	5
	Read Informational Texts	16	0	0	0	16
	Read Literary Texts	16	0	0	0	16
	Research	0	0	0	18	18
11	Brief Writes	0	6	0	0	6
	Editing	0	15	0	0	15
	Language and Vocabulary Use	0	15	0	0	15
	Listen/Interpret	0	0	15	0	15
	Performance Task	0	2	0	2	4
	Read Informational Texts	15	0	0	0	15
	Read Literary Texts	16	0	0	0	16
	Research	0	0	0	18	18
	Revision	0	15	0	0	15

TABLE 4-4 COMPOSITION OF INTERIM ASSESSMENT BLOCKS, MATHEMATICS

Grade	Interim Assessment Block Name	CLAIMS				Total # Items
		1	2	3	4	
3	Measurement and Data	12	1	1	1	15
	Number and Operations -- Fractions	13	0	1	0	14
	Number and Operations in Base Ten	12	2	0	0	14
	Operations and Algebraic Thinking	12	1	1	1	15
	Performance Task	0	2	2	2	6
4	Geometry	11	0	0	0	11
	Measurement and Data	13	1	0	1	15
	Number and Operations -- Fractions	12	1	2	0	15
	Number and Operations in Base Ten	12	1	2	0	15
	Operations and Algebraic Thinking	9	2	2	3	16
	Performance Task	0	2	2	2	6
5	Geometry	9	1	2	1	13
	Measurement and Data	9	3	1	1	14
	Number and Operations -- Fractions	11	1	2	1	15
	Number and Operations in Base Ten	11	1	2	1	15
	Operations and Algebraic Thinking	13	1	0	1	15
	Performance Task	0	2	2	2	6
6	Expressions & Equations I	13	1	1	1	16
	Geometry	11	1	1	1	14
	Performance Task	0	2	2	2	6
	Ratios and Proportional Relationships	11	1	1	0	13
	Statistics and Probability	13	0	0	0	13
	The Number System	13	1	1	0	15
7	Expressions & Equations I	12	1	1	1	15
	Geometry	11	2	0	0	13
	Performance Task	0	2	2	2	6
	Ratios and Proportional Relationships	10	1	1	1	13
	Statistics and Probability	13	0	0	2	15
	The Number System	11	0	2	1	14
8	Expressions & Equations I	9	3	2	0	14
	Expressions & Equations II	10	1	1	1	13
	Functions	11	1	2	1	15
	Geometry	13	0	1	1	15
	Performance Task	0	2	2	2	6
11	Algebra and Functions I – Linear	11	2	1	1	15
	Algebra and Functions II – Quadratic	12	0	1	2	15
	Geometry and the Right Triangle	11	1	3	0	15
	Performance Task	0	1	2	3	6
	Statistics and Probability	6	3	0	3	12

TABLE 4-5 COMPOSITION OF INTERIM COMPREHENSIVE ASSESSMENTS

GRADE	CLAIMS				Total
	1	2	3	4	
ELA/Literacy					
3	20	11	9	8	48
4	20	12	9	8	49
5	19	12	9	8	48
6	21	12	9	7	49
7	20	12	9	8	49
8	21	12	9	8	50
11	19	11	9	7	46
Total	**140**	**82**	**63**	**54**	**339**
Mathematics					
3	20	4	8	5	37
4	20	4	7	5	36
5	20	4	8	5	37
6	19	6	8	3	36
7	20	4	8	5	37
8	20	5	8	4	37
11	21	3	8	6	38
Total	**140**	**30**	**55**	**33**	**258**

Composition by Item Type

The Consortium develops many different types of items beyond the traditional multiple-choice item. This is done to measure claims and assessment targets with varying degrees of complexity by allowing students to respond in a variety of ways rather than simply recognizing a correct response. The item types used in Smarter Balanced interim assessments are listed in Table 4-6 along with indications of the subject areas in which each item type is used.

TABLE 4-6 ITEM TYPES FOUND IN THE SUMMATIVE ITEM POOLS

Item Types	ELA/literacy	Mathematics
Multiple Choice (MC)	X	X
Multiple Select (MS)	X	X
Evidence-Based Selected Response (EBSR)	X	
Match Interaction (MI)	X	X
Hot Text (HTQ)	X	
Short Answer Text Response (SA)	X	X
Essay/Writing Extended Response (WER)	X	
Equation Response (EQ)		X
Grid Item Response (GI)		X
Table Interaction (TI)		X

The frequency of item types by IAB is shown in Table 4-7 (ELA/Literacy) and Table 4-8 (mathematics). The frequency of item types by claim for ICAs is shown in Table 4-9 (ELA/Literacy) and Table 4-10 (mathematics). Note that each Essay written is associated with two items. Essays are scored on three traits, two of which are combined, resulting in two items for each essay.

TABLE 4-7 ITEM TYPES USED IN THE INTERIM ASSESSMENT BLOCKS, ELA/LITERACY

Grade	Interim Assessment Block Name	Item Types										Total # Items
		MC	MS	EBSR	MI	HTQ	SA	WER	EQ	GI	TI	
3	Brief Writes	0	0	0	0	0	6	0	0	0	0	6
	Editing	6	2	0	0	7	0	0	0	0	0	15
	Language and Vocabulary Use	6	6	0	0	3	0	0	0	0	0	15
	Listen/Interpret	7	1	3	4	0	0	0	0	0	0	15
	Performance Task	0	0	0	1	0	2	2	0	0	0	5
	Read Informational Texts	8	1	2	0	4	1	0	0	0	0	16
	Read Literary Texts	9	0	2	0	3	1	0	0	0	0	15
	Research	13	2	0	0	3	0	0	0	0	0	18
	Revision	6	5	0	0	4	0	0	0	0	0	15
4	Brief Writes	0	0	0	0	0	6	0	0	0	0	6
	Editing	9	3	0	0	3	0	0	0	0	0	15
	Language and Vocabulary Use	5	7	0	0	3	0	0	0	0	0	15
	Listen/Interpret	7	3	3	2	0	0	0	0	0	0	15
	Performance Task	0	0	0	1	0	2	2	0	0	0	5
	Read Informational Texts	5	4	1	0	3	1	0	0	0	0	14
	Read Literary Texts	7	3	2	0	2	1	0	0	0	0	15
	Research	11	5	0	1	1	0	0	0	0	0	18
	Revision	10	3	0	0	2	0	0	0	0	0	15
5	Brief Writes	0	0	0	0	0	6	0	0	0	0	6
	Editing	8	2	0	0	4	0	0	0	0	0	14
	Language and Vocabulary Use	5	6	0	0	4	0	0	0	0	0	15
	Listen/Interpret	6	2	4	2	0	0	0	0	0	0	14
	Performance Task	0	1	0	0	0	2	2	0	0	0	5
	Read Informational Texts	6	3	1	0	3	2	0	0	0	0	15
	Read Literary Texts	4	4	3	0	2	2	0	0	0	0	15
	Research	8	8	0	0	2	0	0	0	0	0	18
	Revision	8	4	0	0	3	0	0	0	0	0	15
6	Brief Writes	0	0	0	0	0	6	0	0	0	0	6
	Editing	7	1	0	0	7	0	0	0	0	0	15
	Language and Vocabulary Use	8	6	0	0	1	0	0	0	0	0	15
	Listen/Interpret	5	4	5	1	0	0	0	0	0	0	15
	Performance Task	0	0	0	0	0	2	2	0	0	0	4
	Read Informational Texts	3	5	4	0	3	1	0	0	0	0	16
	Read Literary Texts	10	2	0	0	2	1	0	0	0	0	15
	Research	6	5	0	0	7	0	0	0	0	0	18
	Revision	11	3	0	0	1	0	0	0	0	0	15

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TABLE 4.7 (CONTINUED)

Grade	Interim Assessment Block Name	Item Types										Total # Items
		MC	MS	EBSR	MI	HTQ	SA	WER	EQ	GI	TI	
7	Brief Writes	0	0	0	0	0	6	0	0	0	0	6
	Editing	8	4	0	0	2	0	0	0	0	0	14
	Language and Vocabulary Use	5	6	0	0	4	0	0	0	0	0	15
	Listen/Interpret	9	3	3	0	0	0	0	0	0	0	15
	Performance Task	0	0	0	1	0	2	2	0	0	0	5
	Read Informational Texts	2	6	3	0	4	1	0	0	0	0	16
	Read Literary Texts	8	2	3	0	2	1	0	0	0	0	16
	Research	5	6	0	3	4	0	0	0	0	0	18
	Revision	9	3	0	0	3	0	0	0	0	0	15
8	Brief Writes	0	0	0	0	0	6	0	0	0	0	6
	Edit/Revise	7	4	0	0	3	0	0	0	0	0	14
	Listen/Interpret	11	1	2	1	0	0	0	0	0	0	15
	Performance Task	0	0	0	1	0	2	2	0	0	0	5
	Read Informational Texts	3	5	1	0	5	2	0	0	0	0	16
	Read Literary Texts	8	4	1	0	2	1	0	0	0	0	16
	Research	7	2	0	1	8	0	0	0	0	0	18
11	Brief Writes	0	0	0	0	0	6	0	0	0	0	6
	Editing	6	2	0	0	7	0	0	0	0	0	15
	Language and Vocabulary Use	4	5	0	0	6	0	0	0	0	0	15
	Listen/Interpret	10	4	0	1	0	0	0	0	0	0	15
	Performance Task	0	0	0	0	0	2	2	0	0	0	4
	Read Informational Texts	5	3	1	0	5	1	0	0	0	0	15
	Read Literary Texts	9	2	1	0	3	1	0	0	0	0	16
	Research	9	2	0	0	7	0	0	0	0	0	18
	Revision	9	4	0	0	2	0	0	0	0	0	15

TABLE 4-8 ITEM TYPES USED IN THE INTERIM ASSESSMENT BLOCKS, MATHEMATICS

Grade	Interim Assessment Block Name	Item Types										Total # Items
		MC	MS	EBSR	MI	HTQ	SA	WER	EQ	GI	TI	
3	Measurement and Data	5	1	0	0	0	0	0	9	0	0	15
	Number and Operations in Base Ten	1	0	0	1	0	0	0	12	0	0	14
	Number and Operations -- Fractions	3	1	0	1	0	0	0	9	0	0	14
	Operations and Algebraic Thinking	2	0	0	2	0	0	0	9	0	2	15
	Performance Task	0	0	0	0	0	4	0	2	0	0	6
4	Geometry	0	0	0	11	0	0	0	0	0	0	11
	Measurement and Data	0	0	0	5	0	0	0	8	0	2	15
	Number and Operations in Base Ten	5	2	0	2	0	0	0	6	0	0	15
	Number and Operations -- Fractions	0	2	0	5	0	0	0	8	0	0	15
	Operations and Algebraic Thinking	6	0	0	3	0	0	0	7	0	0	16
	Performance Task	1	0	0	0	0	3	0	1	0	1	6
5	Geometry	8	1	0	4	0	0	0	0	0	0	13
	Measurement and Data	2	0	0	1	0	0	0	11	0	0	14
	Number and Operations in Base Ten	6	0	0	3	0	0	0	6	0	0	15
	Number and Operations -- Fractions	9	2	0	0	0	0	0	4	0	0	15
	Operations and Algebraic Thinking	10	0	0	0	0	0	0	5	0	0	15
	Performance Task	0	0	0	0	0	2	0	3	0	1	6
6	Expressions & Equations I	1	5	0	2	0	0	0	8	0	0	16
	Geometry	1	1	0	0	0	0	0	12	0	0	14
	The Number System	1	1	0	3	0	0	0	10	0	0	15
	Performance Task	0	0	0	0	0	2	0	4	0	0	6
	Ratios and Proportional Relationships	0	0	0	1	0	0	0	12	0	0	13
	Statistics and Probability	3	0	0	7	0	0	0	3	0	0	13

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TABLE 4.8 (CONTINUED)

Grade	Interim Assessment Block Name	Item Types										Total # Items
		MC	MS	EBSR	MI	HTQ	SA	WER	EQ	GI	TI	
7	Expressions & Equations I	6	3	0	0	0	0	0	6	0	0	15
	Geometry	0	1	0	3	0	0	0	9	0	0	13
	The Number System	4	1	0	1	0	0	0	7	0	1	14
	Performance Task	1	0	0	0	0	2	0	1	0	2	6
	Ratios and Proportional Relationships	4	1	0	1	0	0	0	7	0	0	13
	Statistics and Probability	5	1	0	4	0	0	0	5	0	0	15
8	Expressions & Equations I	4	2	0	0	0	0	0	8	0	0	14
	Expressions & Equations II	4	0	0	1	0	0	0	6	0	2	13
	Functions	6	3	0	2	0	0	0	4	0	0	15
	Geometry	4	1	0	4	0	0	0	6	0	0	15
	Performance Task	0	0	0	0	0	2	0	3	0	1	6
11	Algebra and Functions I – Linear Functions, Equations, Inequalities	7	0	0	3	0	0	0	5	0	0	15
	Algebra and Functions II – Quadratic Functions, Equations and Inequalities	6	1	0	6	0	0	0	2	0	0	15
	Geometry and the Right Triangle Trigonometry	2	2	0	4	0	0	0	7	0	0	15
	Performance Task	1	0	0	0	0	4	0	1	0	0	6
	Statistics and Probability	7	0	0	4	0	0	0	1	0	0	12

TABLE 4-9 ITEM TYPES USED IN THE INTERIM COMPREHENSIVE ASSESSMENTS, ELA/LITERACY

Grade	Claim	Item Types										Total # Items
		MC	MS	EBSR	MI	HTQ	SA	WER	EQ	GI	TI	
3	1	12	0	3	0	3	2	0	0	0	0	20
	2	7	0	0	0	1	1	2	0	0	0	11
	3	3	1	2	3	0	0	0	0	0	0	9
	4	4	1	0	1	0	2	0	0	0	0	8
4	1	11	2	2	0	3	2	0	0	0	0	20
	2	7	0	0	0	2	1	2	0	0	0	12
	3	5	2	1	1	0	0	0	0	0	0	9
	4	3	1	0	2	0	2	0	0	0	0	8
5	1	6	3	4	0	4	2	0	0	0	0	19
	2	7	1	0	0	1	1	2	0	0	0	12
	3	4	0	3	2	0	0	0	0	0	0	9
	4	4	2	0	0	0	2	0	0	0	0	8
6	1	10	3	2	0	4	2	0	0	0	0	21
	2	6	2	0	0	1	1	2	0	0	0	12
	3	5	1	2	1	0	0	0	0	0	0	9
	4	2	0	0	0	3	2	0	0	0	0	7
7	1	7	3	4	0	4	2	0	0	0	0	20
	2	5	2	0	0	2	1	2	0	0	0	12
	3	6	3	0	0	0	0	0	0	0	0	9
	4	4	0	0	1	1	2	0	0	0	0	8
8	1	11	2	2	0	4	2	0	0	0	0	21
	2	5	2	0	0	2	1	2	0	0	0	12
	3	9	0	0	0	0	0	0	0	0	0	9
	4	3	0	0	1	2	2	0	0	0	0	8
11	1	12	0	1	0	4	2	0	0	0	0	19
	2	5	0	0	0	3	1	2	0	0	0	11
	3	6	2	0	1	0	0	0	0	0	0	9
	4	5	0	0	0	0	2	0	0	0	0	7

TABLE 4-10 ITEM TYPES USED IN THE INTERIM COMPREHENSIVE ASSESSMENTS, MATHEMATICS

Grade	Claim	Item Types										Total # Items
		MC	MS	EBSR	MI	HTQ	SA	WER	EQ	GI	TI	
3	1	0	0	0	1	0	0	0	17	0	2	20
	2	1	0	0	0	0	1	0	2	0	0	4
	3	3	1	0	2	0	2	0	0	0	0	8
	4	2	0	0	0	0	1	0	2	0	0	5
4	1	2	0	0	5	0	0	0	13	0	0	20
	2	1	0	0	1	0	0	0	1	0	1	4
	3	3	1	0	0	0	2	0	1	0	0	7
	4	1	0	0	0	0	1	0	3	0	0	5
5	1	11	0	0	5	0	0	0	4	0	0	20
	2	1	0	0	0	0	0	0	3	0	0	4
	3	3	2	0	0	0	2	0	1	0	0	8
	4	3	0	0	0	0	0	0	1	0	1	5
6	1	1	2	0	4	0	0	0	12	0	0	19
	2	1	0	0	0	0	0	0	5	0	0	6
	3	3	1	0	1	0	1	0	2	0	0	8
	4	0	1	0	0	0	1	0	1	0	0	3
7	1	5	4	0	2	0	0	0	9	0	0	20
	2	0	0	0	0	0	0	0	3	0	1	4
	3	5	0	0	0	0	2	0	1	0	0	8
	4	3	0	0	0	0	0	0	0	0	2	5
8	1	7	2	0	2	0	0	0	9	0	0	20
	2	1	0	0	0	0	0	0	3	0	1	5
	3	6	0	0	0	0	2	0	0	0	0	8
	4	1	0	0	0	0	0	0	3	0	0	4
11	1	11	0	0	5	0	0	0	5	0	0	21
	2	1	0	0	0	0	0	0	2	0	0	3
	3	5	1	0	0	0	2	0	0	0	0	8
	4	0	1	0	1	0	3	0	1	0	0	6

Summary of Item Statistics

Summary information about the item-response theory item parameters of items used in the IABs and ICAs are shown in Table 4-11 through Table 4-13. The tables display the mean and standard deviation of the IRT difficulty parameter (b-parameter) and discrimination parameter (a-parameter).

TABLE 4-11 ITEM DIFFICULTY (B-PARAMETER) AND DISCRIMINATION (A-PARAMETER) OF INTERIM ASSESSMENT BLOCKS, ELA/LITERACY

Grade	Interim Assessment Block Name	N items	Mean b parameter	SD b parameter	Mean a parameter	SD a parameter
3	Brief Writes	6	0.26	0.27	0.72	0.08
	Editing	15	-0.47	1.21	0.67	0.25
	Language and Vocabulary Use	15	-0.79	1.00	0.69	0.17
	Listen/Interpret	15	-0.71	0.66	0.63	0.15
	Performance Task	5	0.54	0.90	0.83	0.16
	Read Informational Texts	16	-0.18	1.09	0.64	0.23
	Read Literary Texts	15	-0.50	0.96	0.78	0.30
	Research	18	-0.76	0.94	0.64	0.22
	Revision	15	-0.64	0.86	0.74	0.18
4	Brief Writes	6	0.64	0.44	0.66	0.12
	Editing	15	-0.07	1.38	0.55	0.19
	Language and Vocabulary Use	15	-0.15	1.09	0.66	0.16
	Listen/Interpret	15	-0.40	0.99	0.53	0.16
	Performance Task	5	0.55	0.75	0.83	0.17
	Read Informational Texts	14	0.07	0.87	0.66	0.23
	Read Literary Texts	15	-0.12	1.04	0.71	0.27
	Research	18	-0.16	0.91	0.59	0.21
	Revision	15	-0.42	1.07	0.52	0.16
5	Brief Writes	6	0.90	0.67	0.61	0.06
	Editing	14	0.12	0.93	0.60	0.24
	Language and Vocabulary Use	15	0.63	1.80	0.59	0.23
	Listen/Interpret	14	-0.04	1.02	0.57	0.14
	Performance Task	5	0.56	0.40	0.78	0.24
	Read Informational Texts	15	0.87	1.00	0.55	0.16
	Read Literary Texts	15	0.69	1.12	0.66	0.23
	Research	18	0.17	0.98	0.65	0.21
	Revision	15	-0.15	0.92	0.60	0.17

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TABLE 4-11 (CONTINUED)

Grade	Interim Assessment Block Name	N items	Mean b parameter	SD b parameter	Mean a parameter	SD a parameter
6	Brief Writes	6	1.30	0.54	0.68	0.12
	Editing	15	0.71	1.65	0.55	0.19
	Language and Vocabulary Use	15	0.61	1.21	0.50	0.17
	Listen/Interpret	15	0.49	0.76	0.61	0.16
	Performance Task	4	0.82	0.86	0.92	0.20
	Read Informational Texts	16	1.01	0.96	0.63	0.20
	Read Literary Texts	15	0.66	1.16	0.47	0.13
	Research	18	0.71	0.73	0.66	0.24
	Revision	15	0.41	1.44	0.46	0.15
7	Brief Writes	6	1.42	0.51	0.62	0.13
	Editing	14	2.41	2.41	0.34	0.16
	Language and Vocabulary Use	15	0.78	1.10	0.61	0.17
	Listen/Interpret	15	0.59	1.03	0.49	0.15
	Performance Task	5	1.64	1.23	0.90	0.16
	Read Informational Texts	16	0.99	1.18	0.63	0.22
	Read Literary Texts	16	0.39	1.16	0.67	0.26
	Research	18	1.52	1.10	0.52	0.12
	Revision	15	0.65	0.64	0.49	0.17
8	Brief Writes	6	1.54	0.47	0.67	0.15
	Edit/Revise	14	0.40	1.04	0.57	0.22
	Listen/Interpret	15	0.22	1.18	0.49	0.15
	Performance Task	5	1.62	1.36	0.75	0.12
	Read Informational Texts	16	1.50	1.09	0.62	0.20
	Read Literary Texts	16	0.70	1.17	0.70	0.26
	Research	18	1.80	1.35	0.56	0.24
11	Brief Writes	6	1.74	0.74	0.52	0.07
	Editing	15	1.38	1.23	0.43	0.13
	Language and Vocabulary Use	15	1.01	1.47	0.47	0.15
	Listen/Interpret	15	0.43	1.18	0.48	0.08
	Performance Task	4	1.51	0.51	0.60	0.11
	Read Informational Texts	15	1.47	1.16	0.54	0.24
	Read Literary Texts	16	1.33	1.26	0.47	0.13
	Research	18	1.57	1.09	0.52	0.16
	Revision	15	1.05	1.10	0.49	0.17

TABLE 4-12 ITEM DIFFICULTY (B-PARAMETER) AND DISCRIMINATION (A-PARAMETER) OF INTERIM ASSESSMENT BLOCKS, MATHEMATICS

Grade	Interim Assessment Block Name	N items	Mean b parameter	SD b parameter	Mean a parameter	SD a parameter
3	Measurement and Data	15	-1.20	0.85	0.88	0.27
	Number and Operations -- Fractions	14	-1.13	0.99	0.69	0.27
	Number and Operations in Base Ten	14	-0.82	0.91	1.05	0.17
	Operations and Algebraic Thinking	15	-1.49	1.10	0.90	0.24
	Performance Task	6	-0.63	0.38	1.16	0.26
4	Geometry	11	1.09	1.42	0.58	0.30
	Measurement and Data	15	0.34	0.89	0.76	0.29
	Number and Operations -- Fractions	15	-0.61	1.04	0.92	0.33
	Number and Operations in Base Ten	15	-0.72	0.94	0.71	0.19
	Operations and Algebraic Thinking	16	-0.49	0.82	0.82	0.33
	Performance Task	6	0.15	0.53	0.73	0.18
5	Geometry	13	0.03	1.47	0.44	0.14
	Measurement and Data	14	0.19	0.79	0.76	0.17
	Number and Operations -- Fractions	15	-0.02	0.99	0.75	0.33
	Number and Operations in Base Ten	15	-0.24	0.86	0.66	0.31
	Operations and Algebraic Thinking	15	0.09	1.01	0.58	0.21
	Performance Task	6	0.71	0.70	0.84	0.29
6	Expressions & Equations I	16	0.29	1.06	0.73	0.20
	Geometry	14	1.18	0.68	0.89	0.19
	Performance Task	6	1.26	0.72	0.83	0.07
	Ratios and Proportional	13	0.08	0.88	0.85	0.19
	Statistics and Probability	13	1.37	1.58	0.43	0.19
	The Number System	15	0.35	0.59	0.68	0.22
7	Expressions & Equations I	15	1.03	1.29	0.59	0.28
	Geometry	13	1.87	0.97	0.80	0.35
	Performance Task	6	1.04	0.97	0.96	0.23
	Ratios and Proportional	13	1.21	0.75	0.61	0.29
	Statistics and Probability	15	0.96	1.44	0.56	0.30
	The Number System	14	1.00	0.98	0.60	0.23
8	Expressions & Equations I	14	1.26	1.56	0.51	0.21
	Expressions & Equations II	13	1.53	1.18	0.57	0.24
	Functions	15	0.87	1.09	0.59	0.21
	Geometry	15	1.61	1.04	0.53	0.18
	Performance Task	6	0.81	1.23	0.71	0.14
11	Algebra and Functions I – Linear	15	1.27	1.19	0.48	0.21
	Algebra and Functions II – Quadratic	15	2.55	1.46	0.44	0.25
	Geometry and the Right Triangle	15	2.01	1.05	0.62	0.21
	Performance Task	6	3.66	2.09	0.55	0.29
	Statistics and Probability	12	2.36	3.43	0.35	0.16

TABLE 4-13 ITEM DIFFICULTY (B-PARAMETER) AND DISCRIMINATION (A-PARAMETER) OF INTERIM COMPREHENSIVE ASSESSMENTS (ICAS)

Grade	N items	Mean b parameter	SD b parameter	Mean a parameter	SD a parameter
ELA/literacy					
3	48	-0.68	0.98	0.71	0.24
4	49	-0.34	0.90	0.64	0.21
5	48	0.01	0.94	0.65	0.22
6	49	0.37	1.06	0.60	0.23
7	49	0.67	0.94	0.57	0.20
8	50	0.51	1.09	0.63	0.24
11	46	0.66	1.05	0.47	0.18
Mathematics					
3	37	-1.09	0.81	0.90	0.29
4	36	-0.46	0.77	0.84	0.25
5	37	0.01	0.88	0.67	0.28
6	36	0.51	0.91	0.78	0.21
7	37	0.60	0.87	0.69	0.32
8	37	0.86	0.86	0.58	0.22
11	38	1.49	1.69	0.47	0.20

Content Alignment

The content alignment studies described in this section were performed using samples of tests delivered in the summative assessments. They are applicable to interim assessments because the interim assessments are created from the same item pool as the summative assessments and their blueprints use the same content categories (e.g., claims, targets, and DOK) as summative assessments.

Content alignment addresses how well individual test items, test blueprints, and the tests themselves represent the intended construct and support appropriate inferences. With a computer adaptive test, a student's test form is a sampling of items drawn from a much larger universe of possible items and tasks. The sampling is guided by a blueprint. Alignment studies investigate how well individual tests cover the intended breadth and depth of the underlying content standards. For inferences from test results to be justifiable, the sample of items in each student's test has to be an adequate representation of the broad domain, providing strong evidence to support claims being made from the test results.

Four alignment studies have been conducted to examine the alignment between Smarter Balanced tests and the CCSS. The Human Resources Research Organization (HumRRO) conducted the first alignment study. HumRRO's comprehensive study (HumRRO, 2015), centered around the assumptions of evidence centered design (ECD), which examined the connections in the evidentiary chain underlying the development of the Smarter Balanced foundational documents (test blueprints, content specifications, and item/task specifications) and the resulting summative assessments. Among those connections were the alignment between the Smarter Balanced content specifications,

the alignment between the Smarter Balanced evidence statements and content specifications, and the alignment between the Smarter Balanced blueprint and the Smarter Balanced content specifications. Results from this study were favorable in terms of the intended breadth and depth of the alignment for each connection in the evidentiary chain.

In 2016, the Fordham Institute (2016) and HumRRO (2016) investigated the quality of the Smarter Balanced assessments relative to CCSSO criteria for evaluating high-equality assessments. In particular, the Smarter Balanced assessments were investigated to see if they place strong emphasis on the most important content for college and career readiness as called for by the CCSS and if they require that students demonstrate the range of thinking skills, including higher-order thinking skills, called for by those standards. Fordham Institute reviewed Grades 5 and 8 ELA and mathematics, and HumRRO reviewed high school ELA and mathematics.

- Fordham Institute rated Smarter Balanced Grades 5 and 8 ELA assessments an Excellent Match to the CCSSO Criteria for Content in ELA, and a Good Match for Depth in ELA
- Fordham Institute rated Smarter Balanced Grades 5 and 8 mathematics assessments as a Good Match to the CCSSO Criteria for Content in Mathematics, and a Good Match to the CCSSO Criteria for Depth in Mathematics
- HumRRO (2016) rated the Smarter Balanced high school ELA assessments an Excellent Match to the CCSSO Criteria for Content in ELA, and a Good to Excellent Match for Depth in ELA
- HumRRO (2016) rated the Smarter Balanced high school ELA assessments a Good to Excellent Match to the CCSSO Criteria for Content in ELA, and a Good to Excellent Match for Depth in ELA

An additional external alignment study, completed by WestEd (2017), employed a modified Webb alignment methodology to examine the summative assessments for grades 3, 4, 6, and 7, using sample test events built using 2015-2016 operational data. The WestEd alignment study provided evidence that the items within ELA/L and mathematics test events for grades 3, 4, 6, and 7 were well aligned to the CCSS in terms of both content and cognitive complexity.

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Chapter 5: Test Administration

Introduction

This chapter provides a high-level guide to the resources for administering interim assessments and an overview of their contents. The resources consist of a customizable Online Summative Test Administration Manual (TAM) (Smarter Balanced, 2017a) and a Member Procedures Manual that includes information for the summative assessments, interim assessments, data warehouse/reporting system, and Digital Library. (Smarter Balanced, 2017b). The interim assessments also include all the accessibility resources that are available in the summative assessment.

Teachers have the option to administer interims in a standardized or non-standardized fashion. For the non-standardized administration, the teacher need not use the summative TAM. The interim assessments are considered student and teacher facing. The student and teacher facing designation provides educators the flexibility to access the test questions and their students' responses to the test questions. Because of this flexibility, the interim assessments are not intended to be used for accountability purposes.

While interim assessments may be administered in non-standardized ways, they are not for public use, display, or distribution. Any use, display, or distribution of the interim assessments that results in access to individuals beyond authorized local education agency staff and students is prohibited. Finally, interim assessment items must not be copied into third party systems without the permission of Smarter Balanced.

Member Procedures Manual

The Smarter Balanced Assessment Consortium *Member Procedures Manual* (Smarter Balanced Assessment Consortium, 2017b) is designed to help member leadership prepare for the administration of the Smarter Balanced assessments.

The manual provides a general overview of Smarter Balanced policy topics such as test security, test scheduling, and general administration as it relates to the summative and interim assessments. In addition, this manual provides a high-level overview of member and/or district responsibilities, services provided by Smarter Balanced, and examples of services that members are responsible for securing.

Online Summative Test Administration Manual

The Test Administration Manual (Smarter Balanced, 2017a) for the online administration provides information for District/School Test Coordinators and Test Administrators regarding policies and procedures for the summative assessment. This document is customizable and is updated annually and made available in September of each test administration year. Specific components of the Online Summative TAM require customization to meet unique needs in each member state. These components include:

- Help Desk information
- Test expiration dates
- Administration and Registration Tools user roles
- Test security policy
- Links to where materials and modules are posted
- Test Security/Administration training policy
- Role–specific checklists

The development of the Smarter Balanced test administration manuals was guided by the AERA, APA, and NCME 2014 *Standards* (2014). In regard to test administration, the *Standards* provide guidance to test developers that the directions for test administration should be sufficiently clear to allow for standardized implementation in a variety of conditions (see Standard 4.15). In addition, the standards recommend that test developers provide sufficient detail so that test takers can respond to items and tasks in the manner intended by the test developer (see Standard 4.16).

Interim Assessments Test Administration Manual

Specific instructions for member states to administer Smarter Balanced interim assessments are developed by each state and are available on the state's website. Smarter Balanced is currently working on a template Interim Assessment Guide for Administration that members may use to create or update their state-specific Interim Assessment TAMs.

Administration of the Interim Assessments

The interim assessments can be administered flexibly by teachers to best meet their instructional needs. Examples of this flexibility include:

- Multiple configurations: Districts/schools may elect to administer both the ICA and IAB during the school year.
- Multiple administrations: The ICAs and IABs (including those for the same block) may be administered multiple times within an academic year. Districts and schools may determine the schedule for interim assessments or delegate the administration of interim assessments to teachers. The Consortium will not limit the number of times that the ICAs and/or IABs are administered. Members will need to work with service providers to determine contractual expectations related to the number of administrations. Despite this allowance, members should be aware of risks associated with administering these assessments multiple times within an academic year.
    - Item over-exposure: testing multiple times a year limits the item pool available to students, which will increase the possibility of students encountering the same item several times. Over-exposed items are unlikely to hold their original parameters and may skew performance results. To prevent this, schools and classrooms may want to limit their testing program to either a judicious use of ICAs or to coordinated use of IABs.
    - Hand-scoring: Some of the interim items require hand-scoring. Members will have to allocate resources (either vendor resources or local resources) to hand-scoring and multiple administrations may add to this effort.
- Grade levels: The ICA and IAB are composed of items aligned to the CCSS in grades 3–8 and high school. However, the interim assessments are not constrained by grade level. Students may take an off-grade-level interim assessment.

Standardized vs. non-Standardized Test Administrations

Interim assessments can serve a variety of educator needs corresponding to standardized or non-standardized administrations. To better support the range of possible uses consistent with member education agency policies, educators may establish the timeframe, administration policies, and scoring practices for interim assessments.

The distinction between standardized and non-standardized administrations is important because the statistical properties of these assessments as reported in this technical report apply only to

standardized administrations. This does not mean that non-standard administrations are not useful. The examples of non-standard administrations provided below are useful in the classroom. However, the reliability coefficients, norm-referenced, and criterion-referenced interpretations typically attached to test scores require standardized administration.

Standardized Administration

Standardized administration means that a student completes the interim assessment individually, following the procedure for administration used for the summative assessments. Results from a standardized administration can be interpreted in a consistent manner and used as a gauge of student learning that is comparable across students. In this approach, the interim assessment is used as an assessment of learning after a period of instruction and results reflect an individual student's mastery of the concepts assessed. Standardized tests can be used as part of an assessment of learning and an assessment for learning.

The Smarter Balanced procedures for test administration recognize the responsibilities of test administrators and provide appropriate guidance as recommended by the AERA, APA, and NCME *Standards* (2014). Test administrators are advised to carefully follow the standardized procedures (Standard 6.1); inform test takers of available accommodations (Standard 6.2); report changes or disruptions to the standardized test administration (Standard 6.3); furnish a comfortable environment with minimal distractions (Standard 6.4); provide appropriate instructions, practice, and other supports (Standard 6.5); and ensure the integrity of the test by eliminating opportunities for test taker malfeasance (Standard 6.6). Test users are responsible for test security at all times (Standard 6.7).

When administering interim tests under standardized conditions, guidelines in the Test Administration Manual should be followed. These include:

- strict adherence to the directions in the TAM;
- ensuring appropriate access to universal tools, designated supports, and accommodations; and
- ensuring a proper test environment (e.g. student seating, providing a quiet environment).

The interim assessment blocks were designed to be completed within one class period. The ICAs are similarly designed in parts to be completed in class periods. Table 5-1 presents the estimated testing times for a standardized administration of the ICA as it follows a format similar to the summative assessment. The estimated times for each session of each content area test provides sufficient time for students to attempt all items.

TABLE 5-1: ESTIMATED TESTING TIMES FOR STANDARDIZED ADMINISTRATIONS OF THE ICA

Content Area	Grades	Non-PT hrs : mins	Performance Task (PT) hrs : mins	Total hrs : mins
English Language Arts/Literacy	3–5	1: 30	2:00	3:30
	6–8	1:30	2:00	3:30
	HS	2:00	2:00	4:00
Mathematics	3–5	1:30	1:00	2:30
	6–8	2:00	1:00	3:00
	HS	2:00	1:30	3:30

Non-standardized administration

Non-standardized administration refers to any administration that is not consistent with the administration requirements of the summative assessment. Some examples of non-standardized administration might include (but are not limited to):

- Administering tests while students answer cooperatively in pairs, in small groups, or as a whole class. Teachers may elect to include some discussion time between test items, and may have students hand score items as needed.
- Providing interim assessment resources other than those approved in the Usability, Accessibility and Accommodations Guidelines.

Smarter Balanced created and disseminated the Online Summative TAM to ensure standardized summative test administration procedures and, thus, uniform test administration conditions for all students in Smarter Balanced member states. The Online Summative TAM (Smarter Balanced, 2017a) is customizable – modifications by members are referred to here as "State TAMs." Administrations that follow the procedures described in state TAMs may be considered standardized for purposes of interpreting the statistical properties of the tests as presented in this technical report.

Practice Tests and Training Tests

Practice and Training Tests are available in grades 3-8 and high school. Each Smarter Balanced state and territory hosts the practice and training tests on their own test delivery system. This allows students and educators to become familiar with how the tests are presented on their test delivery systems.

Universal Tools, Designated Supports, and Accommodations

All interim assessments are fully accessible and feature all accessibility resources described in the Usability, Accessibility, and Accommodations Guidelines (Smarter Balanced, 2016). To enhance student access to the assessment content during test administration, Smarter Balanced developed a conceptual model that includes universal tools, designated supports, and accommodations (Smarter Balanced Assessment Consortium, 2016, p.4).

Universal Tools are access features of the Smarter Balanced assessment that are either provided as digitally-delivered components of the test delivery system (embedded) or provided separately from the test delivery system (non-embedded). Universal tools are available to all students based on student preference and selection. Embedded universal tools include (but are not limited to) such features as an English glossary, that provides grade- and context-appropriate definitions of specific construct-irrelevant terms, a digital calculator that the student may access by clicking on a calculator button; and a digital notepad. Non-embedded universal tools include (but are not limited to) provision of an English dictionary for the full-write portion of the ELA/literacy performance task and the provision of physical scratch paper for all content area tests.

Designated supports for the Smarter Balanced assessments are embedded and non-embedded features that are available for use by any student for whom the need has been indicated by an educator or team of educators (along with the student and his/her parent/guardian) familiar with the student's instructional needs. Embedded designated supports include (but are not limited to) such features as color contrast, which enables students to adjust background or font color; translated test directions, translated glossaries, and stacked Spanish translations for mathematics items. Non-embedded designated supports include (but are not limited to) provision of color overlays; color contrast that allows printing test content with different colors; use of magnification devices; and use of noise buffers.

Accommodations are changes in procedures or materials that increase equitable access during the Smarter Balanced assessments. Students receiving accommodations must have a need for those accommodations documented in an Individualized Education Program (IEP) or 504 accommodation plan. Like universal tools and designated supports, accommodations may be either embedded or non-embedded. Examples of embedded accommodations include (but are not limited to) closed captioning and test content translated into American Sign Language (ASL) video. Non-embedded accommodations include (but are not limited to) use of an abacus, print on demand, and use of an external communication device (speech-to-text).

Universal tools, designated supports, and accommodations all yield valid scores that count as participation in assessments that meet the requirements of ESEA when used in a manner consistent with the Smarter Balanced *Usability, Accessibility, and Accommodations Guidelines* (Smarter Balanced, 2016). A complete summary of all embedded and non-embedded universal tools, designated supports, and accommodations is included in the *Usability, Accessibility, and Accommodations Guidelines.* The guidelines are updated each year.

References

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[4] This is a customizable document. Customized versions may be obtained from member websites.

[5] The guidelines are updated each year. Version 1 applies to the 20-16-2017 interim assessments.

Chapter 6: Reporting and Interpretation

Introduction

This chapter provides an overview of the Smarter Balanced open-source report system. The use of the Smarter Balanced reporting system is optional and configurable. Members can use the open-source system to develop and customize reports for their own use. Information about a specific member's reports should be gathered from member websites and materials.

It should be noted that the hand scoring of student answers to constructed response items is not subject to the rigorous controls used in summative assessment. Local results may show some variations from standardized hand scoring results. Even when an interim is administered under standardized test administration, local hand scoring may not be standardized. Also, if an interim assessment is administered to students more than once, familiarity with test questions may affect student performance and the accuracy of results as related to past and future performance. For these reasons and the fact that teachers may view the items and student responses, the interims are not intended to be used for accountability purposes.

Types of Scores

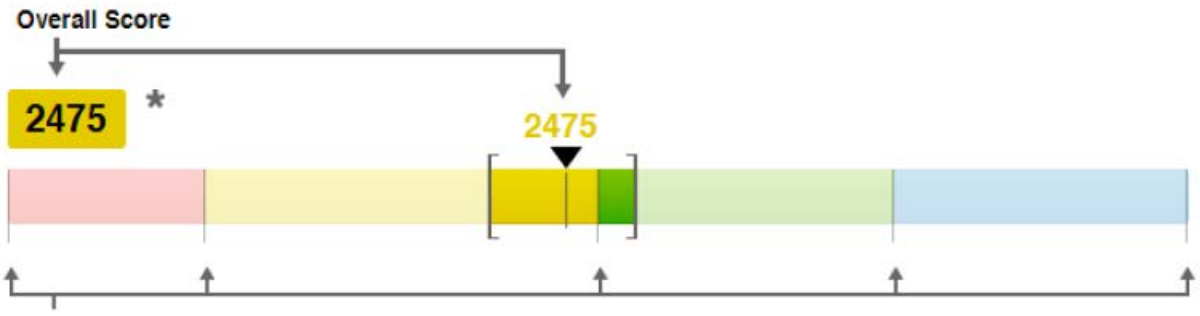
As noted in Chapter 4 on test design, the ICAs provide an overall indicator of proficiency and a set of claim indicators corresponding to more specific areas of content (claims) within the broader content areas (ELA/Literacy and mathematics). Information from IABs is reported in the same manner as Claim level information on the ICAs and summative assessments.

Overall Test Scores

Scale scores are the basic means of reporting a student's overall performance on summative and ICA tests. These scores fall along a continuous vertical scale that increases across grade levels from approximately 2000 to 3000. Scores are used to describe an individual student's current level of achievement. They can also be used to track growth over time. When aggregated, scale scores are used to describe achievement for different groups of students.

For the ICA, the Smarter Balanced reporting system communicates an individual student's overall scale score in relation to Achievement Levels using graphics similar to Figure 6-1. By default, the system uses generic terms for the Achievement Levels, Level 1, Level 2, Level 3, and Level 4, but members may customize them using terms such as "novice, developing, proficient, advanced" or others.

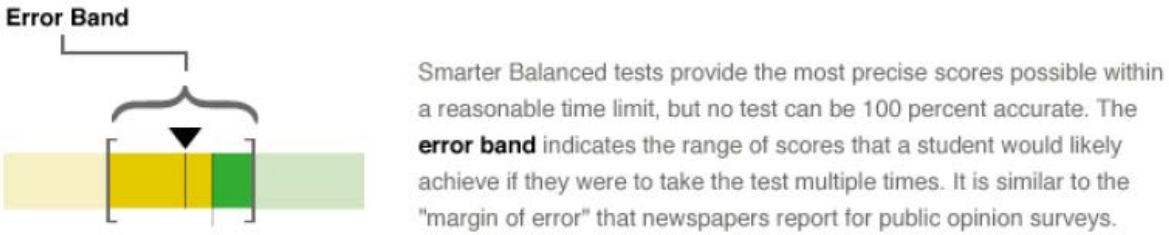
FIGURE 6-1 PORTRAYAL OF ICA SCORE REPORTING LEVELS. FROM REPORTING SYSTEM USER GUIDE, P.14.



ICA scale scores are reported with an error band based on the standard error of measurement (SEM) (see Chapter 2). In Figure 6-1, the overall score is 2475, which is in Level 2. However, it should be

noted that the score's error band encompasses Level 3. Smarter Balanced reporting provides information to help users understand the meaning of the error bands, as shown in Figure 6-2.

FIGURE 6-2 EXPLANATION OF ERROR BANDS DISPLAYED ON SMARTER BALANCED REPORTS. FROM REPORTING SYSTEM USER GUIDE, P.120.



Depicting errors and error bands in score reporting is an important measurement principle. In this portrayal, the score is represented by the vertical line and black triangle. The error band is shown by the brackets. If the test were to be given again, the score is likely to fall within this band.

Smarter Balanced has developed a set of customizable Achievement Level Descriptors for ELA/literacy and mathematics that are aligned with the Common Core State Standards (CCSS) and Smarter Balanced assessment claims. The intent of these descriptors is to specify, in content terms, the knowledge and skills that students may display at four levels of achievement. The full set of customizable Reporting Achievement Level Descriptors are available to the public online (Smarter Balanced, 2014, 2017).

IAB Overall Scores and ICA Content-area (Claim) Scores

Student performance on IABs, and on content areas corresponding to claims in the summative and ICA assessment blueprints, is classified into one of three reporting categories: "Above," "At/near", or "Below" Standard. The standard is the level 2 cut score (the lower boundary of level 2 achievement level). Table 6-1 and Table 6-2 show the claims for which ICA (and summative) Claim scores are reported in, respectively, ELA/Literacy and Mathematics. It should be noted that claims 2 and 4 in mathematics are combined into a single reporting category.

TABLE 6-1 ENGLISH LANGUAGE ARTS/LITERACY CLAIMS

Claim #1- Reading • Students can read closely and analytically to comprehend a range of increasingly complex literary and informational texts.
Claim #2- Writing • Students can produce effect and well-grounded writing for a range of purposes and audiences.
Claim #3- Speaking and Listening • Students can employ effective speaking and listening skills for a range of purposes and audiences. At this time, only listening is assessed.
Claim #4- Research • Students can engage in research /inquiry to investigate topics and to analyze, integrate, and present information.

TABLE 6-2 MATHEMATICS CLAIMS AND SCORE REPORTING CATEGORIES

Claim #1- Concepts and Procedures • Students can explain and apply mathematical concepts and interpret and carry out mathematical procedures with precision and fluency.
Claim #2- Problem Solving/ Claim #4- Modeling and Data Analysis • Students can solve a range of complex well-posed problems in pure and applied mathematics, making productive use of knowledge and problem solving strategies. Students can analyze complex, real-world scenarios and can construct and use mathematical models to interpret and solve problems • Students can analyze complex, real-world scenarios and can construct and use mathematical models to interpret and solve problems
Claim #3- Communicating Reasoning • Students can clearly and precisely construct viable arguments to support their own reasoning and to critique the reasoning of others.

Other than the level 2 cut score serving as the 'standard' for the reporting categories (above, below, or at/near standard), achievement levels per se are not used in reporting ICA Claim scores and IAB overall scores.

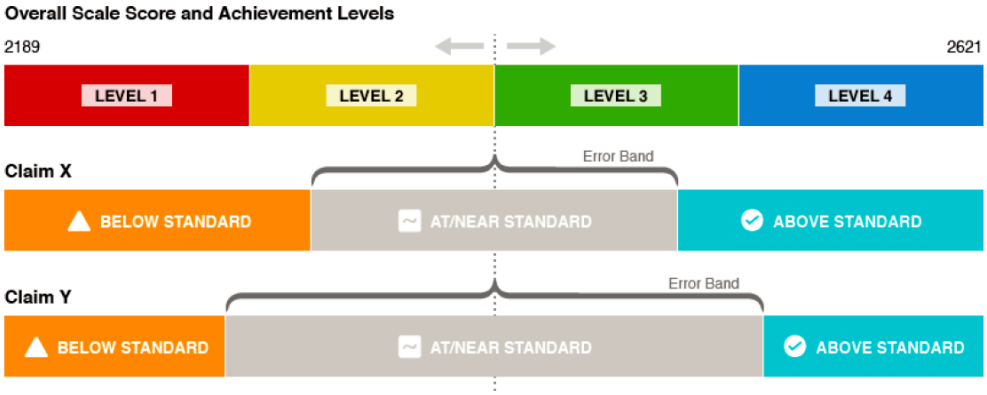
The measurement error associated with ICA Claim scores and IAB overall scores is not reported directly, but is used to classify the student's performance into the reporting categories. To classify a student's performance into one of the three reporting categories, an error band is defined that extends 1.5 times the student's score's SEM above and below the level 2 cut score. Table 6-3 shows how the student's performance is then classified based on where the student's score sits with respect to this error band.

TABLE 6-3 IAB OVERALL SCORE AND ICA CLAIM-SCORE REPORTING CATEGORIES

Above Standard	Score is > 1.5 SEMs above the Level 2/3 cut score
At or Near Standard	The Level 2/3 cut score falls within an error band of +/- 1.5 SEMs around the sub-score
Below Standard	Score is > 1.5 SEMs below the Level 2/3 cut score

Another way to understand this classification procedure is portrayed in the graphic below. Instead of using error bands, it shows the reporting level area that would result from a scale score and SEM.

FIGURE 6-3 PORTRAYAL OF IAB SCORE AND ICA SUB-SCORE REPORTING. FROM REPORTING SYSTEM USER GUIDE, PP.116-117.



Although IAB overall scores and ICA Claim scores are portrayed in Smarter Balanced reports using the three reporting categories (also called "traffic-light" indicators), Claim-level scale scores and SEMs are available to members in the data provided from their vendors. Members may use these in local reporting systems.

Reporting for IABs is focused on communicating the block-level results for a list of students by assessment grade, and for individual student reporting. Like the ICA, IAB results are not aggregated. As some interim items are locally scored, educators will see individual student responses to hand-scored items through the Scoring component. A single Individual student report is provided for all the interim block assessments that a student has taken in a given academic year.

Educators, students, parents and guardians may use the Individual Student reports as one indicator to understand a student's achievement, progress toward mastery of the Common Core State Standards and attainment of the academic knowledge and skills required to be college and career-ready. The report may provide context for a parent-teacher conference or, together with other instructional data, may help to identify areas for instructional focus.

ICA Claim scores are reported as shown in Figure 6-4 below.

FIGURE 6-4 ILLUSTRATION OF ICA CLAIM-SCORE REPORTING ON INDIVIDUAL STUDENT REPORTS

Types of Reports

The Smarter Balanced reporting system is an interactive, online reporting platform that provides a range of interim reports. Educators can log into the system to create reports. They can use their own labels for Achievement Levels and their own student groups if desired.

Individual Student Reports

There is one type of report available for the interim assessments: Individual student reports (ISRs). The ISR will be described briefly here, but the reader is urged to consult the Smarter Balanced *Reporting System User Guide* (Smarter Balanced, 2016) for more detail. The ISRs present individual student assessment scores, SEMs and achievement levels. They also display the reporting categories for claim-score results as illustrated above. The scores and descriptions provide context for understanding what the assessment has measured and how to interpret the scores and sub-scores. Teachers, students and parents use this report to understand a student's achievement and progress toward mastery of the CCSS. The report may be part of a larger set of information that provides context for instructional focus. Individual Student Reports can be downloaded as PDF files for easy printing and distribution to parents.

Data Downloads

In addition to the predesigned reports, the Smarter Balanced open-source reporting system offers authorized users the ability to download data for distribution or further review and analysis in external systems. User authorization is closely controlled for ISRs and personally identifiable information (PII) in files. The list of available data downloads appears below. Note that these downloads assume that members have loaded data into the Smarter Balanced Data Warehouse. In practice, many members get this information directly from test delivery service providers and do not go through the Data Warehouse.

FIGURE 6-5 DATA DOWNLOAD OPTIONS

Download Type	Description
Student Assessment Results	This is a bulk download of the assessment results for the selected assessment, with one row per student-assessment. The resulting files contain all of the data for Overall and Claim scores (e.g., scale score, error band, level determination), as well as all the student data (e.g., demographics, grade/school/district/state attribution, etc.) for the specific summative or interim assessment being viewed.
Printable Student Reports	Printable versions of list and aggregate reports
State Download: Student Registration Statistics	This download shows statistics of registration records for a specified academic year and compares them to those of previous years to detect errors. This download is primarily intended for Consortium, state, and district administrators.
State Download: Assessment Completion Statistics	For a specified assessment administration, this download provides counts of registered and assessed students and percentages of students assessed. This enables an administrator to review how many of the registered students have been assessed.
State Download: Audit XML	This download ensures that all information for a given student assessment is maintained, including usage reports for Universal Tools and Designated Supports, as well as any additional data provided by a Test Delivery System

References

Smarter Balanced Assessment Consortium. (2017, July) *Reporting Achievement Level Descriptors*. Available to the public from: https://portal.smarterbalanced.org/library/achievement-level-descriptors/

Smarter Balanced Assessment Consortium. (2016, March). *Reporting System User Guide.* (Version 2.2[6]) Los Angeles, CA: Author. Retrieved from https://portal.smarterbalanced.org/library/reporting-system-user-guide/

Smarter Balanced Assessment Consortium. (2014, November). *Interpretation and Use of Scores and Achievement Levels.* Version 1.0. Los Angeles, CA: Author. Retrieved from https://portal.smarterbalanced.org/library/interpretation-and-use-of-scores-and-achievement-levels/

[6] This document is updated regularly and more recent versions may not be applicable to the 2016-2017 interim reporting system.

Appendix A: 2016-17 ELA/Literacy ICA Blueprints

Grade 3 NON-PT ICA: Claim 1					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Reading (Literary)	**1. Key Details**	1,2	2	0	2
	2. Central Ideas	2	2	0	2
	3. Word Meaning	1,2	1	0	1
	4. Reasoning & Evidence	3	1	1	2
	5. Analysis within or across Texts	3,4	1	0	1
	6. Text Structures & Features	2,3	1	0	1
	7. Language Use	2,3	1	0	1
Reading (Informational)	**8. Key Details**	1,2	0	0	0
	9. Central Ideas	2	3	1	4
	10. Word Meanings	1,2	1	0	1
	11. Reasoning & Evidence	3	1	0	1
	12. Analysis within or across Texts	3,4	1	0	1
	13. Text Structures or Text Features	2,3	1	0	1
	14. Language Use	2,3	2	0	2
				TOTAL ITEMS	**20**

Grade 3 NON-PT ICA: Claim 2					
Claim	**Assessment Target**	**DOK**	**Items**		**Total Items**
			Machine Scored	**Hand Scored**	
Writing	**1a. Write Brief Texts (Narrative)**	3	0	1	1
	3a. Write Brief Texts (Informational)	3	0	0	0
	6a. Write Brief Texts (Opinion)	3	0	0	0
	1b. Revise Brief Texts (Narrative)	2	0	0	0
	3b. Revise Brief Texts (Informational)	2	1	0	1
	6b. Revise Brief Texts (Opinion)	2	1	0	1
	8. Language and Vocabulary Use	1,2	2	0	2
	9. Edit	1,2	4	0	4
				TOTAL ITEMS	**9**

Grade 3 NON-PT ICA: Claim 3					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Listening	**4. Listen/Interpret**	1,2,3	9	0	9
				TOTAL ITEMS	**9**

Grade 3 NON-PT ICA: Claim 4					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Research	**2. Interpret & Integrate Information**	2	2	0	2
	3. Analyze Information/Sources	2	2	0	2
	4. Use Evidence	2	1	0	1
				TOTAL ITEMS	**5**

Grade 3 ICA PT					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Writing	**2. Compose Full Texts – Narrative**	4	0	0	0
	4. Compose Full Texts – Informational	4	0	0	0
	7. Compose Full Texts - Opinion	4	0	1→3[1]	3→2[2]
Research	**2. Interpret & Integrate Information**	3	0	1	1
	3. Analyze Information/Sources	3	0	0	0
	4. Use Evidence	3	1	1	2
				TOTAL ITEMS	**5**

[1] There is a single student response to a single prompt, but the response is scored on three distinct traits: Evidence/Elaboration, Organization/Purpose, and Conventions.

[2] For measurement purposes, the scores on three traits are represented as two items. The first item is the rounded-up average of the first two traits and is worth 4 points. The second item is the score for Conventions and is worth 2 points.

Grade 4 NON-PT ICA: Claim 1					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Reading (Literary)	**1. Key Details**	1,2	1	0	1
	2. Central Ideas	2	2	0	2
	3. Word Meaning	1,2	2	0	2
	4. Reasoning & Evidence	3	1	1	2
	5. Analysis within or across Texts	3,4	0	0	0
	6. Text Structures & Features	2,3	1	0	1
	7. Language Use	2,3	2	0	2
Reading (Informational)	**8. Key Details**	1,2	2	0	2
	9. Central Ideas	2	0	1	1
	10. Word Meanings	1,2	2	0	2
	11. Reasoning & Evidence	3	2	0	2
	12. Analysis within or across Texts	3,4	0	0	0
	13. Text Structures or Text Features	2,3	2	0	2
	14. Language Use	2,3	1	0	1
				TOTAL ITEMS	**20**

Grade 4 NON-PT ICA: Claim 2					
Claim	**Assessment Target**	**DOK**	**Items**		**Total Items**
			Machine Scored	**Hand Scored**	
Writing	**1a. Write Brief Texts (Narrative)**	3	0	1	1
	3a. Write Brief Texts (Informational)	3	0	0	0
	6a. Write Brief Texts (Opinion)	3	0	0	0
	1b. Revise Brief Texts (Narrative)	2	1	0	1
	3b. Revise Brief Texts (Informational)	2	1	0	1
	6b. Revise Brief Texts (Opinion)	2	0	0	0
	8. Language and Vocabulary Use	1,2	2	0	2
	9. Edit	1,2	5	0	5
				TOTAL ITEMS	**10**

Grade 4 NON-PT ICA: Claim 3					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Listening	**4. Listen/Interpret**	1,2,3	9	0	9
				TOTAL ITEMS	**9**

Grade 4 NON-PT ICA: Claim 4					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Research	**2. Interpret & Integrate Information**	2	2	0	2
	3. Analyze Information/Sources	2	2	0	2
	4. Use Evidence	2	1	0	1
				TOTAL ITEMS	**5**

Grade 5 NON-PT ICA: Claim 1					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Reading (Literary)	**1. Key Details**	1,2	1	0	1
	2. Central Ideas	2	0	1	1
	3. Word Meaning	1,2	3	0	3
	4. Reasoning & Evidence	3	1	0	1
	5. Analysis within or across Texts	3,4	1	0	1
	6. Text Structures & Features	2,3	1	0	1
	7. Language Use	2,3	1	0	1
Reading (Informational)	**8. Key Details**	1,2	2	0	2
	9. Central Ideas	2	1	0	1
	10. Word Meanings	1,2	1	0	1
	11. Reasoning & Evidence	3	2	1	3
	12. Analysis within or across Texts	3,4	1	0	1
	13. Text Structures or Text Features	2,3	1	0	1
	14. Language Use	2,3	1	0	1
				TOTAL ITEMS	**19**

Grade 5 NON-PT ICA: Claim 2					
Claim	**Assessment Target**	**DOK**	**Items**		**Total Items**
			Machine Scored	**Hand Scored**	
Writing	**1a. Write Brief Texts (Narrative)**	3	0	0	0
	3a. Write Brief Texts (Informational)	3	0	0	0
	6a. Write Brief Texts (Opinion)	3	0	1	1
	1b. Revise Brief Texts (Narrative)	2	0	0	0
	3b. Revise Brief Texts (Informational)	2	2	0	2
	6b. Revise Brief Texts (Opinion)	2	0	0	0
	8. Language and Vocabulary Use	1,2	2	0	2
	9. Edit	1,2	5	0	5
				TOTAL ITEMS	**10**

Grade 5 NON-PT ICA: Claim 3					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Listening	**4. Listen/Interpret**	1,2,3	9	0	9
				TOTAL ITEMS	**9**

Grade 5 NON-PT ICA: Claim 4					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Research	**2. Interpret & Integrate Information**	2	2	0	2
	3. Analyze Information/Sources	2	2	0	2
	4. Use Evidence	2	1	0	1
				TOTAL ITEMS	**5**

Grade 5 ICA PT					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Writing	**2. Compose Full Texts – Narrative**	4	0	1→3[3]	3→2[4]
	4. Compose Full Texts – Informational	4	0	0	0
	7. Compose Full Texts - Opinion	4	0	0	0
Research	**2. Interpret & Integrate Information**	3	1	1	2
	3. Analyze Information/Sources	3	0	0	0
	4. Use Evidence	3	0	1	1
				TOTAL ITEMS	**5**

[3] There is a single student response to a single prompt, but the response is scored on three distinct traits: Evidence/Elaboration, Organization/Purpose, and Conventions.

[4] For measurement purposes, the scores on three traits are represented as two items. The first item is the rounded-up average of the first two traits and is worth 4 points. The second item is the score for Conventions and is worth 2 points.

Grade 6 NON-PT ICA: Claim 1					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Reading (Literary)	**1. Key Details**	1,2	0	0	0
	2. Central Ideas	2	1	1	2
	3. Word Meaning	1,2	3	0	3
	4. Reasoning & Evidence	3	1	0	1
	5. Analysis within or across Texts	3,4	1	0	1
	6. Text Structures & Features	2,3	2	0	2
	7. Language Use	2,3	0	0	0
Reading (Informational)	**8. Key Details**	1,2	2	0	2
	9. Central Ideas	2	2	1	3
	10. Word Meanings	1,2	2	0	2
	11. Reasoning & Evidence	3	1	0	1
	12. Analysis within or across Texts	3,4	0	0	0
	13. Text Structures or Text Features	2,3	1	0	1
	14. Language Use	2,3	3	0	3
				TOTAL ITEMS	**21**

Grade 6 NON-PT ICA: Claim 2					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Writing	**1a. Write Brief Texts (Narrative)**	3	0	1	1
	3a. Write Brief Texts (Explanatory)	3	0	0	0
	6a. Write Brief Texts (Argumentative)	3	0	0	0
	1b. Revise Brief Texts (Narrative)	2	1	0	1
	3b. Revise Brief Texts (Explanatory)	2	1	0	1
	6b. Revise Brief Texts (Argumentative)	2	0	0	0
	8. Language and Vocabulary Use	1,2	3	0	3
	9. Edit	1,2	4	0	4
				TOTAL ITEMS	**10**

Grade 6 NON-PT ICA: Claim 3					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Listening	**4. Listen/Interpret**	1,2,3	9	0	9
				TOTAL ITEMS	**9**

Grade 6 NON-PT ICA: Claim 4					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Research	**2. Interpret & Integrate Information**	2	2	0	2
	3. Analyze Information/Sources	2	1	0	2
	4. Use Evidence	2	2	0	2
				TOTAL ITEMS	**5**

Grade 6 ICA PT					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Writing	**2. Compose Full Texts – Narrative**	4	0	0	0
	4. Compose Full Texts – Explanatory	4	0	0	0
	7. Compose Full Texts – Argumentative	4	0	1→3[5]	3→2[6]
Research	**2. Interpret & Integrate Information**	3	0	1	1
	3. Analyze Information/Sources	3	0	0	0
	4. Use Evidence	3	0	1	1
				TOTAL ITEMS	**4**

[5] There is a single student response to a single prompt, but the response is scored on three distinct traits: Evidence/Elaboration, Organization/Purpose, and Conventions.

[6] For measurement purposes, the scores on three traits are represented as two items. The first item is the rounded-up average of the first two traits and is worth 4 points. The second item is the score for Conventions and is worth 2 points.

Grade 7 NON-PT ICA: Claim 1					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Reading (Literary)	**1. Key Details**	1,2	0	0	0
	2. Central Ideas	2	1	0	1
	3. Word Meaning	1,2	1	0	1
	4. Reasoning & Evidence	3	1	1	2
	5. Analysis within or across Texts	3,4	1	0	1
	6. Text Structures & Features	2,3	2	0	2
	7. Language Use	2,3	1	0	1
Reading (Informational)	**8. Key Details**	1,2	4	0	4
	9. Central Ideas	2	2	0	2
	10. Word Meanings	1,2	1	0	1
	11. Reasoning & Evidence	3	2	1	3
	12. Analysis within or across Texts	3,4	0	0	0
	13. Text Structures or Text Features	2,3	1	0	1
	14. Language Use	2,3	1	0	1
				TOTAL ITEMS	**20**

Grade 7 NON-PT ICA: Claim 2					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Writing	**1a. Write Brief Texts (Narrative)**	3	0	1	1
	3a. Write Brief Texts (Explanatory)	3	0	0	0
	6a. Write Brief Texts (Argumentative)	3	0	0	0
	1b. Revise Brief Texts (Narrative)	2	1	0	1
	3b. Revise Brief Texts (Explanatory)	2	0	0	0
	6b. Revise Brief Texts (Argumentative)	2	1	0	1
	8. Language and Vocabulary Use	1,2	2	0	2
	9. Edit	1,2	5	0	5
				TOTAL ITEMS	**10**

Grade 7 NON-PT ICA: Claim 3					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Listening	**4. Listen/Interpret**	1,2,3	9	0	9
				TOTAL ITEMS	**9**

Grade 7 NON-PT ICA: Claim 4					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Research	**2. Interpret & Integrate Information**	2	3	0	3
	3. Analyze Information/Sources	2	1	0	1
	4. Use Evidence	2	1	0	1
				TOTAL ITEMS	**5**

Grade 7 ICA PT					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Writing	**2. Compose Full Texts – Narrative**	4	0	0	0
	4. Compose Full Texts – Explanatory	4	0	1→3[7]	3→2[8]
	7. Compose Full Texts - Argumentative	4	0	0	0
Research	**2. Interpret & Integrate Information**	3	0	1	1
	3. Analyze Information/Sources	3	0	0	0
	4. Use Evidence	3	1	1	2
				TOTAL ITEMS	**5**

[7] There is a single student response to a single prompt, but the response is scored on three distinct traits: Evidence/Elaboration, Organization/Purpose, and Conventions.

[8] For measurement purposes, the scores on three traits are represented as two items. The first item is the rounded-up average of the first two traits and is worth 4 points. The second item is the score for Conventions and is worth 2 points.

Grade 8 NON-PT ICA: Claim 1					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Reading (Literary)	**1. Key Details**	1,2	2	0	2
	2. Central Ideas	2	0	0	0
	3. Word Meaning	1,2	1	0	1
	4. Reasoning & Evidence	3	1	1	2
	5. Analysis within or across Texts	3,4	0	0	0
	6. Text Structures & Features	2,3	1	0	1
	7. Language Use	2,3	2	0	2
Reading (Informational)	**8. Key Details**	1,2	4	0	4
	9. Central Ideas	2	2	0	2
	10. Word Meanings	1,2	2	0	2
	11. Reasoning & Evidence	3	2	1	3
	12. Analysis within or across Texts	3,4	1	0	1
	13. Text Structures or Text Features	2,3	0	0	0
	14. Language Use	2,3	1	0	1
				TOTAL ITEMS	**21**

Grade 8 NON-PT ICA: Claim 2					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Writing	**1a. Write Brief Texts (Narrative)**	3	0	0	0
	3a. Write Brief Texts (Explanatory)	3	0	0	0
	6a. Write Brief Texts (Argumentative)	3	0	1	1
	1b. Revise Brief Texts (Narrative)	2	2	0	2
	3b. Revise Brief Texts (Explanatory)	2	0	0	0
	6b. Revise Brief Texts (Argumentative)	2	0	0	0
	8. Language and Vocabulary Use	1,2	2	0	2
	9. Edit	1,2	5	0	5
				TOTAL ITEMS	**10**

Grade 8 NON-PT ICA: Claim 3					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Listening	**4. Listen/Interpret**	1,2,3	9	0	9
				TOTAL ITEMS	**9**

Grade 8 NON-PT ICA: Claim 4					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Research	**2. Interpret & Integrate Information**	2	1	0	1
	3. Analyze Information/Sources	2	2	0	2
	4. Use Evidence	2	2	0	2
				TOTAL ITEMS	**5**

Grade 8 ICA PT					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Writing	**2. Compose Full Texts – Narrative**	4	0	0	0
	4. Compose Full Texts – Explanatory	4	0	1→3[9]	3→2[10]
	7. Compose Full Texts - Argumentative	4	0	0	0
Research	**2. Interpret & Integrate Information**	3	0	1	1
	3. Analyze Information/Sources	3	0	0	0
	4. Use Evidence	3	1	1	2
				TOTAL ITEMS	**5**

[9] There is a single student response to a single prompt, but the response is scored on three distinct traits: Evidence/Elaboration, Organization/Purpose, and Conventions.

[10] For measurement purposes, the scores on three traits are represented as two items. The first item is the rounded-up average of the first two traits and is worth 4 points. The second item is the score for Conventions and is worth 2 points.

Grade 11 NON-PT ICA: Claim 1					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Reading (Literary)	**1. Key Details**	1,2	0	0	0
	2. Central Ideas	2	0	0	0
	3. Word Meaning	1,2	1	0	1
	4. Reasoning & Evidence	3	1	1	2
	5. Analysis within or across Texts	3,4	0	0	0
	6. Text Structures & Features	2,3	1	0	1
	7. Language Use	2,3	2	0	2
Reading (Informational)	**8. Key Details**	1,2	4	0	4
	9. Central Ideas	2	1	1	2
	10. Word Meanings	1,2	3	0	3
	11. Reasoning & Evidence	3	2	0	2
	12. Analysis within or across Texts	3,4	0	0	0
	13. Text Structures or Text Features	2,3	0	0	0
	14. Language Use	2,3	2	0	2
				TOTAL ITEMS	**19**

Grade 11 NON-PT ICA: Claim 2					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Writing	**1a. Write Brief Texts (Narrative)**	3	0	0	0
	3a. Write Brief Texts (Explanatory)	3	0	1	1
	6a. Write Brief Texts (Argumentative)	3	0	0	0
	1b. Revise Brief Texts (Narrative)	2	1	0	1
	3b. Revise Brief Texts (Explanatory)	2	0	0	0
	6b. Revise Brief Texts (Argumentative)	2	0	0	0
	8. Language and Vocabulary Use	1,2	2	0	2
	9. Edit	1,2	5	0	5
				TOTAL ITEMS	**9**

Grade 11 NON-PT ICA: Claim 3					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Listening	**4. Listen/Interpret**	1,2,3	9	0	9
				TOTAL ITEMS	**9**

Grade 11 NON-PT ICA: Claim 4					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Research	**2. Interpret & Integrate Information**	2	2	0	2
	3. Analyze Information/Sources	2	1	0	1
	4. Use Evidence	2	2	0	2
				TOTAL ITEMS	**5**

Grade 11 ICA PT					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Hand Scored	
Writing	**4. Compose Full Texts – Explanatory**	4	0	1→3[11]	3→2[12]
	7. Compose Full Texts – Argumentative	4	0	0	0
Research	**2. Interpret & Integrate Information**	3	0	1	1
	3. Analyze Information/Sources	3	0	0	0
	4. Use Evidence	3	0	1	2
				TOTAL ITEMS	**5**

[11] There is a single student response to a single prompt, but the response is scored on three distinct traits: Evidence/Elaboration, Organization/Purpose, and Conventions.

[12] For measurement purposes, the scores on three traits are represented as two items. The first item is the rounded-up average of the first two traits and is worth 4 points. The second item is the score for Conventions and is worth 2 points.

Appendix B: 2016-17 Mathematics ICA Blueprints

Mathematics Grade 3						
Claim	**Content Category**	**Assessment Targets**	**DOK**	**Items**		**Total Items**
				NON-PT	**PT**	
1. Concepts and Procedures	Priority Cluster	B. Understand properties of multiplication and the relationship between multiplication and division.	1	6	0	20
		C. Multiply and divide within 100.	1			
		I. Geometric measurement: understand concepts of area and relate area to multiplication and to addition.	1, 2			
		G. Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.	1, 2			
		D. Solve problems involving the four operations, and identify and explain patterns in arithmetic.	2	6		
		F. Develop understanding of fractions as numbers.	1, 2			
		A. Represent and solve problems involving multiplication and division.	1, 2	3		
	Supporting Cluster	E. Use place value understanding and properties of operations to perform multi-digit arithmetic.	1	4		
		J. Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.	1			
		K. Reason with shapes and their attributes.	1,2			
		H. Represent and interpret data.	2,3	1		

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.

Mathematics Grade 3						
Claim	**Content Category**	**Assessment Targets**	**DOK**	**Items**		**Total Items**
				NON-PT	**PT**	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving (drawn across content domains)	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2	9
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3	1		
	Modeling and Data Analysis (drawn across content domains)	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	2	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4	1		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3	1		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4	0		
3. Communicating Reasoning	Communicating Reasoning (drawn across content domains)	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	2	8
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4	2		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3	2		

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.

Mathematics Grade 4						
Claim	**Content Category**	**Assessment Targets**	**DOK**	**Items**		**Total Items**
				NON-	**PT**	
1. Concepts and Procedures	Priority Cluster	A. Use the four operations with whole numbers to solve problems.	1, 2	9	0	20
		E. Use place value understanding and properties of operations to perform multi-digit arithmetic.	1, 2			
		F. Extend understanding of fraction equivalence and ordering.	1, 2			
		G. Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.	1, 2	3		
		D. Generalize place value understanding for multi-digit whole numbers.	1, 2	2		
		H. Understand decimal notation for fractions, and compare decimal fractions.	1, 2	1		
	Supporting Cluster	I. Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.	1, 2	3		
		K. Geometric measurement: understand concepts of angle and measure angles.	1, 2			
		B. Gain familiarity with factors and multiples.	1, 2	1		
		C. Generate and analyze patterns.	2, 3			
		J. Represent and interpret data.	1, 2			
		L. Draw and identify lines and angles, and classify shapes by properties of their lines and angles.	1, 2	1		

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.

Mathematics Grade 4						
Claim	**Content Category**	**Assessment Targets**	**DOK**	**Items**		**Total Items**
				NON-PT	**PT**	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving (drawn across content domains)	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2	9
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3	1		
	Modeling and Data Analysis (drawn across content domains)	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	2	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4	2		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3	0		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4	0		
3. Communicating Reasoning	Communicating Reasoning (drawn across content domains)	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	1	2	7
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4	1		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3	3		

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.

Mathematics Grade 5						
Claim	**Content Category**	**Assessment Targets**	**DOK**	**Items**		**Total Items**
				NON PT	**PT**	
1. Concepts and Procedures	Priority Cluster	E. Use equivalent fractions as a strategy to add and subtract fractions.	1, 2	6	0	20
		I. Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	1, 2			
		F. Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	1, 2	5		
		D. Perform operations with multi-digit whole numbers and with decimals to hundredths.	1, 2	4		
		C. Understand the place value system.	1, 2			
	Supporting Cluster	J. Graph points on the coordinate plane to solve real-world and mathematical problems.	1	3		
		K. Classify two-dimensional figures into categories based on their properties.	2			
		A. Write and interpret numerical expressions.	1	2		
		B. Analyze patterns and relationships.	2			
		G. Convert like measurement units within a given measurement system.	1			
		H. Represent and interpret data.	1, 2			

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.

Mathematics Grade 5						
Claim	**Content Category**	**Assessment Targets**	**DOK**	**Items**		**Total Items**
				NON-PT	**PT**	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving (drawn across content domains)	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2	9
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3	1		
	Modeling and Data Analysis (drawn across content domains)	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	0	2	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4	2		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3	1		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4	0		
3. Communicating Reasoning	Communicating Reasoning (drawn across content domains)	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	2	8
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4	2		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3	2		

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.

Mathematics Grade 6						
Claim	**Content Category**	**Assessment Targets**	**DOK**	**Items**		**Total Items**
				NON-PT	**PT**	
1. Concepts and Procedures	Priority Cluster	E. Apply and extend previous understandings of arithmetic to algebraic expressions.	1	6	0	19
		F. Reason about and solve one-variable equations and inequalities.	1, 2			
		A. Understand ratio concepts and use ratio reasoning to solve problems.	1, 2	4		
		G. Represent and analyze quantitative relationships between dependent and independent variables.	2	2		
		B. Apply and extend previous understandings of multiplication and division to divide fractions by fractions.	1, 2			
		D. Apply and extend previous understandings of numbers to the system of rational numbers.	1, 2	2		
	Supporting Cluster	C. Compute fluently with multi-digit numbers and find common factors and multiples.	1, 2	5		
		H. Solve real-world and mathematical problems involving area, surface area, and volume.	1, 2			
		I. Develop understanding of statistical variability.	2			
		J. Summarize and describe distributions.	1, 2			

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.

Mathematics Grade 6						
Claim	**Content Category**	**Assessment Targets**	**DOK**	**Items**		**Total Items**
				NON-PT	**PT**	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving (drawn across content domains)	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	3	2	9
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3	1		
	Modeling and Data Analysis (drawn across content domains)	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	0	2	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4	0		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3	1		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4	0		
3. Communicating Reasoning	Communicating Reasoning (drawn across content domains)	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	2	8
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4	2		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3	2		

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.

Mathematics Grade 7						
Claim	**Content Category**	**Assessment Targets**	**DOK**	**Items**		**Total Items**
				NON-PT	**PT**	
1. Concepts and Procedures	Priority Cluster	A. Analyze proportional relationships and use them to solve real-world and mathematical problems.	2	9	0	20
		D. Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	1, 2			
		B. Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	1, 2	5		
		C. Use properties of operations to generate equivalent expressions.	1, 2			
	Supporting Cluster	E. Draw, construct, and describe geometrical figures and describe the relationship between them.	1, 2	3		
		F. Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	1, 2			
		G. Use random sampling to draw inferences about a population.	1, 2	3		
		H. Draw informal comparative inferences about two populations.	2			
		I. Investigate chance processes and develop, use, and evaluate probability models.	1, 2			
		J. Summarize and describe distributions.	1, 2			

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.

Mathematics Grade 7						
Claim	**Content Category**	**Assessment Targets**	**DOK**	**Items**		**Total Items**
				NON-PT	**PT**	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving (drawn across content domains)	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	2	2	9
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3	0		
	Modeling and Data Analysis (drawn across content domains)	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	2	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4	1		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3	1		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4	0		
3. Communicating Reasoning	Communicating Reasoning (drawn across content domains)	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	2	8
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4	2		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3	2		

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.

Mathematics Grade 8						
Claim	**Content Category**	**Assessment Targets**	**DOK**	**Items**		**Total Items**
				NON-PT	**PT**	
1. Concepts and Procedures	Priority Cluster	C. Understand the connections between proportional relationships, lines, and linear equations.	1, 2	6	0	20
		D. Analyze and solve linear equations and pairs of simultaneous linear equations.	1, 2			
		B. Work with radicals and integer exponents.	1, 2	6		
		E. Define, evaluate, and compare functions.	1, 2			
		G. Understand congruence and similarity using physical models, transparencies, or geometry software.	1, 2			
		F. Use functions to model relationships between quantities.	1, 2	3		
		H. Understand and apply the Pythagorean Theorem.	1, 2			
	Supporting Cluster	A. Know that there are numbers that are not rational, and approximate them by rational numbers.	1, 2	5		
		I. Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.	1, 2			
		J. Investigate patterns of association in bivariate data.	1, 2			

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.

Mathematics Grade 8						
Claim	**Content Category**	**Assessment Targets**	**DOK**	**Items**		**Total Items**
				NON-PT	**PT**	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving (drawn across content domains)	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2	9
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3	2		
	Modeling and Data Analysis (drawn across content domains)	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	2	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4	0		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3	1		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4	0		
3. Communicating Reasoning	Communicating Reasoning (drawn across content domains)	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	1	2	8
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4	3		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3	2		

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.

Mathematics Grade 11						
Claim	**Content Category**	**Assessment Targets**	**DOK**	**Items**		**Total Items**
				NON-PT	**PT**	
1. Concepts and Procedures	Priority Cluster	D. Interpret the structure of expressions.	1, 2	1	0	21
		E. Write expressions in equivalent forms to solve problems.	1, 2			
		F. Perform arithmetic operations on polynomials.	2	1		
		G. Create equations that describe numbers or relationships.	1, 2	5		
		H. Understand solving equations as a process of reasoning and explain the reasoning.	1, 2			
		I. Solve equations and inequalities in one variable.	1, 2			
		J. Represent and solve equations and inequalities graphically.	1, 2	2		
		K. Understand the concept of a function and use function notation.	1, 2	1		
		L. Interpret functions that arise in applications in terms of a context.	1, 2	5		
		M. Analyze functions using different representations.	1, 2, 3			
		N. Build a function that models a relationship between two quantities.	2			
	Supporting Cluster	O. Define trigonometric ratios and solve problems involving right triangles.	1, 2	2		
		P. Summarize, represent, and interpret data on a single count or measurement variable.	2	2		
		A. Extend the properties of exponents to rational exponents.	1, 2	1		
		B. Use properties of rational and irrational numbers.	1, 2			
		C. Reason quantitatively and use units to solve problems.	1, 2	1		

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.

Mathematics Grade 11						
Claim	**Content Category**	**Assessment Targets**	**DOK**	**Items**		**Total Items**
				NON-PT	**PT**	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving (drawn across content domains)	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	1	9
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3	1		
	Modeling and Data Analysis (drawn across content domains)	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	3	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4	1		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3	1		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4	0		
3. Communicating Reasoning	Communicating Reasoning (drawn across content domains)	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	2	8
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4	1		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3	3		

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.

Appendix C: 2016-17 ELA/Literacy IAB Blueprints

The Smarter Balanced Interim Assessment Blocks (IABs) are one of two distinct types of interim assessments being made available by the Consortium; the other type is the Interim Comprehensive Assessment (ICAs). IABs are short, focused sets or blocks of items that measure one or more assessment targets. Results from these assessments provide information about a student's strengths or needs in relation to the Common Core State Standards (CCSS) and, therefore, generate more detailed information for instructional purposes than the summative or ICAs alone. The IABs are currently available as fixed forms. The fixed forms are administered online, using the same delivery software as the summative assessments.

This blueprint presents the specific blocks that are available by grade level for English Language Arts/literacy beginning at grade 3 and continuing through high school. Each block-level blueprint contains information about claim(s), assessment target(s), and depth of knowledge level(s) addressed by the items in that block as well as the numbers of items allocated to each of those categories. Other more subject-specific information is also included. For example, this blueprint incorporates details on passage length (claim 1 reading) and scoring of responses.

The blueprint can be used by educators to plan how to integrate the IABs effectively within classroom instruction or to better understand results that are reported. Users of the blueprint can become familiar with the number of IABs for each grade level, the general focus of each IAB, (i.e. which assessment targets are addressed in a specific IAB and the emphasis of each target relative to the other targets in the block). A fifth-grade English Language Arts/literacy teacher, for example, may wish to determine what practice students need in writing informational texts. The teacher would see that there is a block on revising texts composed of fifteen machined-scored items across three assessment targets—revising narrative, informational, and opinion texts—and another brief-write block composed of six items requiring hand scoring across the same three writing purposes. A third option would be to administer a performance task that deals solely with research and informational writing that is also hand scored. Given the differences in class time required and the amount of time needed to score blocks, the teacher would decide which blocks best meet the instructional needs of the class.

Finally, educators can use this blueprint in conjunction with the summative and ICA blueprints to support more comprehensive classroom-level instructional and assessment plans.

Summary of ELA/Literacy Interim Assessment Blocks: Grades 3–5

SUMMARY: GRADES 3–5		
Block Number	**Block Name**	**Number of Items**
1	Read Literary Texts	15
2	Read Informational Texts	14-16
3	Brief Writes	6
4[1]	Revision	15
5[1]	Language and Vocabulary Use	15
6[1]	Editing	14-15
7	Listen/Interpret	14-15
8[2]	Research	18
9	Informational Performance Task	NA[3]
10	Opinion Performance Task	5 (grade 3)
11	Narrative Performance Task	5 (grade 4,5)

[1] New block for 2016-2017

[2] Block contains new items for 2016-2017

[3] This block is not provided for 2016-2017 – it is a placeholder for a block to be provided in the future.

Summary of ELA/Literacy Interim Assessment Blocks: Grades 6–7

SUMMARY: GRADES 6–7		
Block Number	**Block Name**	**Number of Items**
1	Read Literary Texts	15-16
2	Read Informational Texts	16
3	Brief Writes	6
4[4]	Revision	15
5[4]	Language and Vocabulary Use	15
6[4]	Editing	14-15
7	Listen/Interpret	15
8[5]	Research	18
9	Explanatory Performance Task	6 (grade 7)
10	Argument Performance Task	5 (grade 6)
11	Narrative Performance Task	NA[6]

[4] New block for 2016-2017

[5] Block contains new items for 2016-2017

[6] This block is not provided for 2016-2017 – it is a placeholder for a block to be provided in the future.

Summary of ELA/Literacy Interim Assessment Blocks: Grade 8

SUMMARY: GRADE 8		
Block Number	**Block Name**	**Number of Items**
1	Read Literary Texts	16
2	Read Informational Texts	16
3	Brief Writes	6
4	Edit/Revise	14
5	Listen/Interpret	15
8[7]	Research	18
7	Explanatory Performance Task	6
8	Argument Performance Task	NA[8]
9	Narrative Performance Task	NA[8]

[7] Block contains new items for 2016-2017

[8] This block is not provided for 2016-2017 – it is a placeholder for a block to be provided in the future.

Summary of ELA/Literacy Interim Assessment Blocks: High School

SUMMARY: High School		
Block Number	**Block Name**	**Number of Items**
1	Read Literary Texts	16
2	Read Informational Texts	15
3	Brief Writes	6
4[9]	Revision	15
5[9]	Language and Vocabulary Use	15
6[9]	Editing	15
7	Listen/Interpret	15
8[10]	Research	18
9	Explanatory Performance Task	5
10	Argument Performance Task	NA[11]

[9] New block for 2016-2017

[10] Block contains new items for 2016-2017

[11] This block is not provided for 2016-2017 – it is a placeholder for a block to be provided in the future.

Grade 3

Block 1: Read Literary Texts						
Claim	Assessment Target	DOK[12]	Items			Total Items
			Short Passage	Short Passage	Long Passage	
Reading	**2. Central Ideas**	2	0-2	0-2[13]	1-2[14]	3
	4. Reasoning & Evidence	3	0-2	0-2[13]	1-2[14]	4
	1. Key Details	1,2	0-1	0-1	0-1	0
	3. Word Meaning	1,2	0-1	0-1	0-1	1
	5. Analysis within or across Texts	3,4	0-1	0-1	0-1	2
	6. Test Structures & Features	2,3	0-1	0-1	0-1	3
	7. Language Use	2,3	0-1	0-1	0-1	2
					TOTAL ITEMS	**15**

[12] The goal is for a student to receive no more than 4 items at DOK 1 and at least 3 items at DOK 3 or higher.

[13] If necessary, the second short passage will be used to achieve item counts.

[14] At least one of these items will be human scored; the other(s) will be machine scored.

Grade 3

Block 2: Read Informational Texts						
Claim	Assessment Target	DOK[15]	Items			Total Items
			Short Passage	Short Passage	Long Passage	
Reading	**9. Central Ideas**	2	0-2	0-2[16]	1-2[17]	3
	11. Reasoning & Evidence	3	0-2	0-2[16]	1-2[17]	3
	8. Key Details	1, 2	0-1	0-1	0-1	2
	10. Word Meanings	1, 2	0-1	0-1	0-1	2
	12. Analysis within or across Texts	3, 4	0-1	0-1	0-1	1
	13. Text Structures or Text Features	2, 3	0-1	0-1	0-1	3
	14. Language Use	2, 3	0-1	0-1	0-1	2
					TOTAL ITEMS	**16**

[15] The goal is for a student to receive no more than 4 items at DOK 1 and at least 3 items at DOK 3 or higher.

[16] If necessary, the second short passage will be used to achieve item counts.

[17] At least one of these items will be human scored; the other(s) will be machine scored.

Grade 3

Block 3: Brief Writes					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text[18]	
Writing	**1a. Write Brief Texts (Narrative)**	3	0	4	6
	3a.Write Brief Texts (Informational)	3	0	1	
	6a. Write Brief Texts (Opinion)	3	0	1	
				TOTAL ITEMS	**6**

[18] These items are designed for hand scoring and may be AI scored with an application that yields comparable results by meeting or exceeding reliability and validity criteria for hand scoring.

Grade 3

Block 4: Revision					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text	
Writing	**1b. Revise Brief Texts (Narrative)**	2	5	0	5
	3b. Revise Brief Texts (Informational)	2	5	0	5
	6b. Revise Brief Texts (Opinion)	2	5	0	5
				TOTAL ITEMS	**15**

Block 5: Language and Vocabulary Use					
Claim	Assessment Target	DOK	Items		Claim
			Machine Scored	Short Text	
Writing	**8. Language and Vocabulary Use**	1, 2	15	0	15
				TOTAL ITEMS	**15**

Grade 3

Block 6: Editing					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text	
Writing	**9. Edit**	1, 2	15	0	15
				TOTAL ITEMS	**15**

Block 7: Listen and Interpret					
Claim	Assessment Target	DOK	Items		Claim
			Machine Scored	Short Text	
Listening	**4. Listen/Interpret**	1,2,3	15	0	15
				TOTAL ITEMS	**15**

Grade 3

Block 8: Research					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text	
Research	**2. Interpret & Integrate Information**	2	6	0	6
	3. Analyze Information/Sources	2	6	0	6
	4. Use Evidence	2	6	0	6
				TOTAL ITEMS	**18**

Grade 3

Block 10: Opinion Performance Task					
Claim	**Assessment Target**	**DOK**	**Items**		**Total Items**
			Machine Scored	**Human Scored**	
Writing	**7. Compose Full Texts (Informational)**	4	0	1→3[19]	3→2[20]
Research	**2. Interpret & Integrate Information (1)**	3	1	2	3
	3. Analyze Information/Sources (0)	4			
	4. Use Evidence (2)	3			
				TOTAL ITEMS	**5**

[19] There is a single student response to a single prompt, but the response is scored on three distinct traits: Evidence/Elaboration, Organization/Purpose, and Conventions.

[20] For measurement purposes, the scores on three traits are represented as two items. The first item is the rounded-up average of the first two traits and is worth 4 points. The second item is the score for Conventions and is worth 2 points.

Grade 4

Block 1: Read Literary Texts						
Claim	Assessment Target	DOK[21]	Items			Total Items
			Short Passage	Short Passage	Long Passage	
Reading	**2. Central Ideas**	2	0-2	0-2[22]	1-2	3
	4. Reasoning & Evidence	3	0-2	0-2[22]	1-2[23]	3
	1. Key Details	1,2	0-1	0-1	0-1	3
	3. Word Meaning	1,2	0-1	0-1	0-1	3
	5. Analysis within or across Texts	3,4	0-1	0-1	0-1	1
	6. Test Structures & Features	2,3	0-1	0-1	0-1	1
	7. Language Use	2,3	0-1	0-1	0-1	1
					TOTAL ITEMS	**15**

[21] The goal is for a student to receive no more than 4 items at DOK 1 and at least 3 items at DOK 3 or higher.

[22] If necessary, the second short passage will be used to achieve item counts.

[23] At least one of these items will be human scored; the other(s) will be machine scored.

Grade 4

Block 2: Read Informational Texts						
Claim	Assessment Target	DOK[24]	Items			Total Items
			Short Passage	Short Passage	Long Passage	
Reading	**9. Central Ideas**	2	0-2	0-2[25]	1-2[26]	2
	11. Reasoning & Evidence	3	0-2	0-2[25]	1-2	2
	8. Key Details	1, 2	0-1	0-1	0-1	2
	10. Word Meanings	1, 2	0-1	0-1	0-1	3
	12. Analysis within or across Texts	3, 4	0-1	0-1	0-1	1
	13. Text Structures or Text Features	2, 3	0-1	0-1	0-1	2
	14. Language Use	2, 3	0-1	0-1	0-1	2
					TOTAL ITEMS	**14**

[24] The goal is for a student to receive no more than 4 items at DOK 1 and at least 3 items at DOK 3 or higher.

[25] If necessary, the second short passage will be used to achieve item counts.

[26] At least one of these items will be human scored; the other(s) will be machine scored.

Grade 4

Block 3: Brief Writes					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text[27]	
Writing	**1a. Write Brief Texts (Narrative)**	3	0	3	3
	3a.Write Brief Texts (Informational)	2	0	2	2
	6a. Write Brief Texts (Opinion)	2	0	1	1
				TOTAL ITEMS	**6**

[27] These items are designed for hand scoring and may be AI scored with an application that yields comparable results by meeting or exceeding reliability and validity criteria for hand scoring.

Grade 4

Block 4: Revision					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text	
Writing	**1b. Revise Brief Texts (Narrative)**	2	6	0	6
	3b. Revise Brief Texts (Informational)	2	6	0	6
	6b. Revise Brief Texts (Opinion)	2	3	0	3
				TOTAL ITEMS	**15**

Block 5: Language and Vocabulary Use					
Claim	Assessment Target	DOK	Items		Claim
			Machine Scored	Short Text	
Writing	**8. Language and Vocabulary Use**	1, 2	15	0	15
				TOTAL ITEMS	**15**

Grade 4

Block 6: Editing					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text	
Writing	**9. Edit**	1, 2	15	0	15
				TOTAL ITEMS	**15**

Block 7: Listen and Interpret					
Claim	Assessment Target	DOK	Items		Claim
			Machine Scored	Short Text	
Listening	**4. Listen/Interpret**	1, 2, 3	15	0	15
				TOTAL ITEMS	**15**

Grade 4

Block 8: Research					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text	
Research	**2. Interpret & Integrate Information**	2	6	0	6
	3. Analyze Information/Sources	2	6	0	6
	4. Use Evidence	2	6	0	6
				TOTAL ITEMS	**18**

Grade 4

Block 11: Narrative Performance Task					
Claim	**Assessment Target**	**DOK**	**Items**		**Total Items**
			Machine Scored	**Short Text**	
Writing	**2. Compose Full Texts (Narrative)**	4	0	1→3[28]	3→2[29]
Research	**2. Interpret & Integrate Information (1)**	3	1	2	3
	3. Analyze Information/Sources (0)	4			
	4. Use Evidence (2)	3			
				TOTAL ITEMS	5

[28] There is a single student response to a single prompt, but the response is scored on three distinct traits: Evidence/Elaboration, Organization/Purpose, and Conventions.

[29] For measurement purposes, the scores on three traits are represented as two items. The first item is the rounded-up average of the first two traits and is worth 4 points. The second item is the score for Conventions and is worth 2 points.

Grade 5

Block 1: Read Literary Texts						
Claim	Assessment Target	DOK[30]	Items			Total Items
			Short Passage	Short Passage	Long Passage	
Reading	**2. Central Ideas**	2	0-2	0-2[31]	1-2[32]	3
	4. Reasoning & Evidence	3	0-2	0-2[31]	1-2[32]	3
	1. Key Details	1,2	0-1	0-1	0-1	3
	3. Word Meaning	1,2	0-1	0-1	0-1	3
	5. Analysis within or across Texts	3,4	0-1	0-1	0-1	1
	6. Test Structures & Features	2,3	0-1	0-1	0-1	0
	7. Language Use	2,3	0-1	0-1	0-1	2
					TOTAL ITEMS	**15**

[30] The goal is for a student to receive no more than 4 items at DOK 1 and at least 3 items at DOK 3 or higher.

[31] If necessary, the second short passage will be used to achieve item counts.

[32] At least one of these items will be human scored; the other(s) will be machine scored.

Grade 5

Block 2: Read Informational Texts						
Claim	Assessment Target	DOK[33]	Items			Total Items
			Short Passage	Short Passage	Long Passage	
Reading	**9. Central Ideas**	2	0-2	0-2[34]	1-2	1
	11. Reasoning & Evidence	3	0-2	0-2[34]	1-2[35]	3
	8. Key Details	1, 2	0-1	0-1	0-1	2
	10. Word Meanings	1, 2	0-1	0-1	0-1	3
	12. Analysis within or across Texts	3, 4	0-1	0-1	0-1	2
	13. Text Structures or Text Features	2, 3	0-1	0-1	0-1	2
	14. Language Use	2, 3	0-1	0-1	0-1	2
					TOTAL ITEMS	**15**

[33] The goal is for a student to receive no more than 4 items at DOK 1 and at least 3 items at DOK 3 or higher.

[34] If necessary, the second short passage will be used to achieve item counts.

[35] At least one of these items will be human scored; the other(s) will be machine scored.

Grade 5

Block 3: Brief Writes					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text[36]	
Writing	**1a. Write Brief Texts (Narrative)**	3	0	2	2
	3a. Write Brief Texts (Informational)	3	0	2	2
	6a. Write Brief Texts (Opinion)	3	0	2	2
				TOTAL ITEMS	**6**

[36] These items are designed for hand scoring and may be AI scored with an application that yields comparable results by meeting or exceeding reliability and validity criteria for hand scoring.

Grade 5

Block 4: Revision					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text	
Writing	**1b. Revise Brief Texts (Narrative)**	2	5	0	5
	3b. Revise Brief Texts (Informational)	2	5	0	5
	6b. Revise Brief Texts (Opinion)	2	5	0	5
				TOTAL ITEMS	**15**

Block 5: Language and Vocabulary Use					
Claim	Assessment Target	DOK	Items		Claim
			Machine Scored	Short Text	
Writing	**8. Language and Vocabulary Use**	1, 2	15	0	15
				TOTAL ITEMS	**15**

Grade 5

Block 6: Editing					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text	
Writing	**9. Edit**	1, 2	14	0	14
				TOTAL ITEMS	**14**

Block 7: Listen and Interpret					
Claim	Assessment Target	DOK	Items		Claim
			Machine Scored	Short Text	
Listening	**4. Listen/Interpret**	1, 2,3	15	0	14
				TOTAL ITEMS	**14**

Grade 5

Block 8: Research					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text	
Research	**2. Interpret & Integrate Information**	2	6	0	6
	3. Analyze Information/ Sources	2	6	0	6
	4. Use Evidence	2	6	0	6
				TOTAL ITEMS	**18**

Grade 5

Block 11: Narrative Performance Task					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Human Scored	
Writing	**2. Compose Full Texts (Narrative)**	4	0	1→3[37]	3→2[38]
Research	**2. Interpret & Integrate Information (2)**	3	1	2	3
	3. Analyze Information/Sources (0)	4			
	4. Use Evidence (1)	3			
				TOTAL ITEMS	**5**

[37] There is a single student response to a single prompt, but the response is scored on three distinct traits: Evidence/Elaboration, Organization/Purpose, and Conventions.

[38] For measurement purposes, the scores on three traits are represented as two items. The first item is the rounded-up average of the first two traits and is worth 4 points. The second item is the score for Conventions and is worth 2 points.

Grade 6

Block 1: Read Literary Texts						
Claim	Assessment Target	DOK[39]	Items			Total Items
			Short Passage	Short Passage	Long Passage	
Reading	**2. Central Ideas**	2	0-2	0-2[40]	1-2[41]	3
	4. Reasoning & Evidence	3	0-2	0-2[40]	1-2	1
	1. Key Details	1,2	0-1	0-1	0-1	1
	3. Word Meaning	1,2	0-1	0-1	0-1	3
	5. Analysis within or across Texts	3,4	0-1	0-1	0-1	2
	6. Test Structures & Features	2,3	0-1	0-1	0-1	4
	7. Language Use	2,3	0-1	0-1	0-1	1
					TOTAL ITEMS	**15**

[39] The goal is for a student to receive no more than 4 items at DOK 1 and at least 3 items at DOK 3 or higher.

[40] If necessary, the second short passage will be used to achieve item counts.

[41] At least one of these items will be human scored; the other(s) will be machine scored.

Grade 6

Block 2: Read Informational Texts						
Claim	Assessment Target	DOK[42]	Items			Total Items
			Short Passage	Short Passage	Long Passage	
Reading	**9. Central Ideas**	2	0-2	0-2[43]	1-2	3
	11. Reasoning & Evidence	3	0-2	0-2[43]	1-2[44]	3
	8. Key Details	1, 2	0-1	0-1	0-1	2
	10. Word Meanings	1, 2	0-1	0-1	0-1	2
	12. Analysis within or across Texts	3, 4	0-1	0-1	0-1	2
	13. Text Structures or Text Features	2, 3	0-1	0-1	0-1	2
	14. Language Use	2, 3	0-1	0-1	0-1	2
					TOTAL ITEMS	**16**

[42] The goal is for a student to receive no more than 4 items at DOK 1 and at least 3 items at DOK 3 or higher.

[43] If necessary, the second short passage will be used to achieve item counts.

[44] At least one of these items will be human scored; the other(s) will be machine scored.

Grade 6

Block 3: Brief Writes					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text[45]	
Writing	**1a. Write Brief Texts (Narrative)**	3	0	3	3
	3a. Write Brief Texts (Explanatory)	3	0	1	1
	6a. Write Brief Texts (Argument)	3	0	2	2
				TOTAL ITEMS	**6**

[45] These items are designed for hand scoring and may be AI scored with an application that yields comparable results by meeting or exceeding reliability and validity criteria for hand scoring.

Grade 6

Block 4: Revision					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text	
Writing	**1b. Revise Brief Texts (Narrative)**	2	5	0	5
	3b. Revise Brief Texts (Explanatory)	2	5	0	5
	6b. Revise Brief Texts (Argument)	2	5	0	5
				TOTAL ITEMS	**15**

Block 5: Language and Vocabulary Use					
Claim	Assessment Target	DOK	Items		Claim
			Machine Scored	Short Text	
Writing	**8. Language and Vocabulary Use**	1, 2	15	0	15
				TOTAL ITEMS	**15**

Grade 6

Block 6: Editing					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text	
Writing	**9. Edit**	1, 2	15	0	15
				TOTAL ITEMS	**15**

Block 7: Listen and Interpret					
Claim	Assessment Target	DOK	Items		Claim
			Machine Scored	Short Text	
Listening	**4. Listen/Interpret**	1,2,3	15	0	15
				TOTAL ITEMS	**15**

Grade 6

Block 8: Research					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text	
Research	**2. Analyze/Integrate Information**	2	5	0	5
	3. Evaluate Information/Sources	2	5	0	5
	4. Use Evidence	2	8	0	8
				TOTAL ITEMS	**18**

Grade 6

Block 10: Argument Performance Task					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Human Scored	
Writing	**7. Compose Full Texts (Argument)**	4	0	1→3[46]	3→2[47]
Research	**2. Analyze/Integrate Information (0)**	3		2	2
	3. Evaluate Information/Sources (1)	4			
	4. Use Evidence (1)	3			
				TOTAL ITEMS	**5**

[46] There is a single student response to a single prompt, but the response is scored on three distinct traits: Evidence/Elaboration, Organization/Purpose, and Conventions.

[47] For measurement purposes, the scores on three traits are represented as two items. The first item is the rounded-up average of the first two traits and is worth 4 points. The second item is the score for Conventions and is worth 2 points.

Grade 7

Block 1: Read Literary Texts						
Claim	Assessment Target	DOK[48]	Items			Total Items
			Short Passage	Short Passage	Long Passage	
Reading	**2. Central Ideas**	2	0-2	0-2[49]	1-2	2
	4. Reasoning & Evidence	3	0-2	0-2[49]	1-2[50]	3
	1. Key Details	1,2	0-1	0-1	0-1	3
	3. Word Meaning	1,2	0-1	0-1	0-1	3
	5. Analysis within or across Texts	3,4	0-1	0-1	0-1	1
	6. Test Structures & Features	2,3	0-1	0-1	0-1	3
	7. Language Use	2,3	0-1	0-1	0-1	1
					TOTAL ITEMS	**16**

[48] The goal is for a student to receive no more than 4 items at DOK 1 and at least 3 items at DOK 3 or higher.

[49] If necessary, the second short passage will be used to achieve item counts.

[50] At least one of these items will be human scored; the other(s) will be machine scored.

Grade 7

Block 2: Read Informational Texts						
Claim	Assessment Target	DOK[51]	Items			Total Items
			Short Passage	Short Passage	Long Passage	
Reading	**9. Central Ideas**	2	0-2	0-2[52]	1-2[53]	3
	11. Reasoning & Evidence	3	0-2	0-2[52]	1-2	2
	8. Key Details	1, 2	0-1	0-1	0-1	2
	10. Word Meanings	1, 2	0-1	0-1	0-1	2
	12. Analysis within or across Texts	3, 4	0-1	0-1	0-1	3
	13. Text Structures or Text Features	2, 3	0-1	0-1	0-1	2
	14. Language Use	2, 3	0-1	0-1	0-1	2
					TOTAL ITEMS	**16**

[51] The goal is for a student to receive no more than 4 items at DOK 1 and at least 3 items at DOK 3 or higher.

[52] If necessary, the second short passage will be used to achieve item counts.

[53] At least one of these items will be human scored; the other(s) will be machine scored.

Grade 7

Block 3: Brief Writes					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text[54]	
Writing	**1a. Write Brief Texts (Narrative)**	3	0	2	2
	3a. Write Brief Texts (Explanatory)	3	0	1	1
	6a. Write Brief Texts (Argument)	3	0	3	3
				TOTAL ITEMS	**6**

[54] These items are designed for hand scoring and may be AI scored with an application that yields comparable results by meeting or exceeding reliability and validity criteria for hand scoring.

Grade 7

Block 4: Revision					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text	
Writing	**1b. Revise Brief Texts (Narrative)**	2	4	0	4
	3b. Revise Brief Texts (Explanatory	2	4	0	4
	6b. Revise Brief Texts (Argument)	2	7	0	7
				TOTAL ITEMS	**15**

Block 5: Language and Vocabulary Use					
Claim	Assessment Target	DOK	Items		Claim
			Machine Scored	Short Text	
Writing	**8. Language and Vocabulary Use**	1, 2	15	0	15
				TOTAL ITEMS	**15**

Grade 7

Block 6: Editing					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text	
Writing	**9. Edit**	1, 2	15	0	14
				TOTAL ITEMS	**14**

Block 7: Listen and Interpret					
Claim	Assessment Target	DOK	Items		Claim
			Machine Scored	Short Text	
Listening	**4. Listen/Interpret**	1,2,3	15	0	15
				TOTAL ITEMS	**15**

Grade 7

Block 8: Research					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text	
Research	**2. Analyze/Integrate Information**	2	6	0	6
	3. Evaluate Information/Sources	2	6	0	6
	4. Use Evidence	2	6	0	6
				TOTAL ITEMS	**18**

Grade 7

Block 9: Explanatory Performance Task					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Human Scored	
Writing	**4. Compose Full Texts (Explanatory)**	4	0	1→3[55]	3→2[56]
Research	**2. Analyze/Integrate Information (1)**	3	1	2	3
	3. Evaluate Information/Sources (0)	4			
	4. Use Evidence (2)	3			
				TOTAL ITEMS	**6**

[55] There is a single student response to a single prompt, but the response is scored on three distinct traits: Evidence/Elaboration, Organization/Purpose, and Conventions.

[56] For measurement purposes, the scores on three traits are represented as two items. The first item is the rounded-up average of the first two traits and is worth 4 points. The second item is the score for Conventions and is worth 2 points.

Grade 8

Block 1: Read Literary Texts						
Claim	Assessment Target	DOK[57]	Items			Total Items
			Short Passage	Short Passage	Long Passage	
Reading	**2. Central Ideas**	2	0-2	0-2[58]	1-2[59]	2
	4. Reasoning & Evidence	3	0-2	0-2[58]	1-2	2
	1. Key Details	1,2	0-1	0-1	0-1	4
	3. Word Meaning	1,2	0-1	0-1	0-1	2
	5. Analysis within or across Texts	3,4	0-1	0-1	0-1	0
	6. Test Structures & Features	2,3	0-1	0-1	0-1	3
	7. Language Use	2,3	0-1	0-1	0-1	3
					TOTAL ITEMS	**16**

[57] The goal is for a student to receive no more than 4 items at DOK 1 and at least 3 items at DOK 3 or higher.

[58] If necessary, the second short passage will be used to achieve item counts.

[59] At least one of these items will be human scored; the other(s) will be machine scored.

Grade 8

Block 2: Read Informational Texts						
Claim	Assessment Target	DOK[60]	Items			Total Items
			Short Passage	Short Passage	Long Passage	
Reading	**9. Central Ideas**	2	0-2	0-2[61]	1-2[62]	3
	11. Reasoning & Evidence	3	0-2	0-2[61]	1-2[62]	3
	8. Key Details	1, 2	0-1	0-1	0-1	3
	10. Word Meanings	1, 2	0-1	0-1	0-1	1
	12. Analysis within or across Texts	3, 4	0-1	0-1	0-1	2
	13. Text Structures or Text Features	2, 3	0-1	0-1	0-1	1
	14. Language Use	2, 3	0-1	0-1	0-1	3
					TOTAL ITEMS	**16**

[60] The goal is for a student to receive no more than 4 items at DOK 1 and at least 3 items at DOK 3 or higher.

[61] If necessary, the second short passage will be used to achieve item counts.

[62] At least one of these items will be human scored; the other(s) will be machine scored.

Grade 8

Block 3: Brief Writes					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text[63]	
Writing	**1a. Write Brief Texts (Narrative)**	3	0	2	2
	3a. Write Brief Texts (Explanatory)	3	0	2	2
	6a. Write Brief Texts (Argument)	3	0	2	2
				TOTAL ITEMS	**6**

[63] These items are designed for hand scoring and may be AI scored with an application that yields comparable results by meeting or exceeding reliability and validity criteria for hand scoring.

Grade 8

Block 4: Edit/Revise					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text	
Writing	**1b. Revise Brief Texts (Narrative)**	2	2	0	2
	3b. Revise Brief Texts (Explanatory)	2	2	0	2
	6b. Revise Brief Texts (Argument)	2	1	0	1
	8. Language and Vocabulary Use	1,2	5	0	5
	9. Edit	1,2	8	0	4
				TOTAL ITEMS	**14**

Block 5: Listen/Interpret					
Claim	Assessment Target	DOK	Items		Claim
			Machine Scored	Short Text	
Writing	**4. Listen/Interpret**	1, 2, 3	15	0	15
				TOTAL ITEMS	**15**

Grade 8

Block 6: Research					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text	
Research	**2. Analyze/Integrate Information**	2	6	0	6
	3. Evaluate Information/Sources	2	6	0	6
	4. Use Evidence	2	6	0	6
				TOTAL ITEMS	**18**

Grade 8

Block 7: Explanatory Performance Task					
Claim	**Assessment Target**	**DOK**	**Items**		**Total Items**
			Machine Scored	**Human Scored**	
Writing	**4. Compose Full Texts (Explanatory)**	4	0	1→3[64]	3→2[65]
Research	**2. Analyze/Integrate Information (1)**	3	1	2	3
	3. Evaluate Information/Sources	4			
	4. Use Evidence (2)	3			
				TOTAL ITEMS	**5**

[64] There is a single student response to a single prompt, but the response is scored on three distinct traits: Evidence/Elaboration, Organization/Purpose, and Conventions.

[65] For measurement purposes, the scores on three traits are represented as two items. The first item is the rounded-up average of the first two traits and is worth 4 points. The second item is the score for Conventions and is worth 2 points.

High School

Block 1: Read Literary Texts						
Claim	Assessment Target	DOK[66]	Items			Total Items
			Short Passage	Short Passage	Long Passage	
Reading	**2. Central Ideas**	2	0-2	0-2[67]	1-2	1
	4. Reasoning & Evidence	3	0-2	0-2[67]	1-2[68]	3
	1. Key Details	1,2	0-1	0-1	0-1	3
	3. Word Meaning	1,2	0-1	0-1	0-1	2
	5. Analysis within or across Texts	3,4	0-1	0-1	0-1	2
	6. Test Structures & Features	2,3	0-1	0-1	0-1	2
	7. Language Use	2,3	0-1	0-1	0-1	3
					TOTAL ITEMS	**16**

[66] The goal is for a student to receive no more than 4 items at DOK 1 and at least 3 items at DOK 3 or higher.

[67] If necessary, the second short passage will be used to achieve item counts.

[68] At least one of these items will be human scored; the other(s) will be machine scored.

High School

Block 2: Read Informational Texts						
Claim	Assessment Target	DOK[69]	Items			Total Items
			Short Passage	Short Passage	Long Passage	
Reading	**9. Central Ideas**	2	0-2	0-2[70]	1-2	1
	11. Reasoning & Evidence	3	0-2	0-2[70]	1-2[71]	4
	8. Key Details	1, 2	0-1	0-1	0-1	3
	10. Word Meanings	1, 2	0-1	0-1	0-1	3
	12. Analysis within or across Texts	3, 4	0-1	0-1	0-1	2
	13. Text Structures or Text Features	2, 3	0-1	0-1	0-1	0
	14. Language Use	2, 3	0-1	0-1	0-1	2
					TOTAL ITEMS	**15**

[69] The goal is for a student to receive no more than 4 items at DOK 1 and at least 3 items at DOK 3 or higher.

[70] If necessary, the second short passage will be used to achieve item counts.

[71] At least one of these items will be human scored; the other(s) will be machine scored.

High School

Block 3: Brief Writes					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text[72]	
Writing	**1a. Write Brief Texts (Narrative)**	3	0	2	2
	3a. Write Brief Texts (Explanatory)	3	0	2	2
	6a. Write Brief Texts (Argument)	3	0	2	2
				TOTAL ITEMS	**6**

[72] These items are designed for hand scoring and may be AI scored with an application that yields comparable results by meeting or exceeding reliability and validity criteria for hand scoring.

High School

Block 4: Revision					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text	
Writing	**1b. Revise Brief Texts (Narrative)**	3	4		4
	3b. Revise Brief Texts (Explanatory)	3	5		5
	6b. Revise Brief Texts (Argument)	3	6		6
				TOTAL ITEMS	**15**

Block 5: Language and Vocabulary Use					
Claim	Assessment Target	DOK	Items		Claim
			Machine Scored	Short Text	
Writing	**8. Language and Vocabulary Use**	1, 2	15	0	15
				TOTAL ITEMS	**15**

High School

Block 6: Editing					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text	
Writing	**9. Edit**	1, 2	15	0	15
				TOTAL ITEMS	**15**

Block 7: Listen and Interpret					
Claim	Assessment Target	DOK	Items		Claim
			Machine Scored	Short Text	
Listening	**4. Listen/Interpret**	1,2,3	15	0	15
				TOTAL ITEMS	**15**

High School

Block 8: Research					
Claim	Assessment Target	DOK	Items		Total Items
			Machine Scored	Short Text[73]	
Research	**2. Analyze/Integrate Information**	3	8	0	8
	3. Evaluate Information/Sources	4	2	0	2
	4. Use Evidence	3	8	0	8
				TOTAL ITEMS	**18**

[73] These items are designed for hand scoring and may be AI scored with an application that yields comparable results by meeting or exceeding reliability and validity criteria for hand scoring.

High School

Block 9: Explanatory Performance Task					
Claim	**Assessment Target**	**DOK**	**Items**		**Total Items**
			Machine Scored	**Short Text**	
Writing	**4. Compose Full Texts (Narrative)**	4	0	1→3[74]	3→2[75]
Research	**2. Analyze/Integrate Information (1)**	3			
	3. Evaluate Information/Sources	4		2	2
	4. Use Evidence (1)	3			
				TOTAL ITEMS	**4**

[74] There is a single student response to a single prompt, but the response is scored on three distinct traits: Evidence/Elaboration, Organization/Purpose, and Conventions.

[75] For measurement purposes, the scores on three traits are represented as two items. The first item is the rounded-up average of the first two traits and is worth 4 points. The second item is the score for Conventions and is worth 2 points.

Appendix D: 2016-17 Mathematics IAB Blueprints

The Smarter Balanced Interim Assessment Blocks (IABs) are one of two distinct types of interim assessments being made available by the Consortium; the other type is the Interim Comprehensive Assessment (ICAs). IABs are short, focused sets or blocks of items that measure one or more assessment targets. Results from these assessments provide information about a student's strengths or needs in relation to the Common Core State Standards (CCSS) and, therefore, generate more detailed information for instructional purposes than the summative or ICAs alone. The IABs are currently available as fixed forms. The fixed forms are administered online, using the same delivery software as the summative assessments.

This blueprint presents the specific blocks that are available by grade level for mathematics beginning at grade 3 and continuing through high school. Each block-level blueprint contains information about claim(s), assessment target(s), and depth of knowledge level(s) addressed by the items in that block as well as the numbers of items allocated to each of those categories.

The blueprint can be used by educators to plan how to integrate the IABs effectively within classroom instruction or to better understand results that are reported. Users of the blueprint can become familiar with the number of IABs for each grade level, the general focus of each IAB, (i.e. which assessment targets are addressed in a specific IAB and the emphasis of each target relative to the other targets in the block). A fifth-grade teacher, for example, may wish to collect more information regarding her students' knowledge about geometry. The teacher could use this blueprint to see that there is a block for geometry composed of 13 machined-scored items across the four claims—concepts and procedures, problem solving, modeling and data analysis, and communicating reasoning. After reading the blueprint, she will have a better understanding of the meaning of the geometry block.

Mathematics Interim Assessment Blocks

Grade 3	Grade 4	Grade 5
Operations and Algebraic Thinking**	Operations and Algebraic Thinking**	Operations and Algebraic Thinking*
Number and Operations – Fractions**	Number and Operations – Fractions**	Number and Operations – Fractions**
Measurement and Data	Measurement and Data*	Measurement and Data**
Number and Operations in Base Ten*	Number and Operations in Base Ten	Number and Operations in Base Ten
	Geometry*	Geometry*
Mathematics Performance Task	Mathematics Performance Task	Mathematics Performance Task

Grade 6	Grade 7	Grade 8
Ratios and Proportional Relationships	Ratio and Proportional Relationships**	Expressions & Equations I**
The Number System*	The Number System**	Expressions & Equations II (with Prob/Stat)*
Expressions and Equations**	Expressions and Equations**	Functions**
Geometry**	Geometry*	Geometry**
Statistics and Probability*	Statistics and Probability*	
Mathematics Performance Task	Mathematics Performance Task	Mathematics Performance Task

High School
Algebra and Functions I - Linear Functions, Equations, and Inequalities**
Algebra and Functions II - Quadratic Functions, Equations, and Inequalities**
Geometry and Right Triangle Trigonometry**
Statistics and Probability*
Mathematics Performance Task

*** IAB is new for 2016–17**
**** IAB has been revised for 2016–17**

Grade 3 – Operations and Algebraic Thinking (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
Concepts and Procedures	OA	A. Represent and solve problems involving multiplication and division.	1, 2	4	12
		B. Understand properties of multiplication and the relationship between multiplication and division.	1	2	
		C. Multiply and divide within 100.	1	2	
		D. Solve problems involving the four operations, and identify and explain patterns in arithmetic.	2	4	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	1	1
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3		

Grade 3 – Number and Operations – Fractions (14 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	NF	F. Develop understanding of fractions as numbers.	1, 2	13	13
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	0	0
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	0	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	1	1
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3		

Grade 3 – Measurement and Data (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	MD	G. Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.	1, 2	4	12
		H. Represent and interpret data.	2, 3	2	
		I. Geometric measurement: understand concepts of area and relate area to multiplication and to addition.	1, 2	4	
		J. Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.	1	2	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving Claim 2	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis Claim 4	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	1	1
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3		

Grade 3 – Number and Operations in Base Ten (14 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	NBT	E. Use place value understanding and properties of operations to perform multi-digit arithmetic.	1	12	12
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	2	2
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	0	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	0	0
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3		

Grade 3 – Interim Assessment Block – Performance Task					
Claim	Content Category	Assessment Targets	DOK	Items per Claim	Total Items in PT
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	2	6
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	2	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3		

Grade 4 – Operations and Algebraic Thinking (16 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	OA	A. Use the four operations with whole numbers to solve problems.	1, 2	4	9
		B. Gain familiarity with factors and multiples.	1, 2	4	
		C. Generate and analyze patterns.	2, 3	1	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	2	5
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	3	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	2
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3		

Grade 4 – Number and Operations in Base Ten (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	NBT	D. Generalize place value understanding for multi-digit whole numbers.	1, 2	5	12
		E. Use place value understanding and properties of operations to perform multi-digit arithmetic.	1	7	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	1
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	0	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	2
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3		

Grade 4 – Number and Operations – Fractions (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	NF	F. Extend understanding of fraction equivalence and ordering.	1, 2	5	12
		G. Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.	1, 2	5	
		H. Understand decimal notation for fractions, and compare decimal fractions.	1, 2	2	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	1
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	0	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	2
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3		

Grade 4 – Geometry (11 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	G	L. Draw and identify lines and angles, and classify shapes by properties of their lines and angles.	1, 2	11	11
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	0	0
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	0	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	0	0
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3		

Grade 4 – Measurement and Data (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	MD	I. Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.	1, 2	6	13
		J. Represent and interpret data.	1, 2	2	
		K. Geometric measurement: understand concepts of angle and measure angles.	1, 2	5	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	0	0
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3		

Grade 4 – Interim Assessment Block – Performance Task					
Claim	Content Category	Assessment Targets	DOK	Items per Claim	Total Items in PT
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	2	6
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	2	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3		

Grade 5 – Number and Operations in Base Ten (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	NBT	C. Understand the place value system.	1, 2	4	11
		D. Perform operations with multi-digit whole numbers and with decimals to hundredths.	1, 2	7	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	2
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3		

Grade 5 – Number and Operations – Fractions (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	NF	E. Use equivalent fractions as a strategy to add and subtract fractions.	1, 2	5	11
		F. Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	1, 2	6	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	2
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3		

Grade 5 – Measurement and Data (14 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	MD	G. Convert like measurement units within a given measurement system.	1	1	9
		H. Represent and interpret data.	1, 2	2	
		I. Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	1, 2	6	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	3	4
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	1	1
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3		

Grade 5 – Geometry (13 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	G	J. Graph points on the coordinate plane to solve real-world and mathematical problems.	1	5	9
		K. Classify two-dimensional figures into categories based on their properties.	2	4	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	2
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3		

Grade 5 – Operations and Algebraic Thinking (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	OA	A. Write and interpret numerical expressions.	1	9	13
		B. Analyze patterns and relationships.	2	4	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	0	0
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3		

Grade 5 – Interim Assessment Block – Performance Task					
Claim	Content Category	Assessment Targets	DOK	Items per Claim	Total Items in PT
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	2	6
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	2	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3		

Grade 6 – Ratio and Proportional Relationships (13 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	RP	A. Understand ratio concepts and use ratio reasoning to solve problems.	1, 2	11	11
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	1
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	0	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	1	1
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

Grade 6 – Expressions and Equations (16 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	EE	E. Apply and extend previous understandings of arithmetic to algebraic expressions.	1	3	13
		F. Reason about and solve one-variable equations and inequalities.	1, 2	6	
		G. Represent and analyze quantitative relationships between dependent and independent variables.	2	4	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	1	1
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

Grade 6 – Geometry (14 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	G	H. Solve real-world and mathematical problems involving area, surface area, and volume.	2	11	11
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	1	1
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

Grade 6 – The Number System (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	NS	B. Apply and extend previous understandings of multiplication and division to divide fractions by fractions.	1, 2	2	13
		C. Compute fluently with multi-digit numbers and find common factors and multiples.	1, 2	5	
		D. Apply and extend previous understandings of numbers to the system of rational numbers.	1, 2	6	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	1
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	0	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	1	1
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

Grade 6 – Statistics and Probability (13 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	SP	I. Develop understanding of statistical variability.	2	3	13
		J. Summarize and describe distributions.	1, 2	10	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	0	0
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	0	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	0	0
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

Grade 6 – Interim Assessment Block – Performance Task					
Claim	Content Category	Assessment Targets	DOK	Items per Claim	Total Items in PT
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	2	6
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	2	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

Grade 7 – Ratio and Proportional Relationships (13 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	RP	A. Analyze proportional relationships and use them to solve real-world and mathematical problems.	2	10	10
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	1	1
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

Grade 7 – The Number System (14 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	NS	B. Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	1, 2	11	11
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	0	1
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	2
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

Grade 7 – Expressions and Equations (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	EE	C. Use properties of operations to generate equivalent expressions.	1, 2	5	12
		D. Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	1, 2	7	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	1	1
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

Grade 7 – Geometry (13 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	G	E. Draw, construct, and describe geometrical figures and describe the relationship between them.	1, 2	5	11
		F. Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	1, 2	6	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	2	2
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	0	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	0	0
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

Grade 7 – Statistics and Probability (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	SP	G. Use random sampling to draw inferences about a population.	1, 2	3	13
		H. Draw informal comparative inferences about two populations.	2	4	
		I. Investigate chance processes and develop, use, and evaluate probability models.	1, 2	6	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	0	2
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	2	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	0	0
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

Grade 7 – Interim Assessment Block – Performance Task					
Claim	Content Category	Assessment Targets	DOK	Items per Claim	Total Items in PT
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	2	6
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	2	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

Grade 8 – Expressions & Equations I (14 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
Concepts and Procedures	EE	B. Work with radicals and integer exponents.	1, 2	3	9
		C. Understand the connections between proportional relationships, lines, and linear equations.	1, 2	2	
		D. Analyze and solve linear equations and pairs of simultaneous linear equations.	1, 2	4	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	3	3
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	0	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	2
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

Grade 8 – Expressions & Equations II with Statistics (13 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	EE SP	D. Analyze and solve linear equations and pairs of simultaneous linear equations.	1, 2	5	10
		J. Investigate patterns of association in bivariate data.	1, 2	5	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	1	1
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

Grade 8 – Functions (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	F	E. Define, evaluate, and compare functions.	1, 2	6	11
		F. Use functions to model relationships between quantities.	1, 2	5	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	2
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

Grade 8 – Geometry (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	G	G. Understand congruence and similarity using physical models, transparencies, or geometry software.	1, 2	5	13
		H. Understand congruence and similarity using physical models, transparencies, or geometry software.	1, 2	5	
		I. Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.	1, 2	3	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	0	1
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	1	1
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

Grade 8 – Interim Assessment Block – Performance Task					
Claim	Content Category	Assessment Targets	DOK	Items per Claim	Total Items in PT
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	2	6
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	2	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

High School – Algebra and Functions I – Linear Functions, Equations, and Inequalities (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	A, F	G. Create equations that describe numbers or relationships.	1, 2	1	11
		I. Solve equations and inequalities in one variable.	1, 2	3	
		J. Represent and solve equations and inequalities graphically.	1, 2	4	
		L. Interpret functions that arise in applications in terms of a context.	1, 2	1	
		M. Analyze functions using different representations.	1, 2, 3	1	
		N. Build a function that models a relationship between two quantities.	2	1	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	2	3
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	1	1
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply.	2, 3		

High School – Algebra and Functions II – Quadratic Functions, Equations, and Inequalities (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	A, F	G. Create equations that describe numbers or relationships.	1, 2	1	12
		H. Understand solving equations as a process of reasoning and explain the reasoning.	1, 2	3	
		I. Solve equations and inequalities in one variable.	1, 2	1	
		J. Represent and solve equations and inequalities graphically.	1, 2	3	
		L. Interpret functions that arise in applications in terms of a context.	1, 2	1	
		M. Analyze functions using different representations.	1, 2, 3	2	
		N. Build a function that models a relationship between two quantities.	2	1	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	0	2
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	2	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	1	1
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply.	2, 3		

High School – Geometry and Right Triangle Trigonometry (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	G	O: Define trigonometric ratios and solve problems involving right triangles.	1, 2	11	11
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	1
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	0	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	3	3
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

High School – Statistics and Probability (12 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	SP	P. Summarize, represent, and interpret data on a single count or measurement variable.	2	6	6
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	3	6
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	3	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	0	0
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

High School – Interim Assessment Block – Performance Task					
Claim	Content Category	Assessment Targets	DOK	Items per Claim	Total Items in PT
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	6
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	3	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

Appendix E: 2016-17 ELA/Literacy ICA Test Maps

Grade	Part	Item Sequence	Claim	Target	DOK	Item Type	Point Value
3	Non-PT	1	2	9	1	MC4	1
3	Non-PT	2	4	2	2	MS6	1
3	Non-PT	3	2	9	1	MC4	1
3	Non-PT	4	1	3	1	MC4	1
3	Non-PT	5	1	1	2	MC4	1
3	Non-PT	6	1	2	2	HTQ	1
3	Non-PT	7	1	4	3	EBSR4	1
3	Non-PT	8	2	8	1	MC4	1
3	Non-PT	9	3	4	1	MI	1
3	Non-PT	10	3	4	1	MC4	1
3	Non-PT	11	3	4	3	MS5	1
3	Non-PT	12	4	3	2	MC4	1
3	Non-PT	13	2	6	2	MC4	1
3	Non-PT	14	1	10	2	MC4	1
3	Non-PT	15	1	12	3	MC4	1
3	Non-PT	16	1	14	2	MC4	1
3	Non-PT	17	1	9	2	MC4	1
3	Non-PT	18	1	13	2	MC4	1
3	Non-PT	19	1	9	3	SA	2
3	Non-PT	20	2	9	1	MC4	1
3	Non-PT	21	3	4	3	MC4	1
3	Non-PT	22	3	4	3	EBSR4	1
3	Non-PT	23	3	4	1	MI	1
3	Non-PT	24	4	3	2	MC4	1
3	Non-PT	25	2	3	2	MC4	1
3	Non-PT	26	1	7	2	MC4	1
3	Non-PT	27	1	6	2	MC4	1
3	Non-PT	28	1	1	2	MC4	1
3	Non-PT	29	1	5	3	HTQ	1
3	Non-PT	30	1	2	2	HTQ	1
3	Non-PT	31	1	4	3	SA	2
3	Non-PT	32	2	1	3	SA	2
3	Non-PT	33	3	4	3	MC4	1
3	Non-PT	34	3	4	1	MI	1
3	Non-PT	35	3	4	3	EBSR4	1
3	Non-PT	36	4	2	2	MC4	1
3	Non-PT	37	2	8	2	MC4	1
3	Non-PT	38	1	9	2	MC4	1
3	Non-PT	39	1	14	3	MC4	1
3	Non-PT	40	1	11	3	EBSR4	1
3	Non-PT	41	1	9	2	EBSR4	1
3	Non-PT	42	2	9	1	HTQ	1

Grade	Part	Item Sequence	Claim	Target	DOK	Item Type	Point Value
3	Non-PT	43	4	4	2	MC4	1
3	PT	1	4	4	3	MI	1
3	PT	2	4	2	3	SA	2
3	PT	3	4	4	3	SA	2
3	PT	4	2	7	4	WER	6
4	Non-PT	1	2	9	1	MC4	1
4	Non-PT	2	4	3	2	MC4	1
4	Non-PT	3	2	8	1	MC4	1
4	Non-PT	4	1	3	2	MC4	1
4	Non-PT	5	1	7	2	MC4	1
4	Non-PT	6	1	4	3	EBSR4	1
4	Non-PT	7	1	2	2	MC4	1
4	Non-PT	8	1	1	2	HTQ	1
4	Non-PT	9	2	9	1	MC4	1
4	Non-PT	10	3	4	2	MC4	1
4	Non-PT	11	3	4	3	EBSR4	1
4	Non-PT	12	3	4	2	MC4	1
4	Non-PT	13	4	4	2	MS6	1
4	Non-PT	14	2	1	2	MC4	1
4	Non-PT	15	1	14	2	MC4	1
4	Non-PT	16	1	8	2	MC4	1
4	Non-PT	17	2	9	1	HTQ	1
4	Non-PT	18	3	4	1	MC4	1
4	Non-PT	19	3	4	3	MC4	1
4	Non-PT	20	3	4	3	MS5	1
4	Non-PT	21	4	3	2	MC4	1
4	Non-PT	22	2	9	1	MC4	1
4	Non-PT	23	1	4	3	SA	2
4	Non-PT	24	1	6	3	MC4	1
4	Non-PT	25	1	2	2	MC4	1
4	Non-PT	26	1	7	2	MS6	1
4	Non-PT	27	1	3	2	MS6	1
4	Non-PT	28	2	9	1	MC4	1
4	Non-PT	29	3	4	2	MC4	1
4	Non-PT	30	3	4	3	MS6	1
4	Non-PT	31	3	4	3	MI	1
4	Non-PT	32	4	2	2	MI	1
4	Non-PT	33	2	1	3	SA	2
4	Non-PT	34	1	10	2	MC4	1
4	Non-PT	35	1	13	2	MC4	1
4	Non-PT	36	1	11	3	HTQ	1
4	Non-PT	37	2	8	1	MC4	1

Grade	Part	Item Sequence	Claim	Target	DOK	Item Type	Point Value
4	Non-PT	38	4	2	2	MC6	1
4	Non-PT	39	2	3	2	HTQ	1
4	Non-PT	40	1	9	3	SA	2
4	Non-PT	41	1	10	2	HTQ	1
4	Non-PT	42	1	13	2	MC4	1
4	Non-PT	43	1	11	3	EBSR4	1
4	Non-PT	44	1	8	1	MC4	1
4	PT	1	4	2	3	SA	2
4	PT	2	4	4	3	SA	2
4	PT	3	4	4	3	MI	1
4	PT	4	2	2	4	WER	6
5	Non-PT	1	2	8	1	MC4	1
5	Non-PT	2	4	4	2	MC4	1
5	Non-PT	3	2	3	2	MC4	1
5	Non-PT	4	2	9	1	MC4	1
5	Non-PT	5	3	4	3	MC4	1
5	Non-PT	6	3	4	2	MC4	1
5	Non-PT	7	3	4	3	EBSR4	1
5	Non-PT	8	4	3	2	MC4	1
5	Non-PT	9	2	3	2	MS6	1
5	Non-PT	10	1	3	1	MC4	1
5	Non-PT	11	1	6	2	MC4	1
5	Non-PT	12	1	4	3	HTQ	1
5	Non-PT	13	1	5	3	EBSR4	1
5	Non-PT	14	1	1	2	MS6	1
5	Non-PT	15	2	8	2	MC4	1
5	Non-PT	16	3	4	3	EBSR4	1
5	Non-PT	17	3	4	2	MC4	1
5	Non-PT	18	3	4	1	MI	1
5	Non-PT	19	4	3	2	MC4	1
5	Non-PT	20	2	9	1	MC4	1
5	Non-PT	21	1	12	3	MC4	1
5	Non-PT	22	1	10	2	HTQ	1
5	Non-PT	23	1	11	3	EBSR4	1
5	Non-PT	24	1	8	1	HTQ	1
5	Non-PT	25	1	14	3	MS5	1
5	Non-PT	26	1	11	3	SA	2
5	Non-PT	27	2	9	1	MC4	1
5	Non-PT	28	3	4	1	MI	1
5	Non-PT	29	3	4	2	MC4	1
5	Non-PT	30	3	4	3	EBSR4	1
5	Non-PT	31	4	2	2	MC4	1

Grade	Part	Item Sequence	Claim	Target	DOK	Item Type	Point Value
5	Non-PT	32	2	6	3	SA	2
5	Non-PT	33	1	11	3	EBSR4	1
5	Non-PT	34	1	8	1	HTQ	1
5	Non-PT	35	1	13	2	MC4	1
5	Non-PT	36	1	9	2	EBSR4	1
5	Non-PT	37	2	9	1	HTQ	1
5	Non-PT	38	4	2	2	MS6	1
5	Non-PT	39	2	9	1	MC4	1
5	Non-PT	40	1	3	1	MC4	1
5	Non-PT	41	1	7	2	MC4	1
5	Non-PT	42	1	3	2	MS5	1
5	Non-PT	43	1	2	3	SA	2
5	PT	1	4	2	3	SA	2
5	PT	2	4	4	3	SA	2
5	PT	3	4	2	3	MS6	1
5	PT	4	2	2	4	WER	6
6	Non-PT	1	2	8	1	MC4	1
6	Non-PT	2	4	2	2	MC4	1
6	Non-PT	3	2	9	1	MC4	1
6	Non-PT	4	1	8	2	HTQ	1
6	Non-PT	5	1	9	2	EBSR4	1
6	Non-PT	6	1	14	3	MC4	1
6	Non-PT	7	1	10	1	MS5	1
6	Non-PT	8	2	1	2	MC4	1
6	Non-PT	9	3	4	2	MC4	1
6	Non-PT	10	3	4	1	MI	1
6	Non-PT	11	3	4	3	EBSR4	1
6	Non-PT	12	4	4	2	HTQ	1
6	Non-PT	13	2	9	1	MC4	1
6	Non-PT	14	1	6	2	MC4	1
6	Non-PT	15	1	3	1	MC4	1
6	Non-PT	16	1	3	2	MC4	1
6	Non-PT	17	1	5	3	MC4	1
6	Non-PT	18	1	4	3	HTQ	1
6	Non-PT	19	2	9	1	MC4	1
6	Non-PT	20	3	4	1	MC4	1
6	Non-PT	21	3	4	3	MC4	1
6	Non-PT	22	3	4	3	EBSR4	1
6	Non-PT	23	4	2	2	HTQ	1
6	Non-PT	24	2	3	2	MC4	1
6	Non-PT	25	1	3	2	MC4	1
6	Non-PT	26	1	2	2	HTQ	1

Grade	Part	Item Sequence	Claim	Target	DOK	Item Type	Point Value
6	Non-PT	27	1	6	3	MC4	1
6	Non-PT	28	1	2	3	SA	2
6	Non-PT	29	2	8	2	MS6	1
6	Non-PT	30	3	4	3	MC4	1
6	Non-PT	31	3	4	3	MC4	1
6	Non-PT	32	3	4	2	MS6	1
6	Non-PT	33	4	3	2	MC4	1
6	Non-PT	34	2	9	1	HTQ	1
6	Non-PT	35	1	9	3	SA	2
6	Non-PT	36	1	8	2	MS6	1
6	Non-PT	37	1	14	3	MC4	1
6	Non-PT	38	1	13	3	MC4	1
6	Non-PT	39	2	1	3	SA	2
6	Non-PT	40	4	4	2	HTQ	1
6	Non-PT	41	2	8	2	MS6	1
6	Non-PT	42	1	10	2	HTQ	1
6	Non-PT	43	1	9	2	MC4	1
6	Non-PT	44	1	11	3	EBSR4	1
6	Non-PT	45	1	14	3	MS6	1
6	PT	1	4	4	3	SA	2
6	PT	2	4	3	4	SA	2
6	PT	3	2	7	4	WER	6
7	Non-PT	1	2	8	2	MC4	1
7	Non-PT	2	4	4	2	MC4	1
7	Non-PT	3	2	1	2	MC4	1
7	Non-PT	4	1	8	2	HTQ	1
7	Non-PT	5	1	11	4	EBSR4	1
7	Non-PT	6	2	1	3	SA	2
7	Non-PT	7	3	4	3	MC4	1
7	Non-PT	8	3	4	2	MC4	1
7	Non-PT	9	3	4	1	MS6	1
7	Non-PT	10	4	3	2	MC4	1
7	Non-PT	11	2	9	1	MS5	1
7	Non-PT	12	1	3	2	HTQ	1
7	Non-PT	13	1	2	2	MC4	1
7	Non-PT	14	1	5	3	MC4	1
7	Non-PT	15	1	4	3	EBSR4	1
7	Non-PT	16	1	6	3	MC4	1
7	Non-PT	17	2	9	1	MC4	1
7	Non-PT	18	3	4	3	MC4	1
7	Non-PT	19	3	4	1	MC4	1
7	Non-PT	20	3	4	3	MS5	1

Grade	Part	Item Sequence	Claim	Target	DOK	Item Type	Point Value
7	Non-PT	21	4	2	2	MC4	1
7	Non-PT	22	2	9	1	MC4	1
7	Non-PT	23	1	4	4	SA	2
7	Non-PT	24	1	6	2	MC4	1
7	Non-PT	25	1	7	3	MC4	1
7	Non-PT	26	2	9	1	MC4	1
7	Non-PT	27	3	4	2	MC4	1
7	Non-PT	28	3	4	3	MC4	1
7	Non-PT	29	3	4	2	MS6	1
7	Non-PT	30	4	2	2	MC4	1
7	Non-PT	31	2	6	2	HTQ	1
7	Non-PT	32	1	8	2	MC4	1
7	Non-PT	33	1	11	4	EBSR4	1
7	Non-PT	34	1	14	3	MC4	1
7	Non-PT	35	1	13	3	MS6	1
7	Non-PT	36	1	9	2	MS6	1
7	Non-PT	37	2	8	2	HTQ	1
7	Non-PT	38	4	2	2	HTQ	1
7	Non-PT	39	2	9	1	MS6	1
7	Non-PT	40	1	9	2	EBSR4	1
7	Non-PT	41	1	10	1	HTQ	1
7	Non-PT	42	1	8	2	HTQ	1
7	Non-PT	43	1	8	2	MS6	1
7	Non-PT	44	1	11	4	SA	2
7	PT	1	4	4	3	SA	2
7	PT	2	4	2	4	SA	2
7	PT	3	4	4	3	MI	1
7	PT	4	2	4	4	WER	6
8	Non-PT	1	2	8	2	MC4	1
8	Non-PT	2	4	3	2	MC4	1
8	Non-PT	3	2	8	2	MC4	1
8	Non-PT	4	1	14	3	MC4	1
8	Non-PT	5	1	8	2	MC4	1
8	Non-PT	6	1	12	4	EBSR4	1
8	Non-PT	7	1	11	3	EBSR4	1
8	Non-PT	8	2	9	1	MC4	1
8	Non-PT	9	3	4	1	MC4	1
8	Non-PT	10	3	4	3	MC4	1
8	Non-PT	11	3	4	2	MC4	1
8	Non-PT	12	4	4	2	HTQ	1
8	Non-PT	13	2	9	1	MC4	1
8	Non-PT	14	1	1	2	MC4	1

Grade	Part	Item Sequence	Claim	Target	DOK	Item Type	Point Value
8	Non-PT	15	1	7	3	MC4	1
8	Non-PT	16	1	3	2	MC4	1
8	Non-PT	17	1	4	3	SA	2
8	Non-PT	18	2	9	1	MS6	1
8	Non-PT	19	3	4	2	MC4	1
8	Non-PT	20	3	4	2	MC4	1
8	Non-PT	21	3	4	3	MC4	1
8	Non-PT	22	4	4	2	MC4	1
8	Non-PT	23	2	9	1	HTQ	1
8	Non-PT	24	1	7	3	MC4	1
8	Non-PT	25	1	6	2	MC4	1
8	Non-PT	26	1	1	2	MS6	1
8	Non-PT	27	1	4	4	HTQ	1
8	Non-PT	28	2	9	1	MC4	1
8	Non-PT	29	3	4	2	MC4	1
8	Non-PT	30	3	4	3	MC4	1
8	Non-PT	31	3	4	3	MC4	1
8	Non-PT	32	4	2	2	HTQ	1
8	Non-PT	33	2	1	2	HTQ	1
8	Non-PT	34	1	9	2	MC4	1
8	Non-PT	35	1	8	2	HTQ	1
8	Non-PT	36	1	11	4	HTQ	1
8	Non-PT	37	1	10	1	MC4	1
8	Non-PT	38	2	6	3	SA	2
8	Non-PT	39	4	3	2	MC4	1
8	Non-PT	40	2	1	2	MS5	1
8	Non-PT	41	1	10	1	MS5	1
8	Non-PT	42	1	9	2	MC4	1
8	Non-PT	43	1	11	4	SA	2
8	Non-PT	44	1	8	2	HTQ	1
8	Non-PT	45	1	8	2	MC4	1
8	PT	1	4	4	3	MI	1
8	PT	2	4	4	3	SA	2
8	PT	3	4	2	4	SA	2
8	PT	4	2	4	4	WER	6
11	Non-PT	1	2	8	2	MC4	1
11	Non-PT	2	4	2	2	MC4	1
11	Non-PT	3	2	9	1	MC4	1
11	Non-PT	4	1	10	2	MC4	1
11	Non-PT	5	1	11	3	HTQ	1
11	Non-PT	6	1	8	2	MC4	1
11	Non-PT	7	2	8	2	HTQ	1

Grade	Part	Item Sequence	Claim	Target	DOK	Item Type	Point Value
11	Non-PT	8	3	4	1	MC4	1
11	Non-PT	9	3	4	3	MC4	1
11	Non-PT	10	3	4	2	MC4	1
11	Non-PT	11	4	3	2	MC4	1
11	Non-PT	12	2	1	2	MC4	1
11	Non-PT	13	1	10	1	MC4	1
11	Non-PT	14	1	14	3	MC4	1
11	Non-PT	15	1	8	2	HTQ	1
11	Non-PT	16	2	9	1	MC4	1
11	Non-PT	17	3	4	2	MS6	1
11	Non-PT	18	3	4	3	MC4	1
11	Non-PT	19	3	4	1	MC4	1
11	Non-PT	20	3	4	3	MS5	1
11	Non-PT	21	3	4	3	MC4	1
11	Non-PT	22	3	4	1	MI	1
11	Non-PT	23	4	2	2	MC4	1
11	Non-PT	24	2	3	3	SA	2
11	Non-PT	25	1	14	3	MC4	1
11	Non-PT	26	1	8	2	MC4	1
11	Non-PT	27	1	11	3	HTQ	1
11	Non-PT	28	2	9	1	HTQ	1
11	Non-PT	29	4	4	2	MC4	1
11	Non-PT	30	2	9	1	HTQ	1
11	Non-PT	31	1	10	2	MC4	1
11	Non-PT	32	1	9	2	HTQ	1
11	Non-PT	33	1	8	2	MC4	1
11	Non-PT	34	1	9	3	SA	2
11	Non-PT	35	2	9	1	MC4	1
11	Non-PT	36	4	4	2	MC4	1
11	Non-PT	37	1	6	4	MC4	1
11	Non-PT	38	1	3	1	MC4	1
11	Non-PT	39	1	4	3	EBSR4	1
11	Non-PT	40	1	7	3	MC4	1
11	Non-PT	41	1	4	4	SA	2
11	Non-PT	42	1	7	3	MC4	1
11	PT	1	4	2	4	SA	2
11	PT	2	4	4	3	SA	2
11	PT	3	2	4	3	WER	6

Appendix F: 2016-17 Mathematics ICA Test Maps

Grade	Part	Item Sequence	Claim	Target	DOK	Item Type	Point Value
3	Non-PT	1	1	D	2	EQ	1
3	Non-PT	2	1	A	1	EQ	1
3	Non-PT	3	1	I	2	EQ	1
3	Non-PT	4	1	C	1	EQ	1
3	Non-PT	5	1	D	2	TI	1
3	Non-PT	6	1	D	2	EQ	1
3	Non-PT	7	1	A	1	EQ	1
3	Non-PT	8	1	I	2	EQ	1
3	Non-PT	9	3	D	2	MI	1
3	Non-PT	10	1	E	1	EQ	1
3	Non-PT	11	1	A	1	EQ	1
3	Non-PT	12	3	E	2	MC	1
3	Non-PT	13	1	D	2	TI	1
3	Non-PT	14	1	C	1	EQ	1
3	Non-PT	15	3	C	2	MC	1
3	Non-PT	16	1	H	2	EQ	1
3	Non-PT	17	1	B	1	MI	1
3	Non-PT	18	3	D	3	MI	1
3	Non-PT	19	3	E	3	MC	1
3	Non-PT	20	4	E	3	MC	1
3	Non-PT	21	1	J	1	EQ	2
3	Non-PT	22	2	D	2	MC	1
3	Non-PT	23	4	F	2	MC	1
3	Non-PT	24	1	F	1	EQ	1
3	Non-PT	25	2	A	2	EQ	1
3	Non-PT	26	4	D	2	EQ	1
3	Non-PT	27	1	I	2	EQ	1
3	Non-PT	28	3	C	3	MS	1
3	Non-PT	29	1	E	1	EQ	1
3	Non-PT	30	1	F	2	EQ	1
3	Non-PT	31	1	J	1	EQ	2
3	PT	1	4	A	2	EQ	1
3	PT	2	2	A	2	EQ	1
3	PT	3	3	E	3	SA	2
3	PT	4	3	E	3	SA	2
3	PT	5	2	A	2	SA	1
3	PT	6	4	A	3	SA	2
4	Non-PT	1	1	G	2	MI	1
4	Non-PT	2	1	E	1	EQ	1
4	Non-PT	3	1	H	1	EQ	1
4	Non-PT	4	1	G	1	EQ	1
4	Non-PT	5	1	A	1	EQ	1

Grade	Part	Item Sequence	Claim	Target	DOK	Item Type	Point Value
4	Non-PT	6	1	B	1	MC	1
4	Non-PT	7	4	A	2	EQ	1
4	Non-PT	8	4	E	3	MC	1
4	Non-PT	9	1	A	1	EQ	1
4	Non-PT	10	1	E	2	MC	1
4	Non-PT	11	1	F	1	MI	1
4	Non-PT	12	1	D	1	EQ	1
4	Non-PT	13	3	F	2	MC	1
4	Non-PT	14	1	A	1	EQ	1
4	Non-PT	15	3	B	3	EQ	1
4	Non-PT	16	1	L	1	MI	1
4	Non-PT	17	1	F	2	MI	1
4	Non-PT	18	1	E	1	EQ	1
4	Non-PT	19	2	D	2	MI	1
4	Non-PT	20	3	D	3	MS	1
4	Non-PT	21	3	F	2	MC	1
4	Non-PT	22	1	G	1	EQ	1
4	Non-PT	23	1	I	1	EQ	1
4	Non-PT	24	1	I	2	EQ	1
4	Non-PT	25	3	F	3	MC	1
4	Non-PT	26	1	D	1	EQ	1
4	Non-PT	27	4	B	2	EQ	2
4	Non-PT	28	2	A	2	EQ	1
4	Non-PT	29	1	F	2	MI	1
4	Non-PT	30	1	K	2	EQ	1
4	PT	1	4	A	2	EQ	1
4	PT	2	2	A	2	MC	1
4	PT	3	2	A	2	TI	2
4	PT	4	3	E	3	SA	1
4	PT	5	3	B	3	SA	1
4	PT	6	4	E	3	SA	3
5	Non-PT	1	1	F	1	MC	1
5	Non-PT	2	1	D	1	EQ	1
5	Non-PT	3	3	F	3	EQ	2
5	Non-PT	4	1	J	1	MC	1
5	Non-PT	5	3	E	2	MC	1
5	Non-PT	6	4	C	2	MC	1
5	Non-PT	7	1	C	1	MC	1
5	Non-PT	8	1	B	2	MC	1
5	Non-PT	9	1	K	2	MI	1
5	Non-PT	10	1	F	1	MC	1
5	Non-PT	11	1	E	1	MC	1

Grade	Part	Item Sequence	Claim	Target	DOK	Item Type	Point Value
5	Non-PT	12	3	A	2	MC	1
5	Non-PT	13	1	C	2	MI	1
5	Non-PT	14	1	I	2	EQ	1
5	Non-PT	15	1	F	1	MC	1
5	Non-PT	16	1	I	1	EQ	1
5	Non-PT	17	3	C	2	MC	1
5	Non-PT	18	3	D	2	MS	1
5	Non-PT	19	1	E	1	MC	1
5	Non-PT	20	1	K	2	MI	1
5	Non-PT	21	1	C	1	MI	1
5	Non-PT	22	1	I	2	MI	1
5	Non-PT	23	1	F	1	MC	1
5	Non-PT	24	2	A	2	EQ	1
5	Non-PT	25	1	F	2	EQ	1
5	Non-PT	26	1	E	2	MC	1
5	Non-PT	27	1	B	2	MC	1
5	Non-PT	28	3	E	3	MS	1
5	Non-PT	29	4	E	3	MC	1
5	Non-PT	30	2	B	2	MC	1
5	Non-PT	31	4	E	3	MC	1
5	PT	1	2	A	2	EQ	1
5	PT	2	2	A	2	EQ	1
5	PT	3	4	F	2	TI	2
5	PT	4	4	A	2	EQ	3
5	PT	5	3	F	3	SA	1
5	PT	6	3	F	3	SA	2
6	Non-PT	1	1	F	1	EQ	1
6	Non-PT	2	1	D	2	EQ	1
6	Non-PT	3	1	F	2	MI	1
6	Non-PT	4	1	D	2	EQ	1
6	Non-PT	5	1	E	1	EQ	1
6	Non-PT	6	1	F	2	MS	1
6	Non-PT	7	1	F	2	MI	1
6	Non-PT	8	1	C	2	EQ	1
6	Non-PT	9	1	F	2	MI	1
6	Non-PT	10	1	G	2	EQ	1
6	Non-PT	11	1	A	1	EQ	1
6	Non-PT	12	1	A	2	EQ	1
6	Non-PT	13	3	E	3	MC	1
6	Non-PT	14	1	J	2	MC	1
6	Non-PT	15	3	E	3	MC	1
6	Non-PT	16	2	D	2	MC	1

Grade	Part	Item Sequence	Claim	Target	DOK	Item Type	Point Value
6	Non-PT	17	1	H	2	EQ	1
6	Non-PT	18	3	D	2	MS	1
6	Non-PT	19	1	G	2	EQ	1
6	Non-PT	20	1	H	1	MS	1
6	Non-PT	21	2	A	2	EQ	2
6	Non-PT	22	3	G	2	MI	1
6	Non-PT	23	1	A	2	EQ	1
6	Non-PT	24	3	A	3	EQ	1
6	Non-PT	25	1	J	2	MI	1
6	Non-PT	26	1	A	2	EQ	1
6	Non-PT	27	2	A	2	EQ	1
6	Non-PT	28	2	A	2	EQ	1
6	Non-PT	29	4	C	2	MS	1
6	Non-PT	30	3	G	3	MC	1
6	PT	1	2	A	2	EQ	1
6	PT	2	4	F	2	EQ	1
6	PT	3	2	A	2	EQ	1
6	PT	4	3	A	2	EQ	1
6	PT	5	4	A	2	SA	2
6	PT	6	3	A	2	SA	3
7	Non-PT	1	1	E	2	EQ	1
7	Non-PT	2	1	C	2	MS	1
7	Non-PT	3	1	B	2	EQ	1
7	Non-PT	4	1	C	1	MS	1
7	Non-PT	5	1	B	2	EQ	1
7	Non-PT	6	1	C	2	MS	1
7	Non-PT	7	1	G	1	MC	1
7	Non-PT	8	1	A	2	MC	1
7	Non-PT	9	4	A	2	MC	1
7	Non-PT	10	3	E	3	MC	1
7	Non-PT	11	1	A	2	MS	1
7	Non-PT	12	3	E	3	MC	1
7	Non-PT	13	1	I	1	MI	1
7	Non-PT	14	1	D	1	EQ	1
7	Non-PT	15	1	F	2	MI	1
7	Non-PT	16	1	A	2	EQ	1
7	Non-PT	17	1	D	2	MC	1
7	Non-PT	18	3	D	3	MC	1
7	Non-PT	19	4	C	1	TI	1
7	Non-PT	20	1	A	2	EQ	1
7	Non-PT	21	1	D	2	MC	1
7	Non-PT	22	2	A	2	EQ	1

Grade	Part	Item Sequence	Claim	Target	DOK	Item Type	Point Value
7	Non-PT	23	1	E	2	EQ	1
7	Non-PT	24	1	I	2	EQ	1
7	Non-PT	25	3	F	3	MC	1
7	Non-PT	26	4	E	3	MC	1
7	Non-PT	27	2	A	2	EQ	1
7	Non-PT	28	1	D	1	EQ	1
7	Non-PT	29	3	A	3	MC	1
7	Non-PT	30	1	A	2	MC	1
7	Non-PT	31	3	F	3	EQ	1
7	PT	1	2	A	2	EQ	1
7	PT	2	4	A	2	MC	1
7	PT	3	3	E	3	SA	2
7	PT	4	2	A	2	TI	1
7	PT	5	4	A	2	TI	1
7	PT	6	3	B	3	SA	2
8	Non-PT	1	1	A	1	MC	1
8	Non-PT	2	1	C	2	EQ	1
8	Non-PT	3	1	A	2	MC	1
8	Non-PT	4	1	C	2	EQ	1
8	Non-PT	5	1	A	1	MC	1
8	Non-PT	6	1	E	2	MC	1
8	Non-PT	7	1	J	2	EQ	2
8	Non-PT	8	1	G	1	MI	1
8	Non-PT	9	3	E	3	MC	1
8	Non-PT	10	1	J	2	EQ	2
8	Non-PT	11	3	A	2	MC	1
8	Non-PT	12	3	F	2	MC	1
8	Non-PT	13	1	D	2	EQ	1
8	Non-PT	14	1	D	2	MC	1
8	Non-PT	15	1	H	2	EQ	1
8	Non-PT	16	1	E	2	MC	1
8	Non-PT	17	1	G	2	MI	1
8	Non-PT	18	3	G	2	MC	1
8	Non-PT	19	1	D	2	EQ	1
8	Non-PT	20	1	D	2	MC	1
8	Non-PT	21	4	C	2	MC	1
8	Non-PT	22	2	A	3	EQ	1
8	Non-PT	23	1	F	1	EQ	1
8	Non-PT	24	1	E	1	MS	1
8	Non-PT	25	2	D	2	MC	1
8	Non-PT	26	3	E	3	MC	1
8	Non-PT	27	2	C	2	EQ	1

Grade	Part	Item Sequence	Claim	Target	DOK	Item Type	Point Value
8	Non-PT	28	3	E	3	MC	1
8	Non-PT	29	1	F	2	EQ	1
8	Non-PT	30	1	E	1	MS	1
8	Non-PT	31	4	A	2	EQ	1
8	PT	1	2	A	2	EQ	1
8	PT	2	2	A	2	TI	2
8	PT	3	4	A	2	EQ	1
8	PT	4	4	E	3	EQ	1
8	PT	5	3	A	3	SA	2
8	PT	6	3	F	3	SA	1
11	Non-PT	1	1	I	2	MC	1
11	Non-PT	2	1	K	1	MI	1
11	Non-PT	3	1	A	1	MI	1
11	Non-PT	4	1	F	2	EQ	1
11	Non-PT	5	1	H	2	MC	1
11	Non-PT	6	1	D	2	MC	1
11	Non-PT	7	1	P	2	MC	1
11	Non-PT	8	1	L	2	MC	1
11	Non-PT	9	3	F	3	MC	1
11	Non-PT	10	1	L	2	MC	1
11	Non-PT	11	4	C	2	MS	1
11	Non-PT	12	2	A	2	EQ	2
11	Non-PT	13	3	A	3	MC	1
11	Non-PT	14	1	G	2	EQ	1
11	Non-PT	15	3	A	3	MC	1
11	Non-PT	16	1	J	2	MC	1
11	Non-PT	17	1	C	1	MC	1
11	Non-PT	18	1	G	2	EQ	1
11	Non-PT	19	1	P	2	MC	1
11	Non-PT	20	3	C	3	MC	1
11	Non-PT	21	1	L	1	MI	1
11	Non-PT	22	2	C	2	EQ	1
11	Non-PT	23	1	J	2	MC	1
11	Non-PT	24	1	O	1	MI	1
11	Non-PT	25	4	D	2	MI	1
11	Non-PT	26	3	C	3	MC	1
11	Non-PT	27	4	B	3	SA	2
11	Non-PT	28	1	O	2	EQ	1
11	Non-PT	29	1	G	2	EQ	1
11	Non-PT	30	1	N	2	MC	1
11	Non-PT	31	1	M	2	MI	1
11	Non-PT	32	3	B	3	MS	1

Grade	Part	Item Sequence	Claim	Target	DOK	Item Type	Point Value
11	PT	1	2	C	2	MC	1
11	PT	2	3	E	2	SA	2
11	PT	3	4	D	2	SA	2
11	PT	4	3	E	2	SA	2
11	PT	5	4	A	2	EQ	1
11	PT	6	4	A	3	SA	3

Appendix G: 2016-17 ELA/Literacy IAB Test Maps

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
3	Read Literary Texts	1	1	2	2	MC4	1
3	Read Literary Texts	2	1	6	3	MC4	1
3	Read Literary Texts	3	1	4	3	EBSR4	1
3	Read Literary Texts	4	1	7	2	MC4	1
3	Read Literary Texts	5	1	6	2	MC4	1
3	Read Literary Texts	6	1	5	4	MC4	1
3	Read Literary Texts	7	1	5	3	HTQ	1
3	Read Literary Texts	8	1	2	2	HTQ	1
3	Read Literary Texts	9	1	4	3	SA	2
3	Read Literary Texts	10	1	3	1	MC4	1
3	Read Literary Texts	11	1	2	2	MC4	1
3	Read Literary Texts	12	1	4	3	EBSR4	1
3	Read Literary Texts	13	1	7	3	MC4	1
3	Read Literary Texts	14	1	6	2	MC4	1
3	Read Literary Texts	15	1	4	3	HTQ	1
3	Read Informational Texts	1	1	10	2	MC4	1
3	Read Informational Texts	2	1	14	2	MC4	1
3	Read Informational Texts	3	1	12	3	MC4	1
3	Read Informational Texts	4	1	13	2	MC4	1
3	Read Informational Texts	5	1	8	2	HTQ	1
3	Read Informational Texts	6	1	11	3	HTQ	1
3	Read Informational Texts	7	1	9	3	SA	2
3	Read Informational Texts	8	1	10	1	MC4	1
3	Read Informational Texts	9	1	13	3	MC4	1
3	Read Informational Texts	10	1	9	2	MC4	1
3	Read Informational Texts	11	1	11	3	EBSR4	1
3	Read Informational Texts	12	1	8	2	HTQ	1
3	Read Informational Texts	13	1	14	3	MC4	1
3	Read Informational Texts	14	1	9	2	EBSR4	1
3	Read Informational Texts	15	1	13	2	MS6	1
3	Read Informational Texts	16	1	11	3	HTQ	1
3	Brief Writes	1	2	1	3	SA	2
3	Brief Writes	2	2	1	3	SA	2
3	Brief Writes	3	2	1	3	SA	2
3	Brief Writes	4	2	1	3	SA	2
3	Brief Writes	5	2	3	3	SA	2
3	Brief Writes	6	2	6	3	SA	2
3	Revision	1	2	1	2	HTQ	1
3	Revision	2	2	1	2	MS	1
3	Revision	3	2	1	2	HTQ	1
3	Revision	4	2	1	2	MC	1
3	Revision	5	2	1	2	MS	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
3	Revision	6	2	3	2	HTQ	1
3	Revision	7	2	3	2	MS	1
3	Revision	8	2	3	2	MC4	1
3	Revision	9	2	3	2	HTQ	1
3	Revision	10	2	3	2	MC	1
3	Revision	11	2	6	2	MS6	1
3	Revision	12	2	6	2	MS	1
3	Revision	13	2	6	2	MC4	1
3	Revision	14	2	6	2	MC	1
3	Revision	15	2	6	2	MC	1
3	Language and Vocabulary Use	1	2	8	1	MC4	1
3	Opinion Performance Task	1	4	4	3	MI	1
3	Language and Vocabulary Use	2	2	8	1	HTQ	1
3	Opinion Performance Task	2	4	2	3	SA	2
3	Language and Vocabulary Use	3	2	8	1	MC4	1
3	Opinion Performance Task	3	4	4	3	SA	2
3	Language and Vocabulary Use	4	2	8	2	MC4	1
3	Opinion Performance Task	4	2	7	4	WER	6
3	Language and Vocabulary Use	5	2	8	1	MS	1
3	Language and Vocabulary Use	6	2	8	1	MS	1
3	Language and Vocabulary Use	7	2	8	1	MS	1
3	Language and Vocabulary Use	8	2	8	2	MC	1
3	Language and Vocabulary Use	9	2	8	2	HTQ	1
3	Language and Vocabulary Use	10	2	8	1	HTQ	1
3	Language and Vocabulary Use	11	2	8	2	MC	1
3	Language and Vocabulary Use	12	2	8	1	MS	1
3	Language and Vocabulary Use	13	2	8	1	MS	1
3	Language and Vocabulary Use	14	2	8	2	MS	1
3	Language and Vocabulary Use	15	2	8	1	MC	1
3	Editing	1	2	9	1	MC4	1
3	Editing	2	2	9	1	HTQ	1
3	Editing	3	2	9	1	HTQ	1
3	Editing	4	2	9	1	HTQ	1
3	Editing	5	2	9	1	MC4	1
3	Editing	6	2	9	1	MC4	1
3	Editing	7	2	9	1	MC4	1
3	Editing	8	2	9	1	HTQ	1
3	Editing	9	2	9	1	MC	1
3	Editing	10	2	9	1	MC4	1
3	Editing	11	2	9	1	HTQ	1
3	Editing	12	2	9	2	HTQ	1
3	Editing	13	2	9	1	MS	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
3	Editing	14	2	9	1	HTQ	1
3	Editing	15	2	9	1	MS	1
3	Listen/Interpret	1	3	4	1	MI	1
3	Listen/Interpret	2	3	4	1	MC4	1
3	Listen/Interpret	3	3	4	3	MS5	1
3	Listen/Interpret	4	3	4	1	MI	1
3	Listen/Interpret	5	3	4	3	MC4	1
3	Listen/Interpret	6	3	4	2	MC4	1
3	Listen/Interpret	7	3	4	3	MC4	1
3	Listen/Interpret	8	3	4	3	EBSR4	1
3	Listen/Interpret	9	3	4	1	MI	1
3	Listen/Interpret	10	3	4	1	MC4	1
3	Listen/Interpret	11	3	4	2	MC4	1
3	Listen/Interpret	12	3	4	3	EBSR4	1
3	Listen/Interpret	13	3	4	3	MC4	1
3	Listen/Interpret	14	3	4	3	EBSR4	1
3	Listen/Interpret	15	3	4	1	MI	1
3	Research	1	4	2	2	MC4	1
3	Research	2	4	2	2	MS6	1
3	Research	3	4	2	2	MC4	1
3	Research	4	4	2	2	MC4	1
3	Research	5	4	2	2	MC4	1
3	Research	6	4	2	2	MS6	1
3	Research	7	4	3	2	MC4	1
3	Research	8	4	3	2	MC4	1
3	Research	9	4	3	2	MC4	1
3	Research	10	4	3	2	MC4	1
3	Research	11	4	3	2	MC4	1
3	Research	12	4	3	2	MC	1
3	Research	13	4	4	2	MC4	1
3	Research	14	4	4	2	HTQ	1
3	Research	15	4	4	2	HTQ	1
3	Research	16	4	4	2	MC4	1
3	Research	17	4	4	2	MC4	1
3	Research	18	4	4	2	HTQ	1
4	Read Literary Texts	1	1	5	4	MC4	1
4	Read Literary Texts	2	1	3	2	MC4	1
4	Read Literary Texts	3	1	6	2	MC4	1
4	Read Literary Texts	4	1	4	3	EBSR4	1
4	Read Literary Texts	5	1	2	2	MC4	1
4	Read Literary Texts	6	1	1	2	HTQ	1
4	Read Literary Texts	7	1	2	2	MC4	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
4	Read Literary Texts	8	1	1	2	MC4	1
4	Read Literary Texts	9	1	4	3	EBSR4	1
4	Read Literary Texts	10	1	3	2	MS6	1
4	Read Literary Texts	11	1	4	3	SA	2
4	Read Literary Texts	12	1	3	1	MS5	1
4	Read Literary Texts	13	1	2	2	MC4	1
4	Read Literary Texts	14	1	7	3	MS5	1
4	Read Literary Texts	15	1	1	1	HTQ	1
4	Read Informational Texts	1	1	10	2	MC4	1
4	Read Informational Texts	2	1	13	2	MC4	1
4	Read Informational Texts	3	1	11	3	HTQ	1
4	Read Informational Texts	4	1	14	2	MS6	1
4	Read Informational Texts	5	1	9	2	EBSR5	1
4	Read Informational Texts	6	1	10	2	MC4	1
4	Read Informational Texts	7	1	14	3	MC4	1
4	Read Informational Texts	8	1	13	2	MC4	1
4	Read Informational Texts	9	1	11	3	HTQ	1
4	Read Informational Texts	10	1	8	2	MS5	1
4	Read Informational Texts	11	1	10	2	HTQ	1
4	Read Informational Texts	12	1	8	2	MS5	1
4	Read Informational Texts	13	1	12	4	MS6	1
4	Read Informational Texts	14	1	9	3	SA	2
4	Brief Writes	1	2	1	3	SA	2
4	Brief Writes	2	2	1	3	SA	2
4	Brief Writes	3	2	1	3	SA	2
4	Brief Writes	4	2	3	3	SA	2
4	Brief Writes	5	2	3	3	SA	2
4	Brief Writes	6	2	6	3	SA	2
4	Revision	1	2	1	2	MC4	1
4	Revision	2	2	1	2	MC	1
4	Revision	3	2	1	2	MC	1
4	Revision	4	2	1	2	MC	1
4	Revision	5	2	1	2	MC4	1
4	Revision	6	2	1	2	MS	1
4	Revision	7	2	3	2	MC4	1
4	Revision	8	2	3	2	MC	1
4	Revision	9	2	3	2	HTQ	1
4	Revision	10	2	3	2	MC	1
4	Revision	11	2	3	2	MS	1
4	Revision	12	2	3	2	HTQ	1
4	Revision	13	2	6	2	MC	1
4	Revision	14	2	6	2	MC	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
4	Revision	15	2	6	2	MS	1
4	Language and Vocabulary Use	1	2	8	1	MC4	1
4	Language and Vocabulary Use	2	2	8	2	HTQ	1
4	Language and Vocabulary Use	3	2	8	1	MC4	1
4	Language and Vocabulary Use	4	2	8	1	MS6	1
4	Language and Vocabulary Use	5	2	8	1	MS	1
4	Language and Vocabulary Use	6	2	8	1	MS	1
4	Language and Vocabulary Use	7	2	8	2	MS	1
4	Language and Vocabulary Use	8	2	8	2	HTQ	1
4	Language and Vocabulary Use	9	2	8	1	HTQ	1
4	Language and Vocabulary Use	10	2	8	2	MC	1
4	Language and Vocabulary Use	11	2	8	1	MS	1
4	Language and Vocabulary Use	12	2	8	1	MS	1
4	Language and Vocabulary Use	13	2	8	1	MS	1
4	Language and Vocabulary Use	14	2	8	1	MC	1
4	Language and Vocabulary Use	15	2	8	1	MC	1
4	Editing	1	2	9	1	MC4	1
4	Editing	2	2	9	1	MC4	1
4	Editing	3	2	9	1	MC	1
4	Editing	4	2	9	1	MC	1
4	Editing	5	2	9	1	MS	1
4	Editing	6	2	9	1	HTQ	1
4	Editing	7	2	9	1	HTQ	1
4	Editing	8	2	9	1	MC4	1
4	Editing	9	2	9	1	HTQ	1
4	Editing	10	2	9	1	MC4	1
4	Editing	11	2	9	1	MS	1
4	Editing	12	2	9	1	MC4	1
4	Editing	13	2	9	1	MC4	1
4	Editing	14	2	9	1	MC4	1
4	Editing	15	2	9	2	MS	1
4	Listen/Interpret	1	3	4	3	EBSR4	1
4	Listen/Interpret	2	3	4	2	MC4	1
4	Listen/Interpret	3	3	4	2	MC4	1
4	Listen/Interpret	4	3	4	1	MI	1
4	Listen/Interpret	5	3	4	2	MC4	1
4	Listen/Interpret	6	3	4	2	MC4	1
4	Listen/Interpret	7	3	4	1	MS5	1
4	Listen/Interpret	8	3	4	3	EBSR4	1
4	Listen/Interpret	9	3	4	1	MC4	1
4	Listen/Interpret	10	3	4	3	MC4	1
4	Listen/Interpret	11	3	4	3	MS5	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
4	Listen/Interpret	12	3	4	2	MC4	1
4	Listen/Interpret	13	3	4	3	MS6	1
4	Listen/Interpret	14	3	4	3	MI	1
4	Listen/Interpret	15	3	4	3	EBSR4	1
4	Research	1	4	2	2	MC4	1
4	Research	2	4	2	2	MC4	1
4	Research	3	4	2	2	MC6	1
4	Research	4	4	2	2	MI	1
4	Research	5	4	2	2	MC4	1
4	Research	6	4	2	2	MS6	1
4	Research	7	4	3	2	MC4	1
4	Research	8	4	3	2	MC4	1
4	Research	9	4	3	2	MS6	1
4	Research	10	4	3	2	MC4	1
4	Research	11	4	3	2	MC4	1
4	Research	12	4	3	2	MS6	1
4	Research	13	4	4	2	MC4	1
4	Research	14	4	4	2	MS6	1
4	Research	15	4	4	2	MC4	1
4	Research	16	4	4	2	HTQ	1
4	Research	17	4	4	2	MC4	1
4	Research	18	4	4	2	MS6	1
4	Narrative Performance Task	1	4	2	3	SA	2
4	Narrative Performance Task	2	4	4	3	SA	2
4	Narrative Performance Task	3	4	4	3	MI	1
4	Narrative Performance Task	4	2	2	4	WER	6
5	Read Literary Texts	1	1	3	1	MC4	1
5	Read Literary Texts	2	1	7	2	MC4	1
5	Read Literary Texts	3	1	5	3	EBSR4	1
5	Read Literary Texts	4	1	1	2	MS6	1
5	Read Literary Texts	5	1	4	3	SA	2
5	Read Literary Texts	6	1	7	2	MC4	1
5	Read Literary Texts	7	1	4	3	EBSR4	1
5	Read Literary Texts	8	1	3	2	MS5	1
5	Read Literary Texts	9	1	2	3	HTQ	1
5	Read Literary Texts	10	1	1	2	MS6	1
5	Read Literary Texts	11	1	2	3	SA	2
5	Read Literary Texts	12	1	1	2	MC4	1
5	Read Literary Texts	13	1	3	2	HTQ	1
5	Read Literary Texts	14	1	2	2	MS6	1
5	Read Literary Texts	15	1	4	3	EBSR4	1
5	Read Informational Texts	1	1	10	1	MC4	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
5	Read Informational Texts	2	1	8	1	HTQ	1
5	Read Informational Texts	3	1	13	2	MC4	1
5	Read Informational Texts	4	1	9	2	EBSR4	1
5	Read Informational Texts	5	1	14	3	MS6	1
5	Read Informational Texts	6	1	11	3	HTQ	1
5	Read Informational Texts	7	1	12	4	MC4	1
5	Read Informational Texts	8	1	10	2	MC4	1
5	Read Informational Texts	9	1	13	2	MC4	1
5	Read Informational Texts	10	1	11	3	SA	2
5	Read Informational Texts	11	1	12	3	MC4	1
5	Read Informational Texts	12	1	10	2	HTQ	1
5	Read Informational Texts	13	1	14	3	MS5	1
5	Read Informational Texts	14	1	8	2	MS5	1
5	Read Informational Texts	15	1	11	3	SA	2
5	Brief Writes	1	2	1	3	SA	2
5	Brief Writes	2	2	1	3	SA	2
5	Brief Writes	3	2	3	3	SA	2
5	Brief Writes	4	2	3	3	SA	2
5	Brief Writes	5	2	6	3	SA	2
5	Brief Writes	6	2	6	3	SA	2
5	Revision	1	2	1	2	MC	1
5	Revision	2	2	1	2	MC	1
5	Revision	3	2	1	2	HTQ	1
5	Revision	4	2	1	2	MC4	1
5	Revision	5	2	1	2	MC	1
5	Revision	6	2	3	2	HTQ	1
5	Revision	7	2	3	2	MS	1
5	Revision	8	2	3	2	MS6	1
5	Revision	9	2	3	2	MS	1
5	Revision	10	2	3	2	MC	1
5	Revision	11	2	6	2	HTQ	1
5	Revision	12	2	6	2	MS	1
5	Revision	13	2	6	2	MC	1
5	Revision	14	2	6	2	MC	1
5	Revision	15	2	6	2	MC	1
5	Language and Vocabulary Use	1	2	8	1	MC4	1
5	Language and Vocabulary Use	2	2	8	2	HTQ	1
5	Language and Vocabulary Use	3	2	8	1	HTQ	1
5	Language and Vocabulary Use	4	2	8	2	MC4	1
5	Language and Vocabulary Use	5	2	8	1	HTQ	1
5	Language and Vocabulary Use	6	2	8	1	HTQ	1
5	Language and Vocabulary Use	7	2	8	1	MS	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
5	Language and Vocabulary Use	8	2	8	1	MS	1
5	Language and Vocabulary Use	9	2	8	1	MS	1
5	Language and Vocabulary Use	10	2	8	1	MC	1
5	Language and Vocabulary Use	11	2	8	2	MS	1
5	Language and Vocabulary Use	12	2	8	1	MC	1
5	Language and Vocabulary Use	13	2	8	1	MS	1
5	Language and Vocabulary Use	14	2	8	1	MS	1
5	Language and Vocabulary Use	15	2	8	1	MC	1
5	Editing	1	2	9	1	MC4	1
5	Editing	2	2	9	1	MC4	1
5	Editing	3	2	9	1	MC4	1
5	Editing	4	2	9	1	HTQ	1
5	Editing	5	2	9	1	HTQ	1
5	Editing	6	2	9	1	HTQ	1
5	Editing	7	2	9	1	MC	1
5	Editing	8	2	9	1	MS6	1
5	Editing	9	2	9	1	MC	1
5	Editing	10	2	9	1	MC4	1
5	Editing	11	2	9	1	HTQ	1
5	Editing	12	2	9	1	MC	1
5	Editing	13	2	9	1	MS	1
5	Editing	14	2	9	1	MC	1
5	Listen/Interpret	1	3	4	3	MC4	1
5	Listen/Interpret	2	3	4	2	MC4	1
5	Listen/Interpret	3	3	4	3	EBSR4	1
5	Listen/Interpret	4	3	4	2	MC4	1
5	Listen/Interpret	5	3	4	3	EBSR4	1
5	Listen/Interpret	6	3	4	1	MI	1
5	Listen/Interpret	7	3	4	1	MI	1
5	Listen/Interpret	8	3	4	2	MC4	1
5	Listen/Interpret	9	3	4	1	MC4	1
5	Listen/Interpret	10	3	4	3	EBSR4	1
5	Listen/Interpret	11	3	4	3	MS5	1
5	Listen/Interpret	12	3	4	3	MC4	1
5	Listen/Interpret	13	3	4	3	MS5	1
5	Listen/Interpret	14	3	4	3	EBSR4	1
5	Research	1	4	2	2	MS6	1
5	Research	2	4	2	2	MS6	1
5	Research	3	4	2	2	MC4	1
5	Research	4	4	2	2	MC4	1
5	Research	5	4	2	2	MS6	1
5	Research	6	4	2	2	MC	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
5	Research	7	4	3	2	MC4	1
5	Research	8	4	3	2	MC4	1
5	Research	9	4	3	2	MS6	1
5	Research	10	4	3	2	MC4	1
5	Research	11	4	3	2	MS6	1
5	Research	12	4	3	2	MS6	1
5	Research	13	4	4	2	MC4	1
5	Research	14	4	4	2	MS6	1
5	Research	15	4	4	2	MC4	1
5	Research	16	4	4	2	HTQ	1
5	Research	17	4	4	2	MS6	1
5	Research	18	4	4	2	HTQ	1
5	Narrative Performance Task	1	4	2	3	SA	2
5	Narrative Performance Task	2	4	4	3	SA	2
5	Narrative Performance Task	3	4	2	3	MS6	1
5	Narrative Performance Task	4	2	2	4	WER	6
6	Read Literary Texts	1	1	5	3	MC4	1
6	Read Literary Texts	2	1	3	2	MC4	1
6	Read Literary Texts	3	1	2	2	HTQ	1
6	Read Literary Texts	4	1	6	3	MC4	1
6	Read Literary Texts	5	1	6	3	MS6	1
6	Read Literary Texts	6	1	6	2	MC4	1
6	Read Literary Texts	7	1	3	2	MC4	1
6	Read Literary Texts	8	1	5	3	MC4	1
6	Read Literary Texts	9	1	2	3	SA	2
6	Read Literary Texts	10	1	6	2	MC4	1
6	Read Literary Texts	11	1	2	2	MC4	1
6	Read Literary Texts	12	1	1	2	MC4	1
6	Read Literary Texts	13	1	3	1	MC4	1
6	Read Literary Texts	14	1	4	3	HTQ	1
6	Read Literary Texts	15	1	7	3	MS5	1
6	Read Informational Texts	1	1	8	2	HTQ	1
6	Read Informational Texts	2	1	9	2	EBSR4	1
6	Read Informational Texts	3	1	14	3	MC4	1
6	Read Informational Texts	4	1	10	1	MS5	1
6	Read Informational Texts	5	1	13	3	MS6	1
6	Read Informational Texts	6	1	11	3	EBSR4	1
6	Read Informational Texts	7	1	10	1	HTQ	1
6	Read Informational Texts	8	1	9	2	MS6	1
6	Read Informational Texts	9	1	12	3	EBSR4	1
6	Read Informational Texts	10	1	11	3	SA	2
6	Read Informational Texts	11	1	8	2	HTQ	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
6	Read Informational Texts	12	1	9	2	MC4	1
6	Read Informational Texts	13	1	13	3	MC4	1
6	Read Informational Texts	14	1	14	3	MS6	1
6	Read Informational Texts	15	1	11	3	EBSR4	1
6	Read Informational Texts	16	1	12	4	MS6	1
6	Brief Writes	1	2	1	3	SA	2
6	Brief Writes	2	2	1	3	SA	2
6	Brief Writes	3	2	1	3	SA	2
6	Brief Writes	4	2	3	3	SA	2
6	Brief Writes	5	2	6	3	SA	2
6	Brief Writes	6	2	6	3	SA	2
6	Revision	1	2	1	2	MC4	1
6	Revision	2	2	1	2	MS	1
6	Revision	3	2	1	2	MC4	1
6	Revision	4	2	1	2	MC	1
6	Revision	5	2	1	2	MC	1
6	Revision	6	2	3	2	MC4	1
6	Revision	7	2	3	2	MC	1
6	Revision	8	2	3	2	MC4	1
6	Revision	9	2	3	2	MC	1
6	Revision	10	2	3	2	HTQ	1
6	Revision	11	2	6	2	MS6	1
6	Revision	12	2	6	2	MC	1
6	Revision	13	2	6	2	MC	1
6	Revision	14	2	6	2	MC	1
6	Revision	15	2	6	2	MS	1
6	Language and Vocabulary Use	1	2	8	1	MC4	1
6	Language and Vocabulary Use	2	2	8	2	MS6	1
6	Language and Vocabulary Use	3	2	8	2	MS6	1
6	Language and Vocabulary Use	4	2	8	1	MC4	1
6	Language and Vocabulary Use	5	2	8	2	MS6	1
6	Language and Vocabulary Use	6	2	8	1	MS	1
6	Language and Vocabulary Use	7	2	8	2	MS	1
6	Language and Vocabulary Use	8	2	8	1	HTQ	1
6	Language and Vocabulary Use	9	2	8	1	MC	1
6	Language and Vocabulary Use	10	2	8	1	MC	1
6	Language and Vocabulary Use	11	2	8	1	MC	1
6	Language and Vocabulary Use	12	2	8	2	MC	1
6	Language and Vocabulary Use	13	2	8	1	MC	1
6	Language and Vocabulary Use	14	2	8	2	MS	1
6	Language and Vocabulary Use	15	2	8	1	MC	1
6	Editing	1	2	9	1	MC4	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
6	Editing	2	2	9	1	HTQ	1
6	Editing	3	2	9	1	HTQ	1
6	Editing	4	2	9	1	HTQ	1
6	Editing	5	2	9	1	MS	1
6	Editing	6	2	9	1	MC	1
6	Editing	7	2	9	1	MC	1
6	Editing	8	2	9	1	MC4	1
6	Editing	9	2	9	1	MC4	1
6	Editing	10	2	9	1	MC	1
6	Editing	11	2	9	1	HTQ	1
6	Editing	12	2	9	1	HTQ	1
6	Editing	13	2	9	1	HTQ	1
6	Editing	14	2	9	1	MC	1
6	Editing	15	2	9	1	HTQ	1
6	Listen/Interpret	1	3	4	2	MC4	1
6	Listen/Interpret	2	3	4	3	EBSR4	1
6	Listen/Interpret	3	3	4	3	MS5	1
6	Listen/Interpret	4	3	4	3	MC4	1
6	Listen/Interpret	5	3	4	2	MS6	1
6	Listen/Interpret	6	3	4	1	MC4	1
6	Listen/Interpret	7	3	4	3	MC4	1
6	Listen/Interpret	8	3	4	3	EBSR4	1
6	Listen/Interpret	9	3	4	1	MI	1
6	Listen/Interpret	10	3	4	3	EBSR4	1
6	Listen/Interpret	11	3	4	3	EBSR4	1
6	Listen/Interpret	12	3	4	3	MS5	1
6	Listen/Interpret	13	3	4	3	MC4	1
6	Listen/Interpret	14	3	4	2	EBSR4	1
6	Listen/Interpret	15	3	4	3	MS5	1
6	Research	1	4	2	2	MC4	1
6	Research	2	4	2	2	HTQ	1
6	Research	3	4	2	2	HTQ	1
6	Research	4	4	2	2	MC4	1
6	Research	5	4	2	2	HTQ	1
6	Research	6	4	3	2	MC4	1
6	Research	7	4	3	2	MC4	1
6	Research	8	4	3	2	MC4	1
6	Research	9	4	3	2	MS6	1
6	Research	10	4	3	2	MS6	1
6	Research	11	4	4	2	HTQ	1
6	Research	12	4	4	2	MS6	1
6	Research	13	4	4	2	MC4	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
6	Research	14	4	4	2	HTQ	1
6	Research	15	4	4	2	HTQ	1
6	Research	16	4	4	2	MS6	1
6	Research	17	4	4	2	HTQ	1
6	Research	18	4	4	2	MS6	1
6	Argument Performance Task	1	4	4	3	SA	2
6	Argument Performance Task	2	4	3	4	SA	2
6	Argument Performance Task	3	2	7	4	WER	6
7	Read Literary Texts	1	1	6	2	MC4	1
7	Read Literary Texts	2	1	3	2	MC4	1
7	Read Literary Texts	3	1	4	3	EBSR4	1
7	Read Literary Texts	4	1	1	2	HTQ	1
7	Read Literary Texts	5	1	3	2	HTQ	1
7	Read Literary Texts	6	1	2	2	MC4	1
7	Read Literary Texts	7	1	5	3	MC4	1
7	Read Literary Texts	8	1	6	3	MC4	1
7	Read Literary Texts	9	1	1	2	MS5	1
7	Read Literary Texts	10	1	4	4	SA	2
7	Read Literary Texts	11	1	7	3	MC4	1
7	Read Literary Texts	12	1	3	2	MC4	1
7	Read Literary Texts	13	1	1	2	MC4	1
7	Read Literary Texts	14	1	4	4	EBSR4	1
7	Read Literary Texts	15	1	2	2	EBSR4	1
7	Read Literary Texts	16	1	6	3	MS6	1
7	Read Informational Texts	1	1	14	3	MC4	1
7	Read Informational Texts	2	1	12	4	MC4	1
7	Read Informational Texts	3	1	9	2	EBSR4	1
7	Read Informational Texts	4	1	10	1	HTQ	1
7	Read Informational Texts	5	1	14	3	MS6	1
7	Read Informational Texts	6	1	8	2	MS6	1
7	Read Informational Texts	7	1	10	1	MS5	1
7	Read Informational Texts	8	1	8	2	HTQ	1
7	Read Informational Texts	9	1	11	3	HTQ	1
7	Read Informational Texts	10	1	12	4	EBSR6	1
7	Read Informational Texts	11	1	13	3	MS6	1
7	Read Informational Texts	12	1	9	3	SA	2
7	Read Informational Texts	13	1	11	4	EBSR4	1
7	Read Informational Texts	14	1	13	3	MS6	1
7	Read Informational Texts	15	1	9	2	MS6	1
7	Read Informational Texts	16	1	12	4	HTQ	1
7	Brief Writes	1	2	1	3	SA	2
7	Brief Writes	2	2	1	3	SA	2

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
7	Brief Writes	3	2	3	3	SA	2
7	Brief Writes	4	2	6	3	SA	2
7	Brief Writes	5	2	6	3	SA	2
7	Brief Writes	6	2	6	3	SA	2
7	Revision	1	2	1	2	MC	1
7	Revision	2	2	1	2	MC4	1
7	Revision	3	2	1	2	MC4	1
7	Revision	4	2	1	2	MC	1
7	Revision	5	2	3	2	HTQ	1
7	Revision	6	2	3	2	MS	1
7	Revision	7	2	3	2	MC	1
7	Revision	8	2	3	2	MS	1
7	Revision	9	2	6	2	MC	1
7	Revision	10	2	6	2	HTQ	1
7	Revision	11	2	6	2	MC4	1
7	Revision	12	2	6	2	HTQ	1
7	Revision	13	2	6	2	MC	1
7	Revision	14	2	6	2	MS	1
7	Revision	15	2	6	2	MC	1
7	Language and Vocabulary Use	1	2	8	2	MC4	1
7	Language and Vocabulary Use	2	2	8	2	MC4	1
7	Language and Vocabulary Use	3	2	8	2	HTQ	1
7	Language and Vocabulary Use	4	2	8	1	MS6	1
7	Language and Vocabulary Use	5	2	8	2	HTQ	1
7	Language and Vocabulary Use	6	2	8	2	MC	1
7	Language and Vocabulary Use	7	2	8	1	MC	1
7	Language and Vocabulary Use	8	2	8	1	MS	1
7	Language and Vocabulary Use	9	2	8	1	MS	1
7	Language and Vocabulary Use	10	2	8	2	HTQ	1
7	Language and Vocabulary Use	11	2	8	2	HTQ	1
7	Language and Vocabulary Use	12	2	8	2	MS	1
7	Language and Vocabulary Use	13	2	8	1	MS	1
7	Language and Vocabulary Use	14	2	8	2	MS	1
7	Language and Vocabulary Use	15	2	8	2	MC	1
7	Editing	1	2	9	1	MC4	1
7	Editing	2	2	9	1	HTQ	1
7	Editing	3	2	9	1	MC	1
7	Editing	4	2	9	1	MS	1
7	Editing	5	2	9	1	MC4	1
7	Editing	6	2	9	1	MC4	1
7	Editing	7	2	9	1	HTQ	1
7	Editing	8	2	9	1	MC	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
7	Editing	9	2	9	1	MS	1
7	Editing	10	2	9	1	MC	1
7	Editing	11	2	9	1	MC4	1
7	Editing	12	2	9	1	MS6	1
7	Editing	13	2	9	1	MS6	1
7	Editing	14	2	9	1	MC	1
7	Listen/Interpret	1	3	4	3	MC4	1
7	Listen/Interpret	2	3	4	2	MC4	1
7	Listen/Interpret	3	3	4	1	MS6	1
7	Listen/Interpret	4	3	4	3	EBSR4	1
7	Listen/Interpret	5	3	4	2	MC4	1
7	Listen/Interpret	6	3	4	3	MC4	1
7	Listen/Interpret	7	3	4	3	MC4	1
7	Listen/Interpret	8	3	4	1	MC4	1
7	Listen/Interpret	9	3	4	3	MS5	1
7	Listen/Interpret	10	3	4	3	MC4	1
7	Listen/Interpret	11	3	4	1	EBSR4	1
7	Listen/Interpret	12	3	4	3	EBSR4	1
7	Listen/Interpret	13	3	4	3	MC4	1
7	Listen/Interpret	14	3	4	2	MC4	1
7	Listen/Interpret	15	3	4	1	MS6	1
7	Research	1	4	2	2	HTQ	1
7	Research	2	4	2	2	MC4	1
7	Research	3	4	2	2	MC4	1
7	Research	4	4	2	2	MS6	1
7	Research	5	4	2	2	HTQ	1
7	Research	6	4	2	2	HTQ	1
7	Research	7	4	3	2	MC4	1
7	Research	8	4	3	2	MS6	1
7	Research	9	4	3	2	MC4	1
7	Research	10	4	3	2	MS6	1
7	Research	11	4	3	2	MS6	1
7	Research	12	4	3	2	MS	1
7	Research	13	4	4	2	MC4	1
7	Research	14	4	4	2	MI	1
7	Research	15	4	4	2	HTQ	1
7	Research	16	4	4	2	MI	1
7	Research	17	4	4	2	MI	1
7	Research	18	4	4	2	MS	1
7	Explanatory Performance Task	1	4	4	3	SA	2
7	Explanatory Performance Task	2	4	2	4	SA	2
7	Explanatory Performance Task	3	4	4	3	MI	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
7	Explanatory Performance Task	4	2	4	4	WER	6
8	Read Literary Texts	1	1	7	3	MC4	1
8	Read Literary Texts	2	1	1	2	MC4	1
8	Read Literary Texts	3	1	6	3	MC4	1
8	Read Literary Texts	4	1	6	2	MS6	1
8	Read Literary Texts	5	1	3	2	MS5	1
8	Read Literary Texts	6	1	2	3	SA	2
8	Read Literary Texts	7	1	1	2	MC4	1
8	Read Literary Texts	8	1	3	2	MC4	1
8	Read Literary Texts	9	1	1	2	MC4	1
8	Read Literary Texts	10	1	4	4	HTQ	1
8	Read Literary Texts	11	1	7	3	MS6	1
8	Read Literary Texts	12	1	7	3	MC4	1
8	Read Literary Texts	13	1	6	2	MC4	1
8	Read Literary Texts	14	1	2	2	EBSR4	1
8	Read Literary Texts	15	1	1	2	MS6	1
8	Read Literary Texts	16	1	4	4	HTQ	1
8	Read Informational Texts	1	1	14	3	MC4	1
8	Read Informational Texts	2	1	8	2	MC4	1
8	Read Informational Texts	3	1	12	4	EBSR4	1
8	Read Informational Texts	4	1	10	1	MS5	1
8	Read Informational Texts	5	1	11	3	HTQ	1
8	Read Informational Texts	6	1	9	2	HTQ	1
8	Read Informational Texts	7	1	14	3	MC4	1
8	Read Informational Texts	8	1	8	2	MS5	1
8	Read Informational Texts	9	1	12	3	MS6	1
8	Read Informational Texts	10	1	14	3	MS5	1
8	Read Informational Texts	11	1	11	4	SA	2
8	Read Informational Texts	12	1	9	3	SA	2
8	Read Informational Texts	13	1	8	2	HTQ	1
8	Read Informational Texts	14	1	11	4	HTQ	1
8	Read Informational Texts	15	1	9	2	HTQ	1
8	Read Informational Texts	16	1	13	2	MS5	1
8	Brief Writes	1	2	1	3	SA	2
8	Brief Writes	2	2	1	3	SA	2
8	Brief Writes	3	2	3	3	SA	2
8	Brief Writes	4	2	3	3	SA	2
8	Brief Writes	5	2	6	3	SA	2
8	Brief Writes	6	2	6	3	SA	2
8	Edit/Revise	1	2	8	2	MC4	1
8	Edit/Revise	2	2	8	2	MC4	1
8	Edit/Revise	3	2	8	1	MS6	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
8	Edit/Revise	4	2	8	1	MC4	1
8	Edit/Revise	5	2	8	2	HTQ	1
8	Edit/Revise	6	2	1	2	MC4	1
8	Edit/Revise	7	2	1	2	MS5	1
8	Edit/Revise	8	2	3	2	MS6	1
8	Edit/Revise	9	2	3	2	HTQ	1
8	Edit/Revise	10	2	6	2	HTQ	1
8	Edit/Revise	11	2	9	1	MC4	1
8	Edit/Revise	12	2	9	1	MC4	1
8	Edit/Revise	13	2	9	1	MC4	1
8	Edit/Revise	14	2	9	1	MS6	1
8	Listen/Interpret	1	3	4	1	MC4	1
8	Listen/Interpret	2	3	4	3	MC4	1
8	Listen/Interpret	3	3	4	2	MC4	1
8	Listen/Interpret	4	3	4	2	MC4	1
8	Listen/Interpret	5	3	4	2	MC4	1
8	Listen/Interpret	6	3	4	3	MC4	1
8	Listen/Interpret	7	3	4	1	MC4	1
8	Listen/Interpret	8	3	4	3	EBSR4	1
8	Listen/Interpret	9	3	4	2	MC4	1
8	Listen/Interpret	10	3	4	3	MC4	1
8	Listen/Interpret	11	3	4	1	MI	1
8	Listen/Interpret	12	3	4	2	MC4	1
8	Listen/Interpret	13	3	4	3	MC4	1
8	Listen/Interpret	14	3	4	3	EBSR4	1
8	Listen/Interpret	15	3	4	2	MS5	1
8	Research	1	4	2	2	HTQ	1
8	Research	2	4	2	2	HTQ	1
8	Research	3	4	2	2	HTQ	1
8	Research	4	4	2	2	HTQ	1
8	Research	5	4	2	2	HTQ	1
8	Research	6	4	2	2	HTQ	1
8	Research	7	4	3	2	MC4	1
8	Research	8	4	3	2	MC4	1
8	Research	9	4	3	2	MC4	1
8	Research	10	4	3	2	MS6	1
8	Research	11	4	3	2	MC4	1
8	Research	12	4	3	2	MS6	1
8	Research	13	4	4	2	HTQ	1
8	Research	14	4	4	2	MC4	1
8	Research	15	4	4	2	MC4	1
8	Research	16	4	4	2	MC4	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
8	Research	17	4	4	2	MI	1
8	Research	18	4	4	2	HTQ	1
8	Explanatory Performance Task	1	4	4	3	MI	1
8	Explanatory Performance Task	2	4	4	3	SA	2
8	Explanatory Performance Task	3	4	2	4	SA	2
8	Explanatory Performance Task	4	2	4	4	WER	6
11	Read Literary Texts	1	1	7	3	MC4	1
11	Read Literary Texts	2	1	3	1	MC4	1
11	Read Literary Texts	3	1	5	4	MC4	1
11	Read Literary Texts	4	1	6	4	MC4	1
11	Read Literary Texts	5	1	4	3	EBSR4	1
11	Read Literary Texts	6	1	1	2	MS5	1
11	Read Literary Texts	7	1	7	3	MC4	1
11	Read Literary Texts	8	1	2	2	MC4	1
11	Read Literary Texts	9	1	6	4	MC4	1
11	Read Literary Texts	10	1	1	2	HTQ	1
11	Read Literary Texts	11	1	5	4	HTQ	1
11	Read Literary Texts	12	1	4	4	SA	2
11	Read Literary Texts	13	1	3	2	MC4	1
11	Read Literary Texts	14	1	1	2	MC4	1
11	Read Literary Texts	15	1	7	3	MS6	1
11	Read Literary Texts	16	1	4	3	HTQ	1
11	Read Informational Texts	1	1	10	2	MC4	1
11	Read Informational Texts	2	1	11	3	HTQ	1
11	Read Informational Texts	3	1	8	2	MC4	1
11	Read Informational Texts	4	1	14	3	MS6	1
11	Read Informational Texts	5	1	14	3	MC4	1
11	Read Informational Texts	6	1	8	2	MC4	1
11	Read Informational Texts	7	1	11	3	HTQ	1
11	Read Informational Texts	8	1	11	3	EBSR4	1
11	Read Informational Texts	9	1	10	1	HTQ	1
11	Read Informational Texts	10	1	12	3	HTQ	1
11	Read Informational Texts	11	1	11	4	SA	2
11	Read Informational Texts	12	1	10	1	MC4	1
11	Read Informational Texts	13	1	8	2	HTQ	1
11	Read Informational Texts	14	1	9	2	MS6	1
11	Read Informational Texts	15	1	12	3	MS6	1
11	Brief Writes	1	2	1	3	SA	2
11	Brief Writes	2	2	1	3	SA	2
11	Brief Writes	3	2	3	3	SA	2
11	Brief Writes	4	2	3	3	SA	2
11	Brief Writes	5	2	6	3	SA	2

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
11	Brief Writes	6	2	6	3	SA	2
11	Revision	1	2	1	2	MC4	1
11	Revision	2	2	1	2	MC	1
11	Revision	3	2	1	2	MC4	1
11	Revision	4	2	1	2	MC	1
11	Revision	5	2	3	2	MC4	1
11	Revision	6	2	3	2	MS	1
11	Revision	7	2	3	2	MS6	1
11	Revision	8	2	3	2	HTQ	1
11	Revision	9	2	3	2	MS	1
11	Revision	10	2	6	2	MC4	1
11	Revision	11	2	6	2	MS	1
11	Revision	12	2	6	2	MC	1
11	Revision	13	2	6	2	HTQ	1
11	Revision	14	2	6	2	MC	1
11	Revision	15	2	6	2	MC	1
11	Language and Vocabulary Use	1	2	8	2	MC4	1
11	Language and Vocabulary Use	2	2	8	2	HTQ	1
11	Language and Vocabulary Use	3	2	8	1	MC4	1
11	Language and Vocabulary Use	4	2	8	2	HTQ	1
11	Language and Vocabulary Use	5	2	8	1	HTQ	1
11	Language and Vocabulary Use	6	2	8	2	MC	1
11	Language and Vocabulary Use	7	2	8	2	MS	1
11	Language and Vocabulary Use	8	2	8	2	HTQ	1
11	Language and Vocabulary Use	9	2	8	1	HTQ	1
11	Language and Vocabulary Use	10	2	8	2	MC	1
11	Language and Vocabulary Use	11	2	8	2	MS	1
11	Language and Vocabulary Use	12	2	8	2	HTQ	1
11	Language and Vocabulary Use	13	2	8	2	MS	1
11	Language and Vocabulary Use	14	2	8	2	MS	1
11	Language and Vocabulary Use	15	2	8	2	MS	1
11	Editing	1	2	9	1	MC4	1
11	Editing	2	2	9	1	HTQ	1
11	Editing	3	2	9	1	MS	1
11	Editing	4	2	9	1	HTQ	1
11	Editing	5	2	9	1	MC4	1
11	Editing	6	2	9	1	HTQ	1
11	Editing	7	2	9	1	HTQ	1
11	Editing	8	2	9	1	MC	1
11	Editing	9	2	9	1	HTQ	1
11	Editing	10	2	9	1	MC	1
11	Editing	11	2	9	1	HTQ	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
11	Editing	12	2	9	1	MC4	1
11	Editing	13	2	9	1	MC4	1
11	Editing	14	2	9	1	HTQ	1
11	Editing	15	2	9	1	MS	1
11	Listen/Interpret	1	3	4	1	MC4	1
11	Listen/Interpret	2	3	4	3	MC4	1
11	Listen/Interpret	3	3	4	2	MC4	1
11	Listen/Interpret	4	3	4	3	MC4	1
11	Listen/Interpret	5	3	4	3	MC4	1
11	Listen/Interpret	6	3	4	2	MC4	1
11	Listen/Interpret	7	3	4	3	MS5	1
11	Listen/Interpret	8	3	4	1	MC4	1
11	Listen/Interpret	9	3	4	3	MC4	1
11	Listen/Interpret	10	3	4	2	MS6	1
11	Listen/Interpret	11	3	4	1	MI	1
11	Listen/Interpret	12	3	4	3	MC4	1
11	Listen/Interpret	13	3	4	3	MS5	1
11	Listen/Interpret	14	3	4	2	MC4	1
11	Listen/Interpret	15	3	4	2	MS5	1
11	Research	1	4	2	2	MC4	1
11	Research	2	4	2	2	MC4	1
11	Research	3	4	2	2	MC4	1
11	Research	4	4	2	2	HTQ	1
11	Research	5	4	2	2	HTQ	1
11	Research	6	4	2	2	MS6	1
11	Research	7	4	2	2	HTQ	1
11	Research	8	4	2	2	MS6	1
11	Research	9	4	3	2	MC4	1
11	Research	10	4	3	2	MC	1
11	Research	11	4	4	2	HTQ	1
11	Research	12	4	4	2	MC4	1
11	Research	13	4	4	2	HTQ	1
11	Research	14	4	4	2	HTQ	1
11	Research	15	4	4	2	MC4	1
11	Research	16	4	4	2	MC4	1
11	Research	17	4	4	2	MC4	1
11	Research	18	4	4	2	HTQ	1
11	Explanatory Performance Task	1	4	2	4	SA	2
11	Explanatory Performance Task	2	4	4	3	SA	2
11	Explanatory Performance Task	3	2	4	3	WER	6

Appendix H: 2016-17 Mathematics IAB Test Maps

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
3	Operations and Algebraic Thinking	1	1	D	2	EQ	1
3	Operations and Algebraic Thinking	2	1	A	1	EQ	1
3	Operations and Algebraic Thinking	3	1	D	2	TI	1
3	Operations and Algebraic Thinking	4	1	A	1	EQ	1
3	Operations and Algebraic Thinking	5	1	C	1	EQ	1
3	Operations and Algebraic Thinking	6	1	D	2	EQ	1
3	Operations and Algebraic Thinking	7	1	A	1	EQ	1
3	Operations and Algebraic Thinking	8	1	B	1	MI	1
3	Operations and Algebraic Thinking	9	1	A	1	EQ	1
3	Operations and Algebraic Thinking	10	2	A	2	EQ	1
3	Operations and Algebraic Thinking	11	3	E	3	MC4	1
3	Operations and Algebraic Thinking	12	1	B	1	MI	1
3	Operations and Algebraic Thinking	13	4	E	3	MC4	1
3	Operations and Algebraic Thinking	14	1	C	1	EQ	1
3	Operations and Algebraic Thinking	15	1	D	2	TI	1
3	Number and Operations -- Fractions	1	1	F	1	MC	1
3	Number and Operations -- Fractions	2	1	F	1	MI	1
3	Number and Operations -- Fractions	3	1	F	2	EQ	1
3	Number and Operations -- Fractions	4	1	F	2	MC4	1
3	Number and Operations -- Fractions	5	1	F	1	EQ	1
3	Number and Operations -- Fractions	6	1	F	1	EQ	1
3	Number and Operations -- Fractions	7	1	F	2	EQ	1
3	Number and Operations -- Fractions	8	1	F	1	EQ	1
3	Number and Operations -- Fractions	9	1	F	2	EQ	1
3	Number and Operations -- Fractions	10	1	F	1	EQ	1
3	Number and Operations -- Fractions	11	3	C	3	MS4	1
3	Number and Operations -- Fractions	12	1	F	2	EQ	1
3	Number and Operations -- Fractions	13	1	F	2	EQ	1
3	Number and Operations -- Fractions	14	1	F	1	MC4	1
3	Measurement and Data	1	1	I	2	MC4	1
3	Measurement and Data	2	1	I	2	EQ	1
3	Measurement and Data	3	1	G	1	MC4	1
3	Measurement and Data	4	3	E	2	MC4	1
3	Measurement and Data	5	1	I	2	MC4	1
3	Measurement and Data	6	1	H	2	EQ	1
3	Measurement and Data	7	1	J	1	EQ	1
3	Measurement and Data	8	1	H	2	EQ	1
3	Measurement and Data	9	1	I	2	EQ	1
3	Measurement and Data	10	4	D	2	EQ	1
3	Measurement and Data	11	1	J	1	EQ	2
3	Measurement and Data	12	1	G	2	EQ	1
3	Measurement and Data	13	2	B	2	MS4	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
3	Measurement and Data	14	1	G	2	EQ	1
3	Measurement and Data	15	1	G	1	MC4	1
3	Number and Operations in Base Ten	1	1	E	1	EQ	1
3	Number and Operations in Base Ten	2	1	E	1	EQ	1
3	Number and Operations in Base Ten	3	1	E	1	EQ	1
3	Number and Operations in Base Ten	4	1	E	1	EQ	1
3	Number and Operations in Base Ten	5	1	E	1	EQ	1
3	Number and Operations in Base Ten	6	2	A	2	MC	1
3	Number and Operations in Base Ten	7	1	E	1	EQ	1
3	Number and Operations in Base Ten	8	1	E	1	EQ	1
3	Number and Operations in Base Ten	9	2	A	2	MI	1
3	Number and Operations in Base Ten	10	1	E	1	EQ	1
3	Number and Operations in Base Ten	11	1	E	1	EQ	1
3	Number and Operations in Base Ten	12	1	E	1	EQ	1
3	Number and Operations in Base Ten	13	1	E	1	EQ	1
3	Number and Operations in Base Ten	14	1	E	1	EQ	1
3	Performance Task	1	4	A	2	EQ	1
3	Performance Task	2	2	A	2	EQ	1
3	Performance Task	3	3	E	3	SA	2
3	Performance Task	4	3	E	3	SA	2
3	Performance Task	5	2	A	2	SA	1
3	Performance Task	6	4	A	3	SA	2
4	Operations and Algebraic Thinking	1	1	A	1	EQ	1
4	Operations and Algebraic Thinking	2	1	B	1	MC4	1
4	Operations and Algebraic Thinking	3	2	C	2	MC	1
4	Operations and Algebraic Thinking	4	1	A	1	EQ	1
4	Operations and Algebraic Thinking	5	1	A	1	EQ	1
4	Operations and Algebraic Thinking	6	1	C	2	MC4	1
4	Operations and Algebraic Thinking	7	2	D	2	MI	1
4	Operations and Algebraic Thinking	8	1	A	1	EQ	1
4	Operations and Algebraic Thinking	9	1	B	2	MI	1
4	Operations and Algebraic Thinking	10	3	F	2	MC4	1
4	Operations and Algebraic Thinking	11	1	B	1	MC4	1
4	Operations and Algebraic Thinking	12	3	F	3	MC4	1
4	Operations and Algebraic Thinking	13	4	E	3	EQ	2
4	Operations and Algebraic Thinking	14	4	F	2	EQ	1
4	Operations and Algebraic Thinking	15	4	A	2	EQ	1
4	Operations and Algebraic Thinking	16	1	B	2	MI	1
4	Number and Operations -- Fractions	1	1	H	1	EQ	1
4	Number and Operations -- Fractions	2	1	G	1	EQ	1
4	Number and Operations -- Fractions	3	1	F	2	EQ	1
4	Number and Operations -- Fractions	4	1	G	1	EQ	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
4	Number and Operations -- Fractions	5	1	H	2	EQ	1
4	Number and Operations -- Fractions	6	1	F	1	EQ	1
4	Number and Operations -- Fractions	7	3	C	3	MS4	1
4	Number and Operations -- Fractions	8	1	G	2	MI	1
4	Number and Operations -- Fractions	9	1	F	2	MI	1
4	Number and Operations -- Fractions	10	1	G	1	EQ	1
4	Number and Operations -- Fractions	11	1	F	2	MI	1
4	Number and Operations -- Fractions	12	2	A	3	EQ	1
4	Number and Operations -- Fractions	13	3	D	3	MS5	1
4	Number and Operations -- Fractions	14	1	G	2	MI	1
4	Number and Operations -- Fractions	15	1	F	1	MI	1
4	Measurement and Data	1	1	K	2	EQ	1
4	Measurement and Data	2	1	I	2	TI	1
4	Measurement and Data	3	1	I	2	MI	1
4	Measurement and Data	4	1	K	2	EQ	1
4	Measurement and Data	5	1	I	2	TI	1
4	Measurement and Data	6	1	J	2	EQ	1
4	Measurement and Data	7	1	I	1	MI	1
4	Measurement and Data	8	1	K	2	EQ	1
4	Measurement and Data	9	1	J	2	MI	1
4	Measurement and Data	10	4	D	2	MI	1
4	Measurement and Data	11	1	K	2	EQ	1
4	Measurement and Data	12	2	B	2	EQ	1
4	Measurement and Data	13	1	K	2	EQ	1
4	Measurement and Data	14	1	I	2	EQ	1
4	Measurement and Data	15	1	I	2	MI	1
4	Number and Operations in Base Ten	1	1	E	1	EQ	1
4	Number and Operations in Base Ten	2	1	D	2	EQ	1
4	Number and Operations in Base Ten	3	1	E	1	MC4	1
4	Number and Operations in Base Ten	4	1	E	1	EQ	1
4	Number and Operations in Base Ten	5	1	D	1	EQ	1
4	Number and Operations in Base Ten	6	1	E	2	MC4	1
4	Number and Operations in Base Ten	7	1	E	1	EQ	1
4	Number and Operations in Base Ten	8	3	C	3	MS5	1
4	Number and Operations in Base Ten	9	1	E	2	MC4	1
4	Number and Operations in Base Ten	10	2	D	2	MS4	1
4	Number and Operations in Base Ten	11	1	D	1	EQ	1
4	Number and Operations in Base Ten	12	1	D	2	MI	1
4	Number and Operations in Base Ten	13	3	D	3	MC4	1
4	Number and Operations in Base Ten	14	1	E	2	MC4	1
4	Number and Operations in Base Ten	15	1	D	2	MI	1
4	Geometry	1	1	L	1	MI	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
4	Geometry	2	1	L	1	MI	1
4	Geometry	3	1	L	1	MI	1
4	Geometry	4	1	L	1	MI	1
4	Geometry	5	1	L	1	MI	1
4	Geometry	6	1	L	2	MI	1
4	Geometry	7	1	L	2	MI	1
4	Geometry	8	1	L	2	MI	1
4	Geometry	9	1	L	1	MI	1
4	Geometry	10	1	L	2	MI	1
4	Geometry	11	1	L	1	MI	1
4	Performance Task	1	4	A	2	EQ	1
4	Performance Task	2	2	A	2	MC4	1
4	Performance Task	3	2	A	2	TI	2
4	Performance Task	4	3	E	3	SA	1
4	Performance Task	5	3	B	3	SA	1
4	Performance Task	6	4	E	3	SA	3
5	Operations and Algebraic Thinking	1	1	A	1	MC	1
5	Operations and Algebraic Thinking	2	1	A	1	EQ	1
5	Operations and Algebraic Thinking	3	1	A	2	MC	1
5	Operations and Algebraic Thinking	4	1	B	2	MC	1
5	Operations and Algebraic Thinking	5	1	A	2	MC	1
5	Operations and Algebraic Thinking	6	2	C	2	MC	1
5	Operations and Algebraic Thinking	7	1	A	1	MC	1
5	Operations and Algebraic Thinking	8	1	B	2	MC	1
5	Operations and Algebraic Thinking	9	4	C	2	MC	1
5	Operations and Algebraic Thinking	10	1	A	1	EQ	1
5	Operations and Algebraic Thinking	11	1	B	2	MC	1
5	Operations and Algebraic Thinking	12	1	A	2	EQ	1
5	Operations and Algebraic Thinking	13	1	A	1	EQ	1
5	Operations and Algebraic Thinking	14	1	A	2	EQ	1
5	Operations and Algebraic Thinking	15	1	B	2	MC	1
5	Number and Operations -- Fractions	1	1	F	2	MC4	1
5	Number and Operations -- Fractions	2	1	F	1	MC4	1
5	Number and Operations -- Fractions	3	1	E	1	MC4	1
5	Number and Operations -- Fractions	4	1	F	1	MC4	1
5	Number and Operations -- Fractions	5	1	E	1	EQ	1
5	Number and Operations -- Fractions	6	1	F	1	MC	1
5	Number and Operations -- Fractions	7	1	E	1	MC4	1
5	Number and Operations -- Fractions	8	1	F	2	EQ	1
5	Number and Operations -- Fractions	9	4	E	3	MC4	1
5	Number and Operations -- Fractions	10	2	A	2	EQ	1
5	Number and Operations -- Fractions	11	3	E	3	MS3	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
5	Number and Operations -- Fractions	12	1	F	2	EQ	1
5	Number and Operations -- Fractions	13	3	D	3	MS4	1
5	Number and Operations -- Fractions	14	1	E	2	MC4	1
5	Number and Operations -- Fractions	15	1	E	1	MC4	1
5	Measurement and Data	1	3	E	3	MC4	1
5	Measurement and Data	2	1	H	2	MC	1
5	Measurement and Data	3	1	I	2	EQ	1
5	Measurement and Data	4	1	I	1	EQ	1
5	Measurement and Data	5	2	D	2	EQ	1
5	Measurement and Data	6	2	D	2	EQ	2
5	Measurement and Data	7	1	I	2	EQ	1
5	Measurement and Data	8	1	I	2	MI	1
5	Measurement and Data	9	2	D	2	EQ	1
5	Measurement and Data	10	4	D	2	EQ	1
5	Measurement and Data	11	1	G	1	EQ	1
5	Measurement and Data	12	1	H	2	EQ	1
5	Measurement and Data	13	1	I	2	EQ	1
5	Measurement and Data	14	1	I	1	EQ	1
5	Number and Operations in Base Ten	1	1	D	1	EQ	1
5	Number and Operations in Base Ten	2	1	C	2	MI	1
5	Number and Operations in Base Ten	3	3	E	3	MC4	1
5	Number and Operations in Base Ten	4	1	C	1	MC4	1
5	Number and Operations in Base Ten	5	1	D	1	EQ	1
5	Number and Operations in Base Ten	6	4	C	2	MC4	1
5	Number and Operations in Base Ten	7	1	D	2	MC4	1
5	Number and Operations in Base Ten	8	1	D	2	MC4	1
5	Number and Operations in Base Ten	9	1	C	1	MI	1
5	Number and Operations in Base Ten	10	1	D	2	EQ	1
5	Number and Operations in Base Ten	11	2	A	2	EQ	1
5	Number and Operations in Base Ten	12	3	C	3	EQ	1
5	Number and Operations in Base Ten	13	1	D	2	EQ	1
5	Number and Operations in Base Ten	14	1	D	2	MC4	1
5	Number and Operations in Base Ten	15	1	C	2	MI	1
5	Geometry	1	1	J	1	MC	1
5	Geometry	2	3	E	3	MC	1
5	Geometry	3	1	K	2	MI	1
5	Geometry	4	1	J	1	MC	1
5	Geometry	5	3	C	2	MC	1
5	Geometry	6	1	K	2	MI	1
5	Geometry	7	1	J	1	MC	1
5	Geometry	8	4	F	2	MC	1
5	Geometry	9	1	K	2	MI	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
5	Geometry	10	1	J	1	MC	1
5	Geometry	11	1	K	2	MI	1
5	Geometry	12	2	A	2	MS	1
5	Geometry	13	1	J	1	MC	1
5	Performance Task	1	2	A	2	EQ	1
5	Performance Task	2	2	A	2	EQ	1
5	Performance Task	3	4	F	2	TI	2
5	Performance Task	4	4	A	2	EQ	3
5	Performance Task	5	3	F	3	SA	1
5	Performance Task	6	3	F	3	SA	2
6	Ratios and Proportional Relationships	1	1	A	2	EQ	1
6	Ratios and Proportional Relationships	2	1	A	1	EQ	1
6	Ratios and Proportional Relationships	3	1	A	2	EQ	1
6	Ratios and Proportional Relationships	4	1	A	1	EQ	1
6	Ratios and Proportional Relationships	5	1	A	2	EQ	1
6	Ratios and Proportional Relationships	6	1	A	2	EQ	1
6	Ratios and Proportional Relationships	7	1	A	2	EQ	1
6	Ratios and Proportional Relationships	8	3	G	2	MI	1
6	Ratios and Proportional Relationships	9	1	A	1	EQ	1
6	Ratios and Proportional Relationships	10	1	A	2	EQ	1
6	Ratios and Proportional Relationships	11	1	A	2	EQ	1
6	Ratios and Proportional Relationships	12	2	A	2	EQ	1
6	Ratios and Proportional Relationships	13	1	A	2	EQ	1
6	The Number System	1	1	C	1	EQ	1
6	The Number System	2	1	D	2	EQ	1
6	The Number System	3	1	D	1	MI	1
6	The Number System	4	1	C	2	EQ	1
6	The Number System	5	1	D	1	MS	1
6	The Number System	6	1	D	2	MI	1
6	The Number System	7	1	B	2	EQ	1
6	The Number System	8	3	E	3	MC	1
6	The Number System	9	1	C	1	EQ	1
6	The Number System	10	1	D	2	EQ	1
6	The Number System	11	1	B	2	EQ	1
6	The Number System	12	1	C	1	EQ	1
6	The Number System	13	1	C	1	EQ	1
6	The Number System	14	1	D	2	MI	1
6	The Number System	15	2	A	2	EQ	1
6	Expressions & Equations	1	1	F	1	EQ	1
6	Expressions & Equations	2	1	F	2	MI	1
6	Expressions & Equations	3	1	E	1	EQ	1
6	Expressions & Equations	4	1	F	1	EQ	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
6	Expressions & Equations	5	1	F	2	MS4	1
6	Expressions & Equations	6	1	E	1	MS4	1
6	Expressions & Equations	7	1	E	1	MS4	1
6	Expressions & Equations	8	1	F	2	MI	1
6	Expressions & Equations	9	1	F	2	MS4	1
6	Expressions & Equations	10	2	A	2	EQ	1
6	Expressions & Equations	11	1	G	2	EQ	1
6	Expressions & Equations	12	1	G	2	EQ	1
6	Expressions & Equations	13	3	E	3	MC4	1
6	Expressions & Equations	14	1	G	2	EQ	1
6	Expressions & Equations	15	1	G	2	EQ	1
6	Expressions & Equations	16	4	C	2	MS4	1
6	Geometry	1	1	H	2	EQ	1
6	Geometry	2	1	H	1	EQ	1
6	Geometry	3	1	H	1	MS4	1
6	Geometry	4	1	H	1	EQ	1
6	Geometry	5	1	H	2	EQ	1
6	Geometry	6	3	G	3	MC4	1
6	Geometry	7	2	A	2	EQ	2
6	Geometry	8	1	H	2	EQ	1
6	Geometry	9	1	H	2	EQ	1
6	Geometry	10	1	H	1	EQ	1
6	Geometry	11	4	B	2	EQ	2
6	Geometry	12	1	H	2	EQ	1
6	Geometry	13	1	H	2	EQ	1
6	Geometry	14	1	H	1	EQ	1
6	Statistics and Probability	1	1	J	2	MI	1
6	Statistics and Probability	2	1	J	2	MI	1
6	Statistics and Probability	3	1	J	1	EQ	1
6	Statistics and Probability	4	1	I	2	MC	1
6	Statistics and Probability	5	1	I	2	MI	1
6	Statistics and Probability	6	1	J	2	MC	1
6	Statistics and Probability	7	1	I	2	MI	1
6	Statistics and Probability	8	1	J	2	EQ	1
6	Statistics and Probability	9	1	J	2	MI	1
6	Statistics and Probability	10	1	J	2	MI	1
6	Statistics and Probability	11	1	J	2	EQ	1
6	Statistics and Probability	12	1	J	2	MI	1
6	Statistics and Probability	13	1	J	2	MC	1
6	Performance Task	1	2	A	2	EQ	1
6	Performance Task	2	4	F	2	EQ	1
6	Performance Task	3	2	A	2	EQ	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
6	Performance Task	4	3	A	2	EQ	1
6	Performance Task	5	4	A	2	SA	2
6	Performance Task	6	3	A	2	SA	3
7	Ratios and Proportional Relationships	1	1	A	2	MI	1
7	Ratios and Proportional Relationships	2	1	A	2	EQ	1
7	Ratios and Proportional Relationships	3	1	A	2	EQ	1
7	Ratios and Proportional Relationships	4	4	E	3	MC4	1
7	Ratios and Proportional Relationships	5	1	A	2	EQ	1
7	Ratios and Proportional Relationships	6	3	D	2	MC4	1
7	Ratios and Proportional Relationships	7	1	A	2	EQ	1
7	Ratios and Proportional Relationships	8	1	A	2	MC4	1
7	Ratios and Proportional Relationships	9	1	A	2	EQ	1
7	Ratios and Proportional Relationships	10	2	A	2	MC4	1
7	Ratios and Proportional Relationships	11	1	A	2	EQ	1
7	Ratios and Proportional Relationships	12	1	A	2	MS4	1
7	Ratios and Proportional Relationships	13	1	A	2	EQ	1
7	The Number System	1	1	B	2	EQ	1
7	The Number System	2	1	B	2	EQ	1
7	The Number System	3	1	B	1	MC4	1
7	The Number System	4	1	B	1	EQ	1
7	The Number System	5	1	B	2	MI	1
7	The Number System	6	1	B	2	EQ	1
7	The Number System	7	1	B	1	MS4	1
7	The Number System	8	1	B	1	EQ	1
7	The Number System	9	1	B	1	EQ	1
7	The Number System	10	1	B	1	MC4	1
7	The Number System	11	3	F	2	MC	1
7	The Number System	12	4	E	3	TI	2
7	The Number System	13	1	D	1	EQ	1
7	The Number System	14	3	D	3	MC4	1
7	Expressions & Equations	1	1	C	1	EQ	1
7	Expressions & Equations	2	1	C	2	MS4	1
7	Expressions & Equations	3	1	D	1	EQ	1
7	Expressions & Equations	4	1	C	1	MS4	1
7	Expressions & Equations	5	1	C	1	MC4	1
7	Expressions & Equations	6	1	C	2	MS4	1
7	Expressions & Equations	7	1	D	2	EQ	1
7	Expressions & Equations	8	3	E	3	MC4	1
7	Expressions & Equations	9	1	D	1	EQ	1
7	Expressions & Equations	10	1	D	2	MC4	1
7	Expressions & Equations	11	4	F	3	EQ	2
7	Expressions & Equations	12	1	D	2	MC4	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
7	Expressions & Equations	13	2	A	2	EQ	1
7	Expressions & Equations	14	1	D	2	MC4	1
7	Expressions & Equations	15	1	D	2	MC4	1
7	Geometry	1	1	E	2	MS	1
7	Geometry	2	1	F	2	MI	1
7	Geometry	3	1	E	2	MI	1
7	Geometry	4	1	E	2	EQ	1
7	Geometry	5	2	A	2	EQ	1
7	Geometry	6	1	E	2	EQ	1
7	Geometry	7	1	E	2	MI	1
7	Geometry	8	1	F	2	EQ	1
7	Geometry	9	2	A	2	EQ	1
7	Geometry	10	1	F	2	EQ	1
7	Geometry	11	1	F	2	EQ	1
7	Geometry	12	1	F	2	EQ	1
7	Geometry	13	1	F	2	EQ	1
7	Statistics and Probability	1	1	I	1	MI	1
7	Statistics and Probability	2	1	G	1	MC	1
7	Statistics and Probability	3	1	H	2	MI	1
7	Statistics and Probability	4	1	I	1	MI	1
7	Statistics and Probability	5	1	H	2	EQ	1
7	Statistics and Probability	6	1	G	1	MC	1
7	Statistics and Probability	7	1	H	2	MI	1
7	Statistics and Probability	8	1	G	2	MS	1
7	Statistics and Probability	9	4	C	2	MC	1
7	Statistics and Probability	10	1	I	2	MC	1
7	Statistics and Probability	11	1	I	2	EQ	1
7	Statistics and Probability	12	1	I	2	EQ	1
7	Statistics and Probability	13	1	H	2	EQ	1
7	Statistics and Probability	14	1	I	2	EQ	1
7	Statistics and Probability	15	4	F	3	MC	1
7	Performance Task	1	2	A	2	EQ	1
7	Performance Task	2	4	A	2	MC4	1
7	Performance Task	3	3	E	3	SA	2
7	Performance Task	4	2	A	2	TI	1
7	Performance Task	5	4	A	2	TI	1
7	Performance Task	6	3	B	3	SA	2
8	Expressions & Equations I	1	1	B	1	EQ	1
8	Expressions & Equations I	2	1	B	1	MC4	1
8	Expressions & Equations I	3	1	C	2	EQ	1
8	Expressions & Equations I	4	3	E	3	MC	1
8	Expressions & Equations I	5	1	C	2	EQ	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
8	Expressions & Equations I	6	1	B	1	MS	1
8	Expressions & Equations I	7	1	D	2	MC	1
8	Expressions & Equations I	8	3	A	2	EQ	2
8	Expressions & Equations I	9	2	D	2	MC	1
8	Expressions & Equations I	10	1	D	2	EQ	1
8	Expressions & Equations I	11	1	D	1	EQ	1
8	Expressions & Equations I	12	2	C	2	EQ	1
8	Expressions & Equations I	13	1	D	2	MS4	1
8	Expressions & Equations I	14	2	A	2	EQ	1
8	Expressions & Equations II	1	1	J	1	TI	1
8	Expressions & Equations II	2	1	J	2	EQ	2
8	Expressions & Equations II	3	1	J	2	EQ	2
8	Expressions & Equations II	4	1	D	2	EQ	1
8	Expressions & Equations II	5	1	D	2	MC4	1
8	Expressions & Equations II	6	4	C	2	MC4	1
8	Expressions & Equations II	7	1	D	2	MC4	1
8	Expressions & Equations II	8	1	D	2	MC4	1
8	Expressions & Equations II	9	1	J	2	EQ	2
8	Expressions & Equations II	10	1	D	2	EQ	1
8	Expressions & Equations II	11	1	J	1	TI	2
8	Expressions & Equations II	12	2	A	2	EQ	1
8	Expressions & Equations II	13	3	D	2	MI	1
8	Functions	1	1	F	2	MI	1
8	Functions	2	1	E	2	MC4	1
8	Functions	3	3	E	3	MC4	1
8	Functions	4	1	F	1	EQ	1
8	Functions	5	3	A	2	MC4	1
8	Functions	6	1	E	2	MC4	1
8	Functions	7	1	E	1	MS4	1
8	Functions	8	1	E	2	MC4	1
8	Functions	9	1	E	1	MS4	1
8	Functions	10	1	E	1	MS4	1
8	Functions	11	1	F	1	EQ	1
8	Functions	12	1	F	2	EQ	1
8	Functions	13	4	D	2	MI	1
8	Functions	14	2	D	2	MC4	1
8	Functions	15	1	F	2	EQ	1
8	Geometry	1	1	G	2	MI	1
8	Geometry	2	1	H	2	EQ	1
8	Geometry	3	1	G	1	MI	1
8	Geometry	4	3	G	2	MC4	1
8	Geometry	5	1	I	2	MC	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
8	Geometry	6	1	G	2	MI	1
8	Geometry	7	1	H	2	EQ	1
8	Geometry	8	1	G	2	MI	1
8	Geometry	9	1	H	2	MC4	1
8	Geometry	10	1	G	2	EQ	1
8	Geometry	11	1	H	2	MC4	1
8	Geometry	12	1	H	2	EQ	1
8	Geometry	13	1	I	2	EQ	1
8	Geometry	14	4	E	3	MS4	1
8	Geometry	15	1	I	2	EQ	1
8	Performance Task	1	2	A	2	EQ	1
8	Performance Task	2	2	A	2	TI	2
8	Performance Task	3	4	A	2	EQ	1
8	Performance Task	4	4	E	3	EQ	1
8	Performance Task	5	3	A	3	SA	2
8	Performance Task	6	3	F	3	SA	1
11	Algebra and Functions I - Linear Functions, Equations, Inequalities	1	1	I	1	EQ	1
11	Algebra and Functions I - Linear Functions, Equations, Inequalities	2	1	I	1	EQ	1
11	Algebra and Functions I - Linear Functions, Equations, Inequalities	3	1	I	2	MC4	1
11	Algebra and Functions I - Linear Functions, Equations, Inequalities	4	2	A	2	EQ	2
11	Algebra and Functions I - Linear Functions, Equations, Inequalities	5	1	J	2	MC4	1
11	Algebra and Functions I - Linear Functions, Equations, Inequalities	6	1	J	2	MC4	1
11	Algebra and Functions I - Linear Functions, Equations, Inequalities	7	1	J	1	MC	1
11	Algebra and Functions I - Linear Functions, Equations, Inequalities	8	1	L	1	MI	1
11	Algebra and Functions I - Linear Functions, Equations, Inequalities	9	2	A	2	EQ	2
11	Algebra and Functions I - Linear Functions, Equations, Inequalities	10	1	M	2	MI	1
11	Algebra and Functions I - Linear Functions, Equations, Inequalities	11	3	E	3	MC4	1
11	Algebra and Functions I - Linear Functions, Equations, Inequalities	12	1	N	2	MI	1
11	Algebra and Functions I - Linear Functions, Equations, Inequalities	13	1	G	2	EQ	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
11	Algebra and Functions I - Linear Functions, Equations, Inequalities	14	1	J	2	MC	1
11	Algebra and Functions I - Linear Functions, Equations, Inequalities	15	4	E	3	MC4	1
11	Algebra and Functions II - Quadratic Functions, Equations and Inequalities	1	1	H	1	MI	1
11	Algebra and Functions II - Quadratic Functions, Equations and Inequalities	2	3	A	2	MC4	1
11	Algebra and Functions II - Quadratic Functions, Equations and Inequalities	3	1	I	2	MC4	1
11	Algebra and Functions II - Quadratic Functions, Equations and Inequalities	4	1	H	2	EQ	1
11	Algebra and Functions II - Quadratic Functions, Equations and Inequalities	5	1	H	2	MI	1
11	Algebra and Functions II - Quadratic Functions, Equations and Inequalities	6	1	J	2	MC4	1
11	Algebra and Functions II - Quadratic Functions, Equations and Inequalities	7	1	G	1	EQ	1
11	Algebra and Functions II - Quadratic Functions, Equations and Inequalities	8	1	N	2	MC4	1
11	Algebra and Functions II - Quadratic Functions, Equations and Inequalities	9	1	L	1	MI	1
11	Algebra and Functions II - Quadratic Functions, Equations and Inequalities	10	1	M	2	MI	1
11	Algebra and Functions II - Quadratic Functions, Equations and Inequalities	11	1	J	2	MC	1
11	Algebra and Functions II - Quadratic Functions, Equations and Inequalities	12	4	D	3	MC4	1
11	Algebra and Functions II - Quadratic Functions, Equations and Inequalities	13	1	J	1	MS6	1
11	Algebra and Functions II - Quadratic Functions, Equations and Inequalities	14	4	A	3	MI	1
11	Algebra and Functions II - Quadratic Functions, Equations and Inequalities	15	1	M	1	MI	1
11	Geometry and the Right Triangle Trigonometry	1	3	F	3	MC	1
11	Geometry and the Right Triangle Trigonometry	2	1	O	1	MI	1
11	Geometry and the Right Triangle Trigonometry	3	3	C	2	MC	1
11	Geometry and the Right Triangle Trigonometry	4	1	O	1	MI	1
11	Geometry and the Right Triangle Trigonometry	5	3	A	2	EQ	1
11	Geometry and the Right Triangle Trigonometry	6	1	O	2	EQ	1
11	Geometry and the Right Triangle Trigonometry	7	1	O	1	MI	1
11	Geometry and the Right Triangle Trigonometry	8	1	O	1	EQ	1

Grade	Block Name	Item Sequence	Claim	Target	DOK	Item Type	Point Value
11	Geometry and the Right Triangle Trigonometry	9	1	O	2	EQ	1
11	Geometry and the Right Triangle Trigonometry	10	1	O	1	MI	1
11	Geometry and the Right Triangle Trigonometry	11	1	O	2	EQ	1
11	Geometry and the Right Triangle Trigonometry	12	1	O	1	MS6	1
11	Geometry and the Right Triangle Trigonometry	13	1	O	2	EQ	1
11	Geometry and the Right Triangle Trigonometry	14	1	O	2	EQ	1
11	Geometry and the Right Triangle Trigonometry	15	2	A	3	MS	1
11	Statistics and Probability	1	1	P	2	MC	1
11	Statistics and Probability	2	1	P	2	MC	1
11	Statistics and Probability	3	1	P	2	MI	1
11	Statistics and Probability	4	1	P	2	MC	1
11	Statistics and Probability	5	4	D	3	MC	1
11	Statistics and Probability	6	1	P	2	MC	1
11	Statistics and Probability	7	2	D	2	MC	1
11	Statistics and Probability	8	4	F	2	MC	1
11	Statistics and Probability	9	1	P	2	MI	1
11	Statistics and Probability	10	4	C	2	MI	1
11	Statistics and Probability	11	2	A	2	MI	1
11	Statistics and Probability	12	2	B	2	EQ	1
11	Performance Task	1	2	C	2	MC4	1
11	Performance Task	2	3	E	2	SA	2
11	Performance Task	3	4	D	2	SA	2
11	Performance Task	4	3	E	2	SA	2
11	Performance Task	5	4	A	2	EQ	1
11	Performance Task	6	4	A	3	SA	3