PARCC Accessibility Features and Accommodations Manual

Guidance for Districts and Decision-Making Teams to Ensure that PARCC Summative Assessments Produce Valid Results for All Students

Fourth Edition

Produced by:
Partnership for Assessment of Readiness for College and Careers (PARCC)

PARTNERSHIP FOR ASSESSMENT OF READINESS FOR COLLEGE AND CAREERS (PARCC)

The Partnership for Assessment of Readiness for College and Careers (PARCC) is a group of states working together to develop a set of assessments that measure whether students are on track to be successful in college and their careers. These high-quality, computer-based K-12 assessments in mathematics and English language arts (ELA)/literacy give schools, teachers, students, and parents better information on whether students are on track in their learning and for success after high school, and tools to help teachers customize learning to meet student needs. The first full administration of the PARCC assessments occurred during the 2014-2015 school year.

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Available online at:
http://avocet.pearson.com/PARCC/Home

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Fourth Edition

This is the fourth edition of the *PARCC Accessibility Features and Accommodations Manual* (summer 2015). The *PARCC Accessibility Features and Accommodations Manual* (the "Manual") will continue to be revised as research is conducted during the early years of PARCC assessment administration. This iterative process will ensure that the accessibility features and accommodations students receive on PARCC assessments provide a valid reflection of what they know and can do, and do not alter the construct of what is being assessed. Additional guidance on the accessibility features and accommodations for the PARCC Diagnostic Assessment and Speaking and Listening Assessment is forthcoming. This fourth edition of the Manual includes additional information on: the Student Registration/Personal Needs Profile; test administration guidance for before, during, and after testing; and, specifics on the availability of accessibility features and accommodations during the administration of the PARCC assessments.

Throughout this edition of the *PARCC Accessibility Features and Accommodations Manual*, attention is focused on providing accessibility features and accommodations using the PARCC technology platform. However, the need for administration of paper-based assessments remains for certain students who require this format and presentation of the assessment. Details on accessibility features and accommodations for students taking paper-based assessments can be found in Appendix A: Accessibility Features and Accommodations for Students Taking the Paper-Based PARCC Assessments.

Background

Audience and Purpose

Developed by PARCC states, the fourth edition of the *PARCC Accessibility Features and Accommodations Manual* is a comprehensive policy document that provides guidance to districts and decision-making teams to ensure that the PARCC summative assessments provide valid results for all participating students.

Introduction

PARCC states regard assessments as tools for enhancing teaching and learning. PARCC is committed to providing all students with equitable access to high-quality, 21st century assessments. By applying principles of universal design, using technology, embedding accessibility features, and allowing a broad range of accommodations, PARCC provides opportunities for the widest possible number of students to demonstrate their knowledge and skills. PARCC sets and maintains high expectations that all students will have access to the full range of grade-level and course content standards. Additionally, the PARCC states created and adopted common policies for accessibility features, accommodations, and participation in PARCC assessments. Together, these elements will increase student access to PARCC assessments, fidelity of implementation, and comparability across PARCC states.

PARCC's goals for promoting student access include:

- Applying principles of universal design for accessible assessments during every stage of the development of the assessment items and performance tasks;
- Minimizing/eliminating features of the assessment that are irrelevant to what is being measured so that all students can more accurately demonstrate their knowledge and skills;
- Measuring the full range of complexity of the standards;
- Using technology for the accessible delivery of the assessments;
- Building accessibility throughout the test without sacrificing assessment validity;
- Using a combination of accessible authoring and accessible technologies from the inception of items and tasks; and
- Engaging state and national experts throughout the development process through item review, bias and sensitivity review, policy development and review, and research.

The fourth edition of the *PARCC Accessibility Features and Accommodations Manual* has been created to ensure that:

- Participation in the assessments is consistent across PARCC states for students with disabilities and English learners;
- Appropriate tools are used by students to address their individual learning needs, and that accommodations are provided to eligible students (including students with disabilities, English learners, and English learners with disabilities); and
- Accessibility features and accommodations used on PARCC assessments are generally consistent with those used in daily instruction.

This manual provides information on the accessibility features and accommodations that will be available during the PARCC assessments, based on careful review and inclusion of the following:

- Current[1] and field test research on effective practices for assessing diverse student groups and backgrounds (including needs of students with disabilities and English learners, culture, region, linguistic needs, dialect, and socio-economic background);
- Feedback from PARCC state leads and state experts on students with disabilities and English learners;
- Feedback from the content experts; and
- Input from national technical advisors on PARCC's Technical Working Group for Accessibility, Accommodations, and Fairness.

PARCC states have all agreed to implement the principles, policies, and procedures set forth in this manual.

How PARCC Member States Set Policy

PARCC is a consortium of states working together to develop a set of common assessments that measure whether students are on track to be successful in college and their careers. The PARCC Governing Board, comprised of the K-12 chief state school officers from each Governing State, makes all major policy and operational decisions on behalf of the consortium. State education agency experts from all PARCC Governing States lead the policy and content development, and management of the PARCC assessment system.

Key policies set by the Governing Board, with input of working groups composed of representatives from the PARCC member states, include:

1. A common set of policies and procedures for providing assessment accommodations for English learners;
2. A common set of policies and procedures for providing assessment accommodations for students with disabilities;
3. A common set of policies and procedures for participation of English learners in the assessment system; and
4. A common set of policies and procedures for participation of students with disabilities in the assessment system.

[1]Abedi, J. & Ewers, N. (2013). Accommodations for English Language Learners and Students with Disabilities: A Research-Based Decision Algorithm.; Christensen, L., C. Johnston, and C. Rogers (2012). Common Core Accommodations Guidance. PARCC State Consortium. Refer to the reference list for the research foundation for this Manual.

Structure of the *PARCC Accessibility Features and Accommodations Manual*

The Manual consists of the following sections:

Background and Introduction

Section 1: Overview of the PARCC Assessment, Claims, and Design: This section summarizes the various PARCC assessments and provides the approaches used for universal design.

Section 2: PARCC Accessibility System and Accessibility Features for All Students Taking the PARCC Assessments: This section provides an overview of the PARCC Accessibility System and defines the accessibility features that will be offered to all students taking the PARCC assessments.

Section 3: Accommodations for Students with Disabilities and English Learners: This section outlines the accommodations for students with disabilities and English learners taking the PARCC assessments.

Section 4: Decision-Making Process for Selecting, Using, and Evaluating Accessibility Features and Accommodations for Students with Disabilities, English Learners, and English Learners with Disabilities: This section describes a five-step process for selecting, administering, and evaluating the use of accommodations for PARCC assessments.

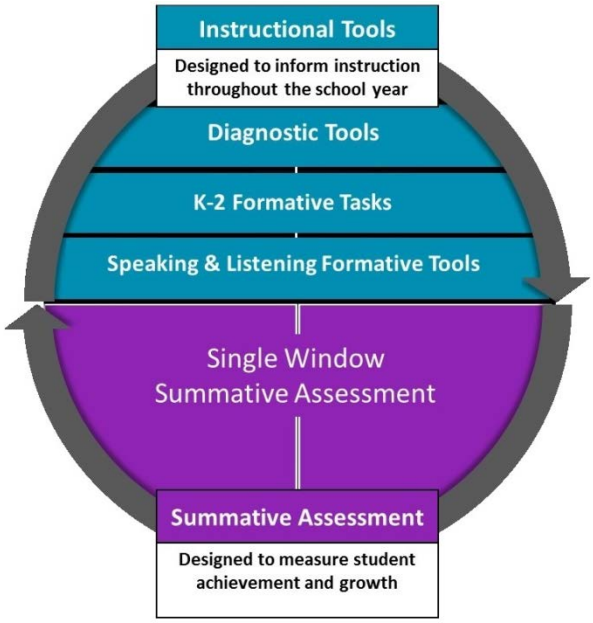
Section 1: Overview of the PARCC Assessment, Claims, and Design

Overview of the PARCC Assessment

The PARCC assessment system is designed to determine whether students are college- and career-ready or on track, assess the full range of the Common Core State Standards (CCSS), measure the full range of student performance, and provide timely data throughout the academic year to teachers to help inform instruction, interventions, and professional development.

The PARCC assessment system includes multiple components[2]:

- Diagnostic Tools for ELA/Literacy and Mathematics: *Optional, non-summative, early indicator of student knowledge, flexible administration*
- K-2 Formative Tasks: *Optional, non-summative, flexible administration*
- Speaking and Listening Formative Tools for ELA/Literacy only: *Optional, non-summative, flexible administration*
- Summative Assessment for ELA/Literacy and Mathematics: *Required, summative*



The PARCC summative assessments in English language arts/literacy and mathematics will include a rich set of performance-based tasks that address a long-standing concern among educators about large-scale student assessments: that they have been unable to capture some of the most important skills that we strive to develop in students. The PARCC assessments were carefully crafted to accomplish this important goal. They enable teachers, schools, students, and parents to gain important insights into how well critical knowledge, skills, and abilities essential for young people to thrive in college and careers are being mastered.

[2] For Fall Block 2015 administration students will take PBA and EOY assessments.

The assessments at each grade level will assess the CCSS for that grade. However, in mathematics, a small portion of the assessments will assess securely-held[3] content from the previous grade. Also, the high school mathematics assessments will be based on the CCSS designated for two course sequences – a traditional sequence including Algebra I, Geometry, and Algebra II; and an integrated sequence including Mathematics 1, 2, and 3. For more information regarding high school mathematics sequences, refer to the Mathematics Model Content Frameworks at http://www.parcconline.org/parcc-model-content-frameworks.

In order to promote improvements in curriculum and instruction and support various forms of accountability, the PARCC assessments are designed to measure the full range of the CCSS and full continuum of student abilities, including the performance of high-performing and underperforming students. Performance level scores will be reported according to five levels. More information about the PARCC performance levels can be found by visiting http://www.parcconline.org/policies-and-guidance.

PARCC ELA/Literacy Assessments

The ELA/literacy summative assessment at each grade level will include three units. Each unit will contain a performance-based task (Literary Analysis, Research Simulation, and Narrative Writing) and a literary or international reading passage with a number of comprehension and vocabulary questions. For each performance-based task, students will be asked to read or view one or more texts, answer comprehension and vocabulary questions, and write an essay that requires them to draw evidence from the text(s). Units at most grades will also include one or two additional reading passages, literary or informational, with related comprehension and vocabulary questions. PARCC will use both print and multimedia texts. In total, students in grades 3-5 will be administered three performance-based tasks and two or three additional reading passages; students in grades 6-11 will be administered three performance-based tasks and four additional reading passages.

The claims listed below drive the design of the PARCC ELA/literacy summative assessments.

Master Claim: On track for college and career readiness; the degree to which a student is college- and career-ready (or, on track to being ready) in ELA/literacy. Under the master claim, there are two major claims: (1) reading complex text (students read and comprehend a range of sufficiently complex texts independently), and (2) writing (students write effectively when using and/or analyzing sources).

Further delineation in what is being measured is indicated by the following six sub-claims:

1. Vocabulary, Interpretation, and Use (RL/RI.X.4 and L.X.4-6)
    a. Students use context to determine the meaning of words and phrases
2. Reading Literature (RL.X.1-10)
    a. Students demonstrate comprehension and draw evidence from readings of grade-level, complex literary text.
3. Reading Informational Text (RI.X.1-10)
    a. Students demonstrate comprehension and draw evidence from readings of grade-level, complex informational texts.

[3] The ability to flexibly apply what one already knows to a non-routine or complex problem is an important aspect of readiness for college and careers.

4. Written Expression (W.X.1-10)
    a. Students produce clear and coherent writing in which the development, organization, and style are appropriate to the task, purpose, and audience.
5. Conventions and Knowledge of Language (L.X.1-3)
    a. Students demonstrate knowledge of conventions and other important elements of language.
6. Research (data taken from Research Simulation Task)
    a. Students build and present knowledge through integration, comparison, and synthesis of ideas.

Section 1

Results of the ELA/literacy assessments will be reported in three categories:

1. ELA/literacy (major claim);
2. Reading and comprehending a range of sufficiently complex texts independently (reading) (sub-claim);
3. Writing effectively when using and/or analyzing sources (writing); and
4. ELA/literacy results will be based on a composite of students' reading and writing scores.

Students will receive both a scale score and performance level scores for ELA/literacy, and scale scores for the reading and writing categories.

PARCC Mathematics Assessments

The summative mathematics assessment at each grade level will include both short- and extended-response questions focused on applying skills and concepts to solve problems that require demonstration of the mathematical practices with a focus on modeling, reasoning, and precision. The assessments will also contain short-answer questions focused on conceptual understanding, procedural skills, and application.

The claims listed below are the claims that drive the design of the PARCC mathematics assessments.

Master Claim: On track for college and career readiness; the degree to which a student is college- and career-ready (or, on track to being ready) in mathematics. The student solves grade-level/course-level problems in mathematics as set forth in the Standards for Mathematical Content with connections to the Standards for Mathematical Practice.

- **Sub Claim A:** Major Content with Connections to Practices. The student solves problems involving the Major Content for her grade/course with connections to the Standards for Mathematical Practice.
- **Sub Claim B:** Additional and Supporting Content with Connections to Practices. The student solves problems involving the Additional and Supporting Content for her grade/course with connections to the Standards for Mathematical Practice.
- **Sub Claim C:** Highlighted Practices MP.3, 6 with Connections to Content: Expressing Mathematical reasoning. The student expresses grade-level/course-level appropriate mathematical reasoning by constructing viable arguments, critiquing the reasoning of others and/or attending to precision when making mathematical statements.
- **Sub Claim D:** Highlighted Practice MP.4 with Connections to Content: Modeling/Application. The student solves real-world problems with a degree of difficulty appropriate to the grade/course by

applying knowledge and skills articulated in the standards for the current grade/course (or, for more complex problems, knowledge and skills articulated in the standards for previous grades/courses), engaging particularly in the Modeling practice, and

- Where helpful making sense of problems and persevering to solve them (MP.1);
- Reasoning abstractly and quantitatively (MP.2);
- Using appropriate tools strategically (MP.5);
- Looking for and making use of structure (MP.7); and/or
- Looking for and expressing regularity in repeated reasoning (MP.8).

Use of Technology to Deliver PARCC Assessments

PARCC assessments use a computer-based assessment delivery platform that is easy for students to learn, intuitive to use, and provides an opportunity for results to be reported quickly and accurately. The PARCC assessment delivery platform is compliant with the Accessible Portable Item Profile (APIP) and Web Content Accessibility Guidelines (WCAG) 2.0. PARCC has released technology guidelines to inform schools and districts as they make technology decisions to best meet the instructional and assessment needs of their students.

The PARCC Technology Guidelines can be found here: http://www.parcconline.org/technology.

Participation Guidelines for PARCC Assessments

All students, including students with disabilities and English learners, are required to participate in statewide assessments and have their assessment results be part of the state's accountability systems, with narrow exceptions for English learners in their first year in a U.S. school (described in Section 4), and certain students with disabilities who have been identified by the Individualized Education Program team to take their state's alternate assessment. All other students will participate in the PARCC ELA/literacy and mathematics assessments. Federal laws governing student participation in statewide assessments include the No Child Left Behind Act of 2001 (NCLB), the Individuals with Disabilities Education Improvement Act of 2004 (IDEA), Section 504 of the Rehabilitation Act of 1973 (reauthorized in 2008), and the Elementary and Secondary Education Act (ESEA) of 1965, as amended. Specific provisions under these laws for students with disabilities and English learners are summarized in Appendix K: Legal Background. Please consult your state's assessment department to determine which alternate and English language proficiency assessments are offered in your state.

All students can receive accessibility features on PARCC assessments.

Four distinct groups of students may receive accommodations on PARCC assessments:

1. **Students with disabilities who have an Individualized Education Program (IEP)**;
2. **Students with a Section 504 plan** who have a physical or mental impairment that substantially limits one or more major life activities, have a record of such an impairment, or are regarded as having such an impairment, but who do not qualify for special education services;
3. **Students who are English learners**; and
4. **Students who are English learners with disabilities who have an IEP or 504 plan.** These students are eligible for both accommodations for students with disabilities and accommodations for English learners.

The following definitions will help users of the Manual to understand and implement accommodations appropriately:

- **Student with a disability:** One who has been found eligible based on the definitions provided by the Individuals with Disabilities Education Improvement Act of 2004 (IDEA) or Section 504 of the Rehabilitation Act of 1973.
- **English learner:** Assessment consortia are currently collaborating to develop a comprehensive definition. Traditionally, English learner students have also been termed "limited English proficient" students and "English language learners." Legal language is included in Appendix K: Legal Background.
- **Former English learner**: A student who is no longer classified as an English learner, although progress will continue to be tracked for two years after they have achieved the standards of fluency as identified by the state English language proficiency assessment.

General Testing Procedures

For information about coordinating or administering the PARCC assessments, including test security policies, administration procedures, and general administration tasks to complete before, during, and after testing, refer to the *Test Coordinator Manual* and the *Test Administrator Manuals*. Manuals are available now at http://avocet.pearson.com/PARCC/Home.

Universal Design

Universal design, when applied to assessment, is analogous to universal design in architecture where, for example, ramps and curb cuts designed for people in wheelchairs are also considered essential for people without disabilities, such as parents pushing strollers or people moving heavy furniture.[4] Universal design[5] describes a concept or philosophy that, when applied to assessments, provides all students with equal opportunities to demonstrate what they have learned. The purpose of universally designed assessments is to provide access for the greatest number of students during assessment, and to minimize the need for individualized design or accommodations. Universal design acknowledges differences among individuals, and that for accurate assessment to occur, a range of methods and materials are needed to measure learning. Universal design builds flexibility into assessments at the development stage, which enables flexible adjustments for a broad range of students. All students are intended to benefit from assessments that are universally designed, including students who are gifted and talented; English learners; students with physical, cognitive, and/or sensory disabilities; students with emotional or language/learning disabilities; students with more than one of these characteristics; students with unique linguistics needs; other underperforming students; and students without disabilities.

The principles of universal design for assessment are described by Thurlow, et al.:

> Universally designed assessments are designed and developed from the beginning to allow participation of the widest possible range of students, and to result in valid inferences about

[4] Maryland State Board of Education. (2011). "A Route for Every Learner Report."

[5] The term "universal design" is defined in the Individuals with Disabilities Education Act (IDEA) and the Higher Education Opportunity Act (HEOA) as having the same definition as that found in the Assistive Technology Act of 1998: The term "universal design" means a concept or philosophy for designing and delivering products and services that are usable by people with the widest possible range of functional capabilities, which include products and services that are directly accessible (without requiring assistive technologies) and products and services that are interoperable with assistive technologies. (20 U.S.C. §1401(35)(IDEA); 20 U.S.C. §1003(23)(HEOA), both referencing the Assistive Technology Act of 1998, as amended, 29 §3002).

performance for all students who participate in the assessment. Universally designed assessments are based on the premise that each child in school is a part of the population to be tested, and that testing results must not be affected by disability, gender, race, or English language ability. Universally designed assessments are not intended to eliminate individualization, but they may reduce the need for accommodations and various alternative assessments by eliminating access barriers associated with the tests themselves.[6]

Universal design emphasizes that in order to increase access, assessment designers cannot use a "one size fits all" approach, but must build in and make available opportunities for choice and create multiple alternatives and approaches for individuals to express their knowledge. Using these principles, item writers consider the full range of students in the assessment population and develop items, tasks, and prompts that measure the desired construct for the greatest number of students without the need for accommodation or adaptation. Guided by universal design, assessment developers design the assessment to meet the specific needs of as many students as possible and minimize the number of necessary accommodations, while acknowledging that the need for accommodations cannot be eliminated entirely.

PARCC has included the following universal design requirements for item development in the PARCC Accessibility Guidelines:

- The item or task takes into consideration the diversity of the assessment population and the need to allow the full range of eligible students to respond to the item/stimulus.
- Constructs have been precisely defined and the item or task measures what is intended.
- Assessments contain accessible, non-biased items.
- Assessments are designed to be amenable to accommodations.
- Instructions and procedures are simple, clear, and intuitive.
- Assessments are designed for maximum readability, comprehensibility, and legibility.[7]
- The item or task material uses a clear and accessible text format.
- The item or task material uses clear and accessible visual elements (when essential to the item).
- The item or task material uses text appropriate for the intended grade level.
- Decisions will be made to ensure that items and tasks measure what they are intended to measure for English learner students with different levels of English proficiency and/or first language proficiency.
- All accessibility features have been considered that may increase access while preserving the targeted construct.
- Multiple means of item presentation, expression, and student engagement have been considered with regard to items/tasks for both students with disabilities and English learners.
- Changes to the format of an item will be considered that do not alter the item/task meaning or difficulty.

In addition to the universal design requirements, PARCC has provided item developers with comprehensive accessibility guidelines for writing items to ensure that all items/tasks are bias-free, sensitive to diverse cultures, stated clearly, of appropriate linguistic complexity, and consistently formatted.

[6] Thompson, S. J., Johnstone, C. J., & Thurlow, M. L. (2007). Universal design applied to large scale assessments (Synthesis Report 44). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved [April 1, 2013], from the World Wide Web: http://education.umn.edu/NCEO/OnlinePubs/Synthesis44.html.

[7] Thompson, Johnstone, & Thurlow (2002). The National Center for Educational Outcomes (NCEO).

Principles of universal design, when applied to assessment, may provide educators with more valid inferences about the performance levels of students with disabilities and English learners, as well as the performance of their peers.

Universally designed general assessments cannot eliminate, but may reduce the need for accommodations and alternate assessments.

Section 2: PARCC Accessibility System and Accessibility Features for All Students Taking the PARCC Assessments

PARCC Accessibility System

Through a combination of universal design principles and available accessibility features, PARCC has designed an inclusive assessment system by considering accessibility from initial design through item development, field testing, and implementation of the assessments for all students, including students with disabilities, English learners, and English learners with disabilities. Although accommodations may still be needed for some students with disabilities and English learners to assist in demonstrating what they know and can do, the computer-embedded and externally provided accessibility features should minimize the need for accommodations during testing and ensure the inclusive, accessible, and fair testing of the diverse students being assessed.

What are Accessibility Features?

On the PARCC computer-based assessments, accessibility features are tools or preferences that are either built into the assessment system or provided externally by test administrators. Accessibility features can be used by any student taking the PARCC assessments (i.e., students with and without disabilities, gifted students, English learners, and English learners with disabilities). Since the accessibility features are intended for all students, they are not classified as accommodations. Students should be exposed to these features prior to testing, and should have the opportunity to select and practice using them. Even though accessibility features are available to every student, that doesn't necessarily mean they are appropriate for every student. Consideration should be given to the supports a student consistently uses and finds helpful during instruction and when engaging in individual work. Practice tests that include accessibility features are available for teacher and student use throughout the year. To practice now, go to parcc.pearson.com.

Accessibility Features Identified in Advance

A relatively small number of students will require additional accessibility features for their particular needs (e.g., changing the background or font color onscreen, or listening to text-to-speech for the mathematics assessments). Recent research suggests that providing too many tools onscreen may lead to ineffective use of the tools provided and/or an impact on a student's test performance.[8] Furthermore, the on-off controls for these features might distract some students if they were shown onscreen, or interfere with other features or accommodations. As an example, if a student does not regularly receive text-to-speech or other audio representations on their math textbooks during instruction, text-to-speech for mathematics on the PARCC assessments may distract a student or slow their pacing, possibly interfering with their performance.[9] Based on the needs and preferences of the individual student, some accessibility features will be selected ahead of time by students in collaboration with educators. Therefore, some accessibility features will be selected ahead of time by students, in collaboration with educators, and based on the individual needs and preferences of the student. Students must practice using these features, either in a classroom or real world application or setting. Students can decide whether or not to use a pre-selected support, without any consequence to the student, school, or district.

[8] Higgins, J., Fedorchak, G., & Katz, M. (2012). Assignment of Accessibility Tools for Digitally Delivered Assessments: Key Findings. White Paper for Enhanced Assessment Grant # S368A100008.

[9] In fall 2015 PARCC will conduct an external validity and differential boost study for text-to-speech.

It is strongly recommended that decisions are made on an individual student basis based on the specific needs of the child as opposed to group decisions for a class or grade. Individualizing access needs on the assessment for each student provides increased opportunities to accurately demonstrate knowledge and skills, and will reduce the likelihood of giving students incorrect accommodations or accessibility features on the day of the test.

What is a Student Registration and Personal Needs Profile (SR/PNP)?
The SR/PNP is a collection of student information regarding a student's registration, testing condition, materials, and accessibility features and accommodations that are needed to take a PARCC assessment.

Why Collect Student Accessibility Features and Accommodations Information Prior to the Assessment?
Prior to the assessment, the following student information should be collected so students receive the appropriate accessibility features and accommodations on testing day (it is the role of the school to ensure that the student's information is collected and included in this file):

1. Embedded accessibility features in the TestNav 8 online platform that need to be enabled for students during administration (e.g., color contrast [background/font color], text-to-speech for mathematics, etc.) **(via the SR/PNP)**;
2. Embedded accommodations in the TestNav 8 online platform that need to be enabled for students during administration (e.g., ASL, closed captioning, text-to-speech for ELA/literacy, etc.) **(via the SR/PNP)**
3. Externally-provided accessibility features identified in advance, and accommodations for students with disabilities and English learners **(via the SR/PNP)**; and
4. Hard copy accommodated forms that require advance shipping (braille edition, paper-based edition, large print edition, etc.) **(via the SR/PNP)**.

The SR/PNP provides a record for school test coordinators and test administrators to ensure that students receive individualized accessibility features and accommodations during the assessments.

How is Information Collected for the PNP Section of the SR/PNP?
The PNP will be based on observations and stated preferences by the student or parent/guardian regarding a student's testing needs that have been determined to increase access during instruction and assessment. Observations based on a student's interaction with the online testing platform can be made during the practice tests. A student's testing needs should be reviewed at least annually, and revised as appropriate, to reflect current education-related needs or preferences.

Process for Collecting SR/PNP Information

- For *students with disabilities*, the IEP team or 504 plan coordinator will make decisions about which accessibility features and accommodations should be identified in the SR/PNP.
- For *English learners*, the educators responsible for selecting accommodations (or an English learner team, if available) will identify which accessibility features and accommodations should be identified in the student's SR/PNP.
- For *English learners with disabilities*, the IEP team (which includes an adult familiar with the language needs of the student) or 504 plan coordinator will make decisions about which accessibility features and accommodations should be identified in the SR/PNP.

- For students *without* disabilities, and who are not English learners, decisions about which accessibility features identified in advance (if any and if allowed) will be included in the student's SR/PNP will be made based on the student's education-related needs and preferences by an informal team, which may include the:
    - Student (as appropriate);
    - Parent/guardian; and
    - Student's primary educator in the subject of the assessment.

How Do You Fill Out and Submit the SR/PNP File Layout?
**Note: Refer to your state's specific policy on how student information will be captured.*

- Step 1: Local educators/teams collect individual student data to populate the SR/PNP.
- Step 2: Local educators/teams capture individual student SR/PNP data in a central location.
- Step 3: The individual(s) responsible for student data upload at the school/district/state level receive the information from step 2 and upload the information into the SR/PNP.

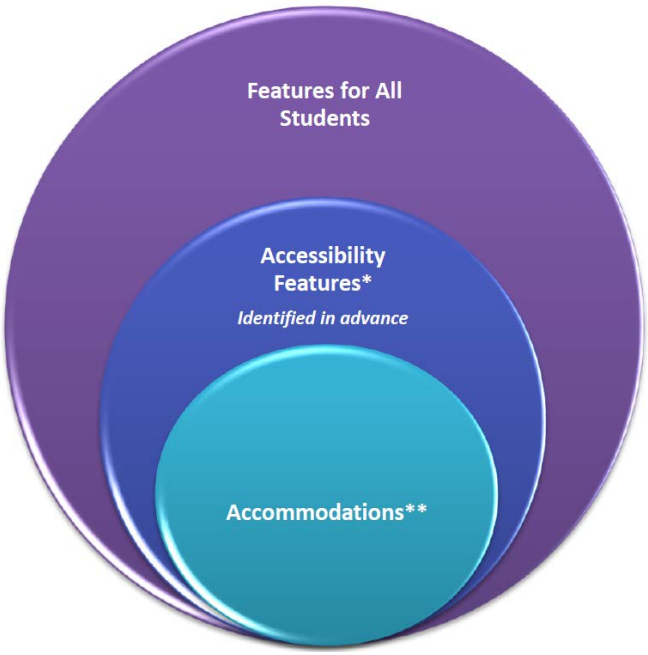
There are certain paper-based accessibility features and accommodations which require materials to be shipped (e.g., large print, braille with tactile graphics, human reader or human signer for ELA/literacy kits, paper test for online students, and Spanish paper mathematics assessments). Counts for materials are determined from records submitted via SR/PNP prior to the deadline for paper material distribution. Reference the training modules for SR/PNP and Editing Enrollment Counts. Any registrations that require materials to be submitted after the deadline for paper must be ordered via Additional Orders.

All other information in the student's SR/PNP will be submitted via the SR/PNP in PearsonAccess^{next}. For guidance on how to upload student information in the PNP File Layout, refer to the Personal Needs Profile Field Definitions, Version 1.0 document posted on http://avocet.pearson.com/PARCC/Home.[10] Administrators with the appropriate access will also be able to manually enter PNP data via the User Interface in PearsonAccess^{next} once a student's test registration is completed.

Section 2

[10] PARCC will also provide training on uploading a student's SR/PNP in the fall of 2015 available at https://parcc.tms.pearson.com > Student Registration/Personal Needs Profile Training Module.

The PARCC Accessibility System



**Available to all participating students*
***For students with disabilities, English learners, and English learners with disabilities*

Note: Coordinators should plan for administrative considerations

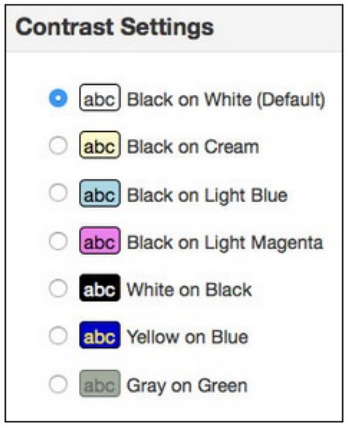
Accessibility Features for All Students[11]

Table 1 lists the accessibility features that PARCC will make available to ***all students***. These features are available through the online platform, or may be externally-delivered by a test administrator or other adult on the PARCC summative assessments. Students should determine whether they wish to use the feature on an item-by-item basis, based on the features they use during instruction and in daily life.

Where applicable, the chart below will include the test administration activities for before, during, and after testing necessary for successful implementation of the PARCC accessibility features. There are a few accessibility features that must be pre-selected for the student in the SR/PNP in order to activate the feature on the platform. When needed, this information is included in the "before testing" guidance.

[11] A foundational piece of research for PARCC policy decisions on accessibility features: Abedi, J. & Ewers, N. (2013). Accommodations for English Language Learners and Students with Disabilities: A Research-Based Decision Algorithm.

Table 1: Accessibility Features for All Students
Table includes Features for All Students & Accessibility Features Identified in Advance.

Accessibility Feature		Administration Guidelines
1a	**Answer Masking** *(SR/PNP[12])*	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have answer masking selected to activate the feature on the platform. **During Testing:** When answer masking is enabled, multiple choice and multiple select answers will be masked. The student will uncover answer options when ready. The student may disable this feature by selecting, "Disable Answer Masking" in the User Dropdown Menu.
1b	**Audio Amplification**	**Before Testing:** The student raises or lowers the volume control, as needed, using headphones. Final volume must be set prior to testing. Student will not have access to volume control in the secure TestNav environment. **During Testing:** Student must be tested in a separate setting if unable to wear headphones. Once the test begins, the volume level cannot be changed.
1c	**Bookmark**	**During Testing:** The student selects the "Bookmark" icon in the toolbar. The student electronically "bookmarks" items to review later. To remove the bookmark, select the "Bookmark" icon again. (Previously, "Bookmark" was called "Flag Items for Review.")
1d	**Color Contrast (Background/Font Color)** *(SR/PNP)*	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have the student's Color Contrast (Background/Font Color) selected to activate this feature on the platform. **During Testing:** Alternate onscreen background and/or font color is enabled via the SR/PNP based on need or preference. The student may change the color contrast option or disable this feature by selecting, "Change the background and foreground color" in the User Dropdown Menu. 

[12] Student Registration/Personal Needs Profile (SR/PNP)

Accessibility Feature		Administration Guidelines
1e	**Blank Scratch Paper** *(provided by test administrator)*	**Before Testing:** Test Administrators must supply at least one page of blank scratch paper (i.e., either unlined, lined, or graph) per student, per unit. If graph paper is used during mathematics instruction, it is recommended that schools provide graph paper as scratch paper for mathematics units. Students with visual impairments may also use braille paper, raised line paper, bold line paper, raised line graph paper, bold line graph paper, abacus, or Math Window. **During Testing:** The student uses blank scratch paper (lined, un-lined, or graph) to take notes and/or work through items during testing. Additional pages may be provided as needed. **After Testing:** Test administrators are responsible for collecting **all** scratch paper after testing is completed to be securely destroyed. Scratch paper must be securely shredded if it has been used. Schools may reuse unused scratch paper only if paper is completely blank.
1f	**Eliminate Answer Choices**	**During Testing:** The student selects the "Answer Eliminator" icon in the toolbar. On multiple choice options, a student selects an answer and a red X appears and "crosses out" the answer choice. The student may disable this feature by selecting "Answer Eliminator" in the toolbar again.
1g	**General Administration Directions Clarified** *(by test administrator)*	**During Testing:** The test administrator clarifies general administration directions only. No passages or test items may be clarified.
1h	**General Administration Directions Read Aloud and Repeated as Needed** *(by test administrator)*	**During Testing:** The test administrator reads aloud the general administration directions only. A student may raise his or her hand and request the directions be repeated.
1i	**General Masking** *(SR/PNP)*	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have general masking selected to activate the feature on the platform. **During Testing:** When general masking is enabled, the student can cover portions of the test with a blank box. The student may disable this feature by selecting, "Disable General Masking" in the User Dropdown Menu.
1j	**Highlight Tool**	**During Testing:** The student electronically highlights text as needed to recall and/or emphasize. The student has the option to remove highlighting over text. The highlighter color option will change depending on the color contrast option selected.

Accessibility Feature		Administration Guidelines
1k	**Headphones or Noise Buffers**	**Before Testing:** Test administrator prepares classroom with headphones for participating students. **During Testing:** The student uses headphones or noise buffers to minimize distraction, access embedded text-to-speech, or filter external noise during testing (in addition to when headphones are required for the ELA/literacy assessment). If headphones are used only as noise buffers, do not plug them into the testing device.
1l	**Line Reader Tool**	**During Testing:** The student selects "Show Line Reader" in the User Dropdown Menu. The student uses an onscreen tool to assist in reading by raising and lowering the tool for each line of text onscreen. The student may disable this feature by selecting, "Hide Line Reader" in the User Dropdown Menu.
1m	**Magnification/ Enlargement Device**	**During Testing:** • Magnifier: The student selects "Enable Magnifier" in the User Dropdown Menu. The student enlarges text and graphics onscreen via a magnification square (200%). The student may disable this feature by selecting, "Disable Magnifier" in the User Dropdown Menu. • Browser/Device Magnification: The student can also use keyboard shortcuts (e.g., Ctrl+) for PCs or pinch/zoom for tablets to magnify what's displayed on the screen (while preserving clarity, contrast, and color). Note: Magnifying beyond 300% may affect heading formatting and may cause text-wrapping, and therefore it is not recommended.
1n	**Notepad**	**During Testing:** The student selects the "Notepad" icon in the toolbar. **The student writes notes using embedded Notepad tool**. The student may disable this feature by selecting "Notepad" in the toolbar again.
1o	**Pop-up Glossary**	**During Testing:** The student is able to view definitions of pre-selected, underlined words by hovering over them. The definition appears in a pop-up text box.
1p	**Redirect Student to the Test** *(by test administrator)*	**During Testing:** The test administrator redirects the student's attention to the test without coaching or assisting the student in any way. There is no limit to the number of times a test administrator can redirect a student back to the test. Examples: Providing reminders to stay on task and focused during the assessments; Providing a visual cue to the student to remain on task.
1q	**Spell Check or External Spell Check Device**	**During Testing:** The student uses the embedded spell check icon in TestNav to review their written text for errors. If preferred, the student uses an external spell check device. Device may not have embedded grammar check, connect to the internet, or save information.

Accessibility Feature		Administration Guidelines
1r	**Text-to-Speech for the Mathematics Assessments** *(SR/PNP)*	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Text-to-Speech selected to activate the feature on the platform. Once a student is placed into a test session, the student will be assigned a form with embedded text-to-speech. Proctor caching is strongly encouraged. If this content is not cached, it may present challenges for students during testing. Volume level must be determined prior to testing; once the test session begins, the volume level cannot be changed. Student will not have access to volume control in the secure TestNav environment. • Test Administrator Training: Refer to the Text-to-Speech Tutorial on parcc.pearson.com for full training on tool functionality. **During Testing:** The student selects the "Text-to-Speech Player" icon on the toolbar on the right side of the screen. The test is read aloud to the student using embedded text-to-speech software. The student may pause and resume the audio. To choose a speed (slow, normal, fast), select the "Text-to-Speech Settings" icon. Once the test begins, the volume level cannot be changed. Student must be tested in a separate setting if unable to wear headphones.

1s	**Human Reader or Human Signer for the Mathematics Assessments** *(SR/PNP)*	**Before Testing:**
		• Identification for SR/PNP: Student's SR/PNP must have Human Reader/Human Signer selected. A student must be placed into a Human Reader test session, then the student will be assigned a Human Reader/Human Signer form. The proctor will be assigned a separate authorization log in to access the same form as all students within the Human Reader session.
		• Test Administrator Training: Human Readers and Human Signers providing this accessibility feature must review:
		  o Appendix B: Test Administration Protocol for the Human Reader Accommodation for English Language Arts/Literacy Assessments, and the Human Reader Accessibility Feature for Mathematics Assessments.
		  o Appendix J: PARCC Mathematics Audio Guidelines
		  o Appendix L: Human Signer Guidelines (signers only)
		
		During Testing: A test administrator reads aloud to a student (human reader or human signer). The student must be tested in an individual or small group setting. Small groups should only be used if all students are able to work at approximately the same pace. The number of students in a small group is determined at the state level.

1t	**Writing Tools**	**During Testing:** The student uses embedded writing process tools for written responses, including copy/paste, bold, italicize, underline, insert bullets, numbered list, undo, redo, and spell check. Writing tools are available in the constructed response items on the ELA/literacy assessment.

Administrative Considerations for All Students

Detailed guidelines on the administration of the PARCC assessments will be included in the *Test Administrator Manuals* and the *Test Coordinator Manuals.*

Although students are generally tested in their regular classroom and follow the standard test administration schedule for the grade and content area being assessed, the principal has the authority to schedule students in testing spaces other than regular classrooms, and at different scheduled times, as long as all requirements for testing conditions and test security are met as set forth in the *Test Administrator Manuals and Test Coordinator Manuals*. Decisions may be considered, for example, that benefit students who are easily distracted in large group settings by testing them in a small group or individual setting. In general, changes to the timing, setting, or conditions of testing are left to the discretion of the principal or test coordinator.

In accordance with principles of universal design for assessment, PARCC is providing the following administrative guidance regarding the timing and scheduling of assessments, and setting/locations for testing. These administrative considerations are available to all students.
The principal may determine that any student can receive one or more of the following test administration considerations, regardless of the student's status as a student with a disability or English learner.

Table 2: Administrative Considerations for All Students

Administrative Consideration		Description
2a	**Small Group Testing**	Student is tested in a separate location with a small group of students with matching accessibility features, accommodations, or testing needs as appropriate. Check individual state policies on the maximum number of students allowed in a small testing group.
2b	**Time of Day**	Student is tested during a specific time of day based on their individual needs (e.g., ELA/literacy in the morning; no testing after lunch).
2c	**Separate or Alternate Location**	Student is tested in a location other than their originally scheduled testing classroom.
2d	**Specified area or seating**	Student is tested in a specialized area or setting (e.g., front of the classroom, seat near the door, library, etc.).
2e	**Adaptive and specialized equipment or furniture**	Student is provided specialized equipment or furniture needed for a successful testing environment (e.g., low lighting; adaptive seat).
2f	**Frequent breaks**	Guidance on logistics for administrating the PARCC assessments with frequent breaks: • *Medical Breaks*: Student takes a break due to existence or sudden onset of a temporary or long-term medical condition. Student's testing time stops during a medical break. • *Individual Bathroom Breaks*: Student requests a bathroom break within their overall allotted testing time. Student's testing time does not stop. • *In-Chair Stretch Break:* Student pauses and stretches. Student's testing time does not stop. • *Other Frequent Breaks,* according to state policy.

Section 3: Accommodations for Students with Disabilities and English Learners

Accommodations for Students with Disabilities and English Learners

It is important to ensure that performance in the classroom and on assessments is influenced minimally, if at all, by a student's disability or linguistic/cultural characteristics that is unrelated to the content being assessed. For PARCC assessments, accommodations are considered to be adjustments to the testing conditions, test format, or test administration that provide equitable access during assessments for students with disabilities and students who are English learners. In general, the administration of the assessment should not be the first occasion in which an accommodation is introduced to the student. To the extent possible, accommodations should:

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

Accommodations are intended to reduce and/or eliminate the effects of a student's disability and/or English language proficiency level; however, **accommodations should never reduce learning expectations by reducing the scope, complexity, or rigor of an assessment**. Moreover, accommodations provided to a student on the PARCC assessments must be generally consistent with those provided for classroom instruction and classroom assessments. There are some accommodations that may be used for instruction and for formative assessments but are not allowed for the summative assessment because they impact the validity of the assessment results – for example, allowing a student to use a thesaurus or access the internet during a PARCC assessment. There may be consequences (e.g., excluding a student's test score) for the use of non-allowable accommodations during PARCC assessments. It is important for educators to become familiar with PARCC policies regarding accommodations used for assessments.

The guidelines provided in this manual are intended to ensure that valid and reliable scores are produced on the PARCC assessments, and that an unfair advantage is not given to students who receive accommodations. Outside of the guidance provided in this manual, changes to an accommodation or the conditions in which it is provided may change what the assessment is measuring, and will likely call into question the reliability and validity of the results regarding what a student knows and is able to do as measured by the assessment.

To the extent possible, accommodations should adhere to the following principles:

- Accommodations enable students to participate more fully and fairly in instruction and assessments and to demonstrate their knowledge and skills.
- Accommodations should be based upon an individual student's needs rather than on the category of a student's disability, level of English language proficiency alone, level of or access to grade-level instruction, amount of time spent in a general classroom, current program setting, or availability of staff.

- Accommodations should be based on a documented need in the instruction/assessment setting and should not be provided for the purpose of giving the student an enhancement that could be viewed as an unfair advantage.
- Accommodations for students with disabilities should be described and documented in the student's appropriate plan (i.e., either the IEP or 504 plan).
- Accommodations for English learners should be described and documented.
- Students who are English learners with disabilities qualify to receive accommodations for both students with disabilities and English learners.
- Accommodations should become part of the student's program of daily instruction as soon as possible after completion and approval of the appropriate plan.
- Accommodations should not be introduced for the first time during the testing of a student.
- Accommodations should be monitored for effectiveness.
- Accommodations used for instruction should also be used, if allowable, on local district assessments and state assessments.

In the event that a student was provided a test accommodation that was **not listed** in his or her IEP, 504 plan, or was not documented for an English learner, or if a student was **not provided** a test accommodation listed in his or her IEP/504 plan/documentation for an English learner, the school must follow each state's policies and procedures for notifying the state assessment office.

Scoring and Reporting

Summative assessment scores for students who receive any of the accommodations listed in this manual will be aggregated with the scores of other students and those of relevant groups, and can be included for accountability purposes. PARCC states may choose to monitor the number and percentage of students using newer assessment accommodations such as text-to-speech, external speech-to-text device, etc. at the school, district, and/or state level.

If needed, refer to your state policy for state- specific information on coding PARCC accommodations.

Unique Accommodations

PARCC has developed a comprehensive list of accessibility features and accommodations that are designed to increase access to PARCC assessments and that will result in valid, comparable assessment scores. However, students with disabilities or English learners may require additional accommodations that are not found in this manual. PARCC states will individually review requests for unique accommodations in their respective states on an individual basis and will provide approval after determining whether the accommodation would result in a valid score for the student. Refer to Appendix F: Unique Accommodation Request Form.

Emergency Accommodations

An emergency accommodation may be appropriate for a student who incurs a temporary disabling condition that interferes with test performance shortly before or during the PARCC assessment window. A student who does not have an IEP or 504 plan may require an accommodation as a result of a recently-occurring accident or illness. Cases include students who have a recently-fractured limb (e.g., arm, wrist, or shoulder); whose only pair of eyeglasses has broken; or a student returning after a serious or prolonged illness or injury. An emergency accommodation should be given only if the accommodation will result in a valid score for the student (i.e., does not change the construct being measured by the test[s]). If the

principal (or designee) determines that a student requires an emergency accommodation on the PARCC assessment, an Emergency Accommodation Form must be completed and maintained in the student's assessment file. If required by your PARCC state, consult with the district office for approval**. The parent must be notified that an emergency accommodation was provided.** If appropriate, the Emergency Accommodation Form may also be submitted to the district assessment coordinator to be retained in the student's central office file. Requests for emergency accommodations will be approved after it is determined that use of the accommodation would result in a valid score for the student. Refer to Appendix G: Use of an Emergency Accommodation on a PARCC Assessment.

Student Refusal Form

If a student refuses an accommodation listed in his or her IEP, 504 plan, or if required by the PARCC member state, an English Learner plan, the school should document in writing that the student refused the accommodation, and the accommodation must be offered and remain available to the student during testing. This form must be completed and placed in the student's file and a copy must be sent to the parent on the day of refusal. Principals (or designee) should work with test administrators to determine who, if any others, should be informed when a student refuses an accommodation documented in an IEP, 504 plan, or if required by the PARCC member state, an English Learner plan. Refer to Appendix H: Student Accommodation Refusal Form.

Ongoing Research and Data Collection on Use of Accommodations

PARCC states will continue to research the effectiveness, validity, differential impact, relevance, and feasibility of the accommodations, and revise as needed.

Accommodations for Students with Disabilities[13]

Table 3 provides a list of ***presentation accommodations*** for students with disabilities that describe changes in the assessment format and method in which the assessment is administered. The table also outlines the before, during, and after testing activities necessary to successfully administer these accommodations.

Table 3: Presentation Accommodations for Students with Disabilities

Accommodation		Administration Guidelines
3a	**Assistive Technology** *(Non-Screen Reader)*	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have assistive technology selected. • Testing: Assistive technology should be tested during an "Infrastructure Trial" to assess its compatibility with the testing platform. Note that PARCC assessments are designed to be Web Content Accessibility Guidelines (WCAG) compliant. For information on how to test assistive technology devices and software for use on the PARCC assessments with the TestNav 8 platform via an "Infrastructure Trial," refer to the Assistive Technology Guidelines available at http://avocet.pearson.com/PARCC/Home. **During Testing:** Students may use a range of assistive technologies on the PARCC assessments, including devices that are compatible with the PARCC online testing platform, and those that are used externally on a separate computer. **After Testing:** Test administrators are responsible for collecting all non-scorable student work created from assistive technology devices. Content must be cleared off all devices. Paper non-scorable student work must be securely shredded.
3b	**Screen Reader Version** *(for a student who is blind or visually impaired)*	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Screen Reader Version selected. Once a student is placed into a test session, the student will be assigned a Screen Reader form. For ELA/literacy, the student does not use a refreshable braille display or hard copy braille edition because they have either not yet learned, or are unable to use, braille. • Materials and Equipment: For optimal screen reader usage, PARCC recommends using JAWS 15 with Firefox (note that PARCC assessments are designed to be compliant with the Web Content Accessibility Guidelines [WCAG]). Tactile graphics booklets are required for test administration. Counts for materials are determined from records submitted via SR/PNP prior to the deadline for paper material distribution. Reference the training modules for SR/PNP and Editing Enrollment Counts. Any registrations that require materials submitted after the deadline for paper must be ordered via Additional Orders. • Screen Reader Testing: Screen reader software **should** be tested during an Infrastructure Trial. • Test Administrator Training: Test administrators should review:

[13] A foundational piece of research for PARCC policy decisions on accessibility features: Abedi, J. & Ewers, N. (2013). Accommodations for English Language Learners and Students with Disabilities: A Research-Based Decision Algorithm.; Christensen, L., C. Johnston, and C. Rogers (2012). Common Core Accommodations Guidance. PARCC State Consortium.

Accommodation		Administration Guidelines
		o PARCC Assistive Technology Guidelines available at http://avocet.pearson.com/PARCC/Home. o Appendix M: PARCC Assessments for Students with Visual Impairments, Including Blindness **During Testing:** A student who is blind or has a visual impairment takes the assessments using his or her preferred screen reader software, pending an "Infrastructure Trial." A student who uses a screen reader will also need a tactile graphics booklet, which contains only the graphics portion of test questions and visual descriptions of pictures and multimedia, where applicable. If the student is not using headphones, the student must be tested in a separate setting. The following embedded tools are not appropriate for use with the Screen Reader Version and therefore are not included: pointer, notepad, answer eliminator, magnifier, line reader, answer masking, color contrast (background/font color), ruler, protractor, and calculator.
3c	**Student Reads Assessment Aloud to Him- or Herself**	**During Testing:** The student reads aloud the assessment to themselves. Students may use an external device such as a whisper phone. The student must be tested in a separate setting.
3d	**Refreshable Braille Display with Screen Reader Version for ELA/Literacy**	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Screen Reader Version selected. Once a student is placed into a test session, the student will be assigned a Screen Reader form. • Materials and Equipment: For screen reader usage, PARCC recommends using JAWS 15 with Firefox. Refreshable braille displays and tactile graphics booklets are required for administration. • Screen Reader Testing: Screen reader software **should** be tested during Infrastructure Trials. For optional screen reader usage, PARCC recommends using JAWS 15 with Firefox. • Test Administrator Training: Test administrators should review: o Appendix M: PARCC Assessments for Students with Visual Impairments, Including Blindness o PARCC Assistive Technology Guidelines available at http://avocet.pearson.com/PARCC/Home. **During Testing:** A student who is blind or has a visual impairment takes the ELA/literacy assessments using his or her preferred screen reader software, pending an "Infrastructure Trial," with a refreshable braille display. A student who uses a screen reader with refreshable braille will also need a tactile graphics booklet, which contains only of the graphics portion of test questions and visual descriptions of pictures and multimedia where applicable. If the student is not using headphones, the student must be tested in a separate setting.

Accommodation		Administration Guidelines

3e	**Hard Copy Braille Edition**[14]	**Before Testing:**
		• Identification for SR/PNP: Student's SR/PNP must have Hard Copy Braille Edition selected.
		• Materials: Braille Kits are required for administration. Braille Kits include Test Administrator Braille Scripts, one copy of the student's Hard Copy Braille Assessment, standard test booklet or answer document[15] for transcription, and supplementary math materials (braille ruler, braille protractor) where appropriate.
		• Test Administrator Training: Test administrators of students with visual impairments must review:
		  o Braille Kits, which will be provided to schools at least two full school days prior to testing in a ***secure environment*** for test administrator review[16]
		  o Appendix M: PARCC Assessments for Students with Visual Impairment, Including Blindness
		  o If needed by the student, braille test booklets or answer documents may be disassembled for testing (but must be reassembled for return). It is critical that test administrators check the number of pages in the test booklet or answer document prior to disassembling the test booklets or answer documents to help ensure that all pages are returned.
		
		During Testing: A student who is blind or has a visual impairment and is unable to take the computer-based test with a refreshable braille display may take the ELA/literacy and mathematics assessments using the hard-copy contracted braille edition. Tactile graphics are already embedded in the hard copy braille edition. For students using braille forms, the test administrator directions for filling in a circle, making marks, and erasing do not apply. Students should number their responses to be sure that their answers can be transcribed accurately into a scorable test booklet or answer document.
		
		After Testing:
		• Responses must be transcribed verbatim by a test administrator in a standard student test booklet or answer document, which is included in the braille test kit. Only transcribed responses will be scored.
		• Refer to Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses for protocol.
		• Test administrators are responsible for collecting all non-scorable student work created from assistive technology devices. Content must be cleared off all devices. Non-scorable student work must be securely shredded.

[14] Distribution quantities for any paper based accommodations and accessibility feature are derived from the student registration process. Any materials required for paper-based accommodations and accessibility features for students registered after the deadline for paper registration must be ordered via Additional Orders.
[15] For the Fall Block 2015 administration consumable test booklets will be used. For the Spring 2016 administration test booklets and answer documents will be used.
[16] Refer to your state policy on the official number of days schools can review secure test materials.

Accommodation		Administration Guidelines
		• If the braille test booklet or answer document was disassembled, it must be reassembled for return. To reassemble test booklets or answer documents, the test administrator may staple or binder clip all pages for return. Failure to return all pages will be considered a breach of security.
3f	**Tactile Graphics**	**Before Testing:** Refer to Table 3c "Refreshable Braille Display with Screen Reader Version for ELA/Literacy" for details. **During Testing:** A student who is blind or has a visual impairment who uses a screen reader or refreshable braille will also need a tactile graphics booklet, consisting only of the graphics portion of test questions, and visual descriptions of pictures and multimedia, where applicable. Tactile graphics will also be embedded in the hard copy braille edition assessments, when needed.

3g	**Large Print Edition**[17]	**Before Testing:**
		• Identification for SR/PNP: Student's SR/PNP must have Large Print Edition selected.
		• Materials: Large print test kit includes a large print assessment booklet, standard test booklet or answer document for transcription, and supplementary large print mathematics materials (large print ruler & protractor), when appropriate.
		• Test Administrator Training: Test administrators of students with visual impairments must review:
		  o Appendix M: PARCC Assessments for Students with Visual Impairment, Including Blindness
		  o Appendix A: Accessibility Features and Accommodations for Students Taking the Paper-Based PARCC Assessments
		
		During Testing: A large print paper-based form of each assessment is available for a student with a visual impairment who is unable to take a computer-based assessment. The font size for the PARCC large print edition will be 18 point on paper sized 11 x 17. Students will not record their answers in standard print test booklets or answer documents. Instead, students will circle their answers in a large print test booklet. For constructed response items, students will write their answers on the lines provided in their large print test booklets. In mathematics, students will need to write their answers in boxes at the top of the Answer Grids, but they do not need to bubble in their answers. Test administrators should refer to the TAM Scripts for instances where they should demonstrate an activity or display information. Demonstrations should be conducted where they are visible for each student (e.g., on the board, near the student).
		
		After Testing:
		• Responses must be transcribed verbatim by a test administrator in a standard student test booklet or answer document, which is included in the Large Print test kit. Only transcribed responses will be scored. At least two persons must be present during transcription of student responses (one transcriber and one observer confirming accuracy). It is recommended that

[17] Distribution quantities for any paper based accommodations and accessibility feature are derived from the student registration process. Any materials required for paper-based accommodations and accessibility features for students registered after the deadline for paper registration must be ordered via Additional Orders.

Accommodation		Administration Guidelines
		one of the individuals be an LEA or School Test Coordinator. • Refer to Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses.
3h	**Paper-Based Edition** *(Alternate Representation – Paper Test)*	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Paper-Based Edition selected. • Materials: Paper-Based Edition of the assessment • Test Administrator Training: Test administrators must review the following appendix for accessibility features and accommodations in a paper-based environment: o Appendix A: Accessibility Features and Accommodations for Students Taking the Paper-Based PARCC Assessments **During Testing:** For schools administering the computer-based assessments, a paper-based assessment is available for students who (1) are unable to take a computer-based assessment due to a disability; (2) recently entered the school and has very little or no prior experience or familiarity with technology; (3) attend a school providing paper-based assessments as the primary mode; or (4) are unable to access an online assessment due to religion or beliefs.
3i	**Closed-Captioning of Multimedia on the ELA/Literacy Assessments**[18]	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Closed-Captioning selected.[19] **During Testing:** A student who is deaf or hearing impaired views captioned text embedded in multimedia (i.e., video) segments of the ELA/literacy performance-based assessments. Captioning can be turned on/off within the video player as needed. Transcripts will also be available in the "Exhibit" icon on the right side of the screen.

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[18] The CCSS call for comparisons between different media. An example of this is RI9-10.7: Analyze various accounts of a subject told in different mediums (e.g., a person's life story in both print and multimedia), determining which details are emphasized in each account. Adding closed captioning to any students other than those who are deaf or hard of hearing affects the ability to effectively assess this type of standard, and therefore it is listed as an accommodation as opposed to a support for all.

[19] Students who require American Sign Language (ASL) Video of the full text of the assessment will not also require Closed-Captioning as the ASL form does not have embedded video.

Accommodation		Administration Guidelines

	ELA/Literacy Assessments, including items, response options, and passages[20]	**Before Testing:**
		• Purpose: The purpose of the embedded text-to-speech, ASL video, and human reader/human signer accommodation for the PARCC ELA/literacy assessment is to provide access to printed or written texts on the PARCC ELA/literacy assessments for a very small number of students with print-related disabilities who would otherwise be unable to participate in the assessment because their disability *severely limits or prevents* their ability to access printed text by decoding. This accommodation is not intended for students reading somewhat (i.e., only moderately) below grade level.
		• Identification for SR/PNP: Student's SR/PNP must have Text-to-Speech, ASL Video, or Human Reader/Human Signer selected. For text-to-speech and ASL Video, proctor caching is strongly encouraged. If this content is not cached, it may present challenges for students during testing. For the human reader/human signer, students must be placed in a Read Aloud session type when creating test sessions. The proctor will be assigned a separate authorization log in to access the same form as all students within the Human Reader session.
		• Tools for Identification: IEP Teams/504 Plan Coordinators should use the decision-making tool available in Appendix D: Text-to-Speech, ASL Video, or Human Reader/Human Signer Guidance for English Language Arts/Literacy Assessments to inform their decision-making.
		• Test Administrator Training: Test Administrators providing this accommodation must review:
		  o Read Aloud Kits at least two school days prior to paper-based testing, with kits provided to schools for this purpose. Review of Read Aloud Kits must occur in a ***secure environment***.
		  o Appendix B: Test Administration Protocol for the Human Reader Accommodation for English Language Arts/Literacy Assessments, and the Human Reader Accessibility Feature for Mathematics Assessments.
		  o Appendix L: Human Signer Guidelines (signers only)
		  o Appendix M: PARCC Assessments for Students with Visual Impairments, Including Blindness
		  o Refer to the Text-to-Speech Tutorial on parcc.pearson.com for training on functionality.
		
		During Testing: A student receives an audio representation of the ELA/literacy assessment either through embedded text-to-speech, embedded ASL video, or a human reader/signer. Note: If headphones are *not* used for text-to-speech, or the student has a human reader or signer, the student must be tested in a separate setting.

3j	• **Text-to-Speech**	
3k	• **ASL Video**	
3l	• **Human Reader/ Human Signer**[21]	

[20] Note: There may be unintended consequences related to the use of this accommodation for some students. Review the adjacent Administration Guidelines carefully. PARCC will conduct additional research to provide PARCC states with data to substantiate the need for providing this level of access to a small number of students.

[21] Distribution quantities for any paper based accommodations and accessibility feature are derived from the student registration process. Any materials required for paper-based accommodations and accessibility features for students registered after the deadline for paper registration must be ordered via Additional Orders.

Accommodation		Administration Guidelines
		Important Guidelines on identifying students for these accommodations: IEP teams and 504 plan coordinators should carefully review the following guidelines before identifying students to receive these accommodations on the ELA/literacy assessments. In making decisions on whether to provide a student with this accommodation, IEP teams and 504 plan coordinators should consider whether the student has: • Blindness or a visual impairment and has not learned (or is unable to use) braille; OR • A disability that severely limits or prevents him/her from accessing printed text, even after varied and repeated attempts to teach the student to do so (e.g., student is unable to decode printed text); OR • Deafness or a hearing impairment and is severely limited or prevented from decoding text due to a documented history of early and prolonged language deprivation. Before listing the accommodation in the student's IEP or 504 plan, teams/coordinators should consider whether: • The student has access to printed text during routine instruction through a reader, other spoken-text audio format, or signer; • The student's inability to decode printed text or read braille is documented in evaluation summaries from locally-administered diagnostic assessments; and • The student receives ongoing, intensive instruction and/or interventions in the foundational reading skills to continue to attain the important college and career-ready skill of independent reading. Decisions about who receives this accommodation will be made by IEP teams and 504 plan coordinators. For a student who receives one of these accommodations, no claims should be inferred regarding the student's ability to demonstrate foundational reading skills (i.e., decoding). PARCC states will collect data on the frequency of their use for the purpose of carefully monitoring and determining appropriate decision-making.
3m	**ASL Video for the Mathematics Assessments**	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have ASL Video selected. Once a student is placed into a test session, the student will be assigned an ASL Video form.[22] Proctor caching is strongly encouraged. If this content is not cached, it may present challenges for students during testing. If a student does not use ASL, a human interpreter and separate test setting will be required.

[22] Since there is no embedded multimedia on the ASL form, students taking this form will not also require Closed Captioning.

Accommodation		Administration Guidelines
		During Testing: The student views an embedded video of a human interpreter for the mathematics assessments. The student may pause and resume the video but cannot adjust the pace.
3n	**Human Signer for Test Directions** *(No ASL video option)*	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Human Signer for Test Directions selected. • Test Administrator Training: Human Signers must review: o Test Administrator Scripts included in the *Test Administration Manuals.* o Appendix L: Human Signer Guidelines (signers only) **During Testing:** A human signer will sign the test directions to a student. The student may either be tested in a small group or a separate setting based on the student's experiences during classroom assessments.

Table 4 provides a list of ***response accommodations*** for students with disabilities that allow a student to respond to test items using different formats. The table outlines the activities needed before, during, and after testing to administer the response accommodations appropriately.

Table 4: Response Accommodations for Students with Disabilities

Accommodation		Administration Guidelines
4a	**Assistive Technology** *(Non-Screen Reader)*	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have assistive technology selected. • Testing: Assistive technology should be tested during an "Infrastructure Trial" to assess its compatibility with the testing platform. For information on how to test assistive technology devices and software for use on the PARCC assessments with the TestNav 8 platform via an "Infrastructure Trial," refer to the Assistive Technology Guidelines available at http://avocet.pearson.com/PARCC/Home. Note that PARCC assessments are designed to be Web Content Accessibility Guidelines (WCAG) compliant. **During Testing:** Students may use a range of assistive technologies on the PARCC assessments, including devices that are compatible with the PARCC online testing platform, and those that are used externally on a separate computer. **After Testing:** Test administrators are responsible for collecting all non-scorable student work created from assistive technology devices. Content must be cleared off all devices. Non-scorable student work must be securely shredded.

Accommodation		Administration Guidelines
4b	**Braille Note-taker**	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have braille note-taker selected. **During Testing:** A student who is blind or has a visual impairment may use an electronic braille note-taker. The grammar checker, internet, and stored file functionalities must be turned off. For students using braille forms, the test administrator directions for filling in a circle, making marks, and erasing do not apply. Students should number their responses to be sure that their answers can be transcribed accurately into a scorable test booklet or answer document. **After Testing:** • Student responses generated using an electronic braille note-taker must be transcribed verbatim by a test administrator into the student's standard student booklet. Only transcribed responses will be scored. Responses must be transcribed by the teacher of the student with visual impairment or a Test Administrator supervised by the teacher of the student with visual impairment. • Refer to Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses. • Test administrators are responsible for collecting all non-scorable student work created using assistive technology devices. Test-related content must be deleted from all devices. Non-scorable student work must be securely shredded.
4c	**Braille Writer**	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have braille writer selected. **During Testing:** A student who is blind or has a visual impairment may use a braille writer. For PARCC assessments, grammar checker, internet, and stored file functionalities must be turned off. For students using braille forms, the test administrator directions for filling in a circle, making marks, and erasing do not apply. Students should number their responses to be sure that their answers can be transcribed accurately into a scorable test booklet or answer document. **After Testing:** • Student responses generated using a braille writer must be transcribed verbatim by a test administrator into the student's standard test booklet or answer document. Only transcribed responses will be scored. Responses must be transcribed either by the teacher of the student with visual impairment or a Test Administrator supervised by the teacher of the student with visual impairment. • Refer to Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses. • Test administrators are responsible for collecting all non-scorable student work created using assistive technology devices. Test-related content must be deleted from all devices. Non-scorable student work must be securely shredded.

Accommodation		Administration Guidelines

4d	**Calculation Device** *(on Calculator Sections of Mathematics Assessments)*	**Before Testing:**
		• Identification for SR/PNP: Student's SR/PNP must have Calculation Device on Calculator Sections selected.
		• Materials:
		  o Specific calculation devices must match the final PARCC Calculator Policy. Allowable calculators include:
		  ▪ Grades 3-5: No calculators allowed
		  ▪ Grades 6-7: Four-function with square root and percentage functions
		  ▪ Grade 8: Scientific calculators
		  ▪ High School: Graphing calculators (with functionalities consistent with TI-84 or similar models)
		
		During Testing: A student uses a specific calculation device (e.g., large key, talking, or other adapted calculator) other than the embedded grade-level calculator on the **calculator section** of the mathematics assessments. If a talking calculator is used, the student must use headphones or be tested in a separate setting.
		
		A student with a visual impairment may need other mathematics tools, such as a large print ruler (embedded PARCC ruler is designed in 18 point font), braille ruler, tactile compass, or braille protractor. Note that braille mathematics kits will include the appropriate grade-level braille ruler and braille protractors.

4e	**Calculation Device and Mathematics Tools** *(on Non-Calculator Sections of Mathematics Assessments)*	**Before Testing:**
		• Purpose: The purpose of the calculation device on the non-calculator sections accommodation is to provide access for students with a disability that *severely limits or prevents* their ability to perform basic calculations (i.e., student is unable to perform single-digit addition, subtraction, multiplication, or division). For these students, a calculation device may be used on the non-calculator mathematics assessment sections (i.e., the device or tool would be permitted on test sections for which calculators are not allowed for other students). The IEP or 504 plan must specify which device(s) or manipulatives.
		• Identification for SR/PNP: Student's SR/PNP must have Calculation Device and Mathematics Tools on Non-Calculator Sections selected. Manipulatives may require state assessment office approval, depending on state policies.
		• Materials:
		  o Hand-held calculator
		  o Allowable calculators for the calculator accommodation on non-calculator sections:
		  ▪ Grades 3-5: Four-function with square root and percentage functions
		  ▪ Grades 6-7: Four-function with square root and percentage functions
		  ▪ Grade 8: Scientific calculators (Student may also bring a four-function with square root and percentage functions in addition to grade-level calculator.)
		  ▪ High School: Graphing calculators with functionalities consistent with TI-84 or similar models. (Student may

Accommodation		Administration Guidelines
		also bring a scientific calculator or a four-function with square root and percentage functions.) o Allowable mathematics tools include: ▪ Arithmetic tables (e.g., addition charts, subtraction charts, multiplication charts; division charts) ▪ Two-color chips (e.g., single-sided or double-sided) ▪ Counters and counting chips ▪ Square tiles ▪ Base 10 blocks ▪ 100s chart **During Testing:** A student uses a calculation device (e.g., four-function calculator, large key, or other adapted calculator), arithmetic table (including addition/ **subtraction** and/or multiplication/division charts), and/or manipulatives (IEP or 504 plan must specify which device or manipulative) on the **non-calculator sections** of the mathematics assessments. If a talking calculator is used, the student must use headphones or be tested in a separate setting. **Important Guidelines for identifying students to receive this accommodation:** IEP teams and 504 plan coordinators should carefully review the following guidelines before identifying students to receive this accommodation. In making decisions whether to provide the student with this accommodation, IEP teams and 504 plan coordinators should consider whether the student has: • A disability that severely limits or prevents the student's ability to perform basic calculations (i.e., single-digit addition, subtraction, multiplication, or division), even after varied and repeated attempts to teach the student to do so. Before listing the accommodation in the student's IEP/504 plan, teams should also consider whether: • The student is unable to perform calculations without the use of a calculation device, arithmetic table, or manipulative during routine instruction. • The student's inability to perform mathematical calculations is documented in evaluation summaries from locally-administered diagnostic assessments. • The student receives ongoing, intensive instruction and/or interventions to learn to calculate without using a calculation device, in order to ensure that the student continues to learn basic calculation and fluency. For a student who receives this accommodation, no claims should be inferred regarding the student's ability to perform basic mathematical calculations without the use of a calculator.

Section 3

Accommodation		Administration Guidelines
4f 4g 4h 4i	**ELA/Literacy Selected Response Options**[23] • **Speech-to-Text** • **Human Scribe** • **Human Signer** • **External Assistive Technology Device**	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Speech-to-Text, Human Scribe, Human Signer, or External Assistive Technology Device selected. • Materials: External device provided by the student, if needed. If the student uses speech-to-text software, such as Dragon Naturally Speaking, then a separate computer must be provided; one to run the assessment on TestNav and a second computer to run the software. TestNav8 does not contain embedded speech-to-text software. • Test Administrator Training: Test administrators providing the scribe accommodation must review: o Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses o Appendix L: Human Signing Guidelines (signers only)
4j 4k 4l 4m	**Mathematics Response Options** • **Speech-to-Text** • **Human Scribe** • **Human Signer** • **Assistive Technology Device**	**During Testing:** Student dictates responses either verbally, using an external speech-to-text device, an augmentative/assistive communication device (e.g., picture/word board), or by dictating, signing, gesturing, pointing, or eye-gazing. The student must be tested in a separate setting. The student must be familiar with any assistive technology external device used for test administration. **After Testing:** • Responses must be transcribed exactly as dictated/signed (e.g., the human scribe/signer may not change, embellish, or interpret a student's responses when transcribing) into the student's standard test booklet or answer document. Only transcribed responses will be scored. • Refer to Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses for protocol. • Test administrators are responsible for collecting all paper non-scorable student work created using assistive technology devices. Test-related content must be deleted from all devices. Non-scorable student work must be securely shredded.
4n 4o 4p 4q	**ELA/Literacy Constructed Response Options**[24] • **Speech-to-Text** • **Human Scribe** • **Human Signer** • **Assistive Technology Device**	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Speech-to-Text, Human Scribe, Human Signer, or External Assistive Technology Device selected. • Materials: External device provided by the student, if needed. • Test Administrator Training: Test administrators providing the scribe accommodation must review: o Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses o Appendix L: Human Signing Guidelines (signers only) **During Testing:** Student dictates responses either verbally, using an external speech-to-text device, an augmentative/assistive communication device (e.g.,

[23] This accommodation applies to Evidence Based Selected Response, and Technology Enhanced Constructed Response items (not Prose Constructed Response items) on the English Language Arts/Literacy assessments.
[24] This accommodation applies to Prose Constructed Responses on the ELA/Literacy assessments.

Accommodation		Administration Guidelines
		picture/word board), or by dictating, signing, gesturing, pointing, or eye-gazing. The student must be tested in a separate setting. The student must be familiar with any assistive technology external device used for test administration. **After Testing:** • Responses must be transcribed exactly as dictated/signed (e.g., the human scribe/signer may not change, embellish, or interpret a student's responses when transcribing) into the student's standard test booklet or answer document. Only transcribed responses will be scored. • Refer to Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses for protocol. • Test administrators are responsible for collecting all non-scorable student work created using assistive technology devices. Test-related content must be deleted from all devices. Non-scorable student work must be securely shredded. **Important Guidelines for identifying students to receive these accommodations:** IEP teams and 504 plan coordinators should carefully review the following guidelines before identifying a student to receive this accommodation. In making decisions whether to provide the student with this accommodation, IEP teams and 504 plan coordinators should consider whether the student has: • A physical disability that severely limits or prevents the student's motor process of writing through keyboarding; OR • A disability that severely limits or prevents the student from expressing written language, even after varied and repeated attempts to teach the student to do so. Before listing the accommodation in the student's IEP or 504 plan, teams/coordinators should also consider whether: • The student's inability to express in writing is documented in evaluation summaries from locally-administered diagnostic assessments; • The student routinely uses a scribe for written assignments; and • The student receives ongoing, intensive instruction and/or interventions to learn written expression, as deemed appropriate by the IEP team or 504 plan coordinator.

Accommodation		Administration Guidelines
4r	**Word Prediction External Device**	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Word Prediction selected. • Materials: External Word Prediction Device **During Testing:** The student uses an external word prediction device that provides a bank of frequently- or recently-used words onscreen after the student enters the first few letters of a word. The student must be familiar with the use of the external device prior to assessment administration. The device may not connect to the internet or save information. **Important Guidelines for identifying students to receive this accommodation:** IEP teams and 504 coordinators should carefully review the following guidelines before identifying a student to receive this accommodation. In making decisions whether to provide the student with this accommodation, IEP teams and 504 plan coordinators are instructed to consider whether the student has: • A physical disability that severely limits or prevents the student from writing or keyboarding responses; OR • A disability that severely limits or prevents the student from recalling, processing, and expressing written language, even after varied and repeated attempts to teach the student to do so. Before listing the accommodation in the student's IEP/504 plan, teams/coordinators are instructed to consider whether: • The student's inability to express in writing is documented in evaluation summaries from locally administered diagnostic assessments; • The student routinely uses a word-prediction device or software during classroom writing assignments; and • The student receives ongoing, intensive instruction, and/or intervention in language processing and writing, as deemed appropriate by the IEP team/504 plan coordinator.

Table 5 describes the ***timing and scheduling accommodation*** for students with disabilities that is intended to increase the allowable time in which to complete an assessment. The table outlines the activities needed before, during, and after testing necessary to successfully administer the assessments with this accommodation.

Table 5: Timing and Scheduling Accommodation for Students with Disabilities

Accommodation		Administration Guidelines
5a	**Extended Time**	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have extended time selected. The amount of time a student receives should be indicated in the student's IEP or 504 plan. The student does not need to take the full day if it is not needed. • Test Administrator Training: Test administrators providing this accommodation must review: o Appendix E: Guidance for Selecting and Administering the Extended Time Accommodation **During Testing:** Students have until the end of the school day to complete a single test unit administered during the prescribed testing window. It is recommended to test students receiving the extended time accommodation in a separate setting to minimize distractions to other students, and to schedule these students for testing in the morning to allow adequate time for completion of a test unit by the end of the school day.

Section 3

Accommodations for English Learners[25]

Table 6 lists the accommodations on PARCC assessments that are available to English learners, cross-referenced with recommendations regarding the effectiveness of the accommodation based on the English Language Proficiency (ELP) level of the student. See Section 4 for how ELP is determined.

Table 6: Guidance on Selection of Accommodations for English Learners on PARCC Assessments[26]

KEY for Table 6:
- ● **Highly recommended** for use by English learners at this ELP level
- ⦿ **Recommended** for use by English learners at this ELP level
- ○ **May not be appropriate** for students at this ELP level

Accommodations	Most likely to benefit English learners at this ELP Level		
	Beginning	Intermediate	Advanced
Extended time	●	●	●
Word-to-Word Dictionary (English/Native Language)	○	●	●
Mathematics Response Speech-to-Text **Mathematics Response Human Scribe**	●	⦿	○
General Administration Directions Read Aloud and Repeated in Student's Native Language (by test administrator)	●	⦿	○
General Administration Directions Clarified as Needed in Student's Native Language (by test administrator)	●	⦿	○
Bilingual Spanish/English Online Mathematics Assessment[27]	●	⦿	○

[25] A foundational piece of research for PARCC policy decisions on accessibility features: Abedi, J. & Ewers, N. (2013). Accommodations for English Language Learners and Students with Disabilities: A Research-Based Decision Algorithm.
[26] Differing laws, regulations, and policies exist among PARCC states as to whether they will allow, require, or prohibit translations of state assessments.
[27] PARCC provides online and paper Spanish mathematics assessments for use in states that permit the assessments in languages other than English. States may also procure assessments in additional languages. Bilingual forms will be available in spring 2016. For Fall Block 2015 students may use Spanish only forms.

Accommodations	Most likely to benefit English learners at this ELP Level		
	Beginning	Intermediate	Advanced
Side-by-Side Spanish/English Paper-based Mathematics Assessment[27]	●	⊙	○
Side-by-Side Spanish/English Large Print Mathematics Assessment	●	⊙	○
Text-to-Speech for the Mathematics Assessments in Spanish **Human Reader for the Mathematics Assessments in Spanish**	●	⊙	○

Table 7 provides a list of ***accommodations*** for English learners. The table describes the activities needed before, during, and after testing necessary to administer these accommodations appropriately.

Table 7: Accommodations for English Learners on PARCC Assessments

Accommodation		Administration Guidelines
7a	**Extended time**	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have extended time selected. • Test Administrator Training: Test administrators providing this accommodation must review: o Appendix E: Guidance for Selecting and Administering the Extended Time Accommodation **During Testing:** Students have until the end of the school day to complete a single test unit administered during the prescribed testing window. The amount of time a student receives must be indicated in advance. It is recommended to test students receiving the extended time accommodation in a separate setting to minimize distractions to other students, and to schedule these students for testing in the morning to allow adequate time for completion of a test unit by the end of the school day.

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Accommodation		Administration Guidelines
7b	**Word-to-Word Dictionary** *(English/ Native Language)*	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have word-to-word dictionary selected. • Materials: Word-to-word dictionaries are provided to students by their school, based on those used by the student for routine classroom instruction. **During Testing:** The student uses a published bilingual, word-to-word dictionary that does not definitions, phrases, sentences, or pictures. The student should be familiar with the dictionary they will use during testing. Students should be given ample time to complete the test using the accommodation. If no printed word-to-word dictionary can be found for a specific language, an electronic translator may be used. The device may not connect to the internet or store information, and therefore, web-based translators are not allowed. A sample list of approved bilingual word-to-word dictionaries is available at: http://www.doe.mass.edu/mcas/testadmin/lep-bilingual-dictionary.pdf.
7c 7d	**Mathematics Response** • **Speech-to-Text** • **Human Scribe**	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Speech-to-Text or Human Scribe selected. • Materials: If student uses software, a separate computer will be needed in addition to the computer used to administer the test. An external device may also be brought to the assessment. • Test Administrator Training: Test administrators providing the scribe accommodation must review: o Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses **During Testing:** A student dictates responses verbally, using an external speech-to-text device or by dictating. The student must be tested in a separate setting. The student must already be familiar with any external device used for this accommodation. **After Testing:** • Responses must be transcribed exactly as dictated/signed (e.g., the human scribe/signer may not change, embellish, or interpret a student's responses when transcribing) into the student's standard test booklet or answer document. Only transcribed responses will be scored. • Refer to Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses for protocol. • Test administrators are responsible for collecting and shredding all non-scorable student work created using assistive technology devices. Test-related content must be deleted from all devices.

Accommodation		Administration Guidelines
7e	**General Administration Directions Read Aloud and Repeated in Student's Native Language** *(by test administrator)*	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have General Administration Directions Read Aloud and Repeated in Student's Native Language selected. • Materials: o For 2015-2016, PARCC will provide written general test administration directions in the following languages[28]: ▪ Spanish ▪ Arabic ▪ Navajo ▪ Chinese Mandarin ▪ Vietnamese ▪ Portuguese ▪ Polish ▪ Haitian Creole ▪ Urdu ▪ Russian o Translations in other languages may also be available on request. o If written general test administration directions are not available in the student's native language, a local translator fluent both in English and the student's native language may translate and read the directions in the language of the student. • Test Administrator Training: Test administrators, or other qualified interpreters, providing the general administration directions in languages other than English must review the directions in advance in order to provide consistent translations. Test administrators providing this accommodation will ideally be literate and fluent in English, as well as in the student's native language; or may collaborate with a local translator, if available. **During Testing:** The test administrator, or other qualified interpreter, reads aloud the general administration instructions in the student's native language. The student may request that directions be repeated. The student must be tested in a separate setting.
7f	**General Administration Directions Clarified in Student's Native Language** *(by test administrator)*	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have General Administration Directions Clarified in Student's Native Language selected. • Test Administrator Training: Test administrators providing this accommodation should be literate and fluent in English, as well as in the student's native language. **During Testing:** The test administrator clarifies general administration directions only in the student's native language. Test administrators, or other qualified interpreters, providing this accommodation should ideally be literate and fluent in English, as well as in the student's native language; or test administrator may be assisted by a translator who speaks the language of the student, if available.

[28] Each year, PARCC will identify the languages for test administration directions based on PARCC state student enrollment data.

Accommodation		Administration Guidelines
7g	**Bilingual Spanish/English Online Mathematics Assessment**[27]	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Online Translation in Spanish selected. Once a student is placed into a test session, the student will be assigned a bilingual online form in Spanish/English. **During Testing:** A student takes the online mathematics assessment with content presented in both English and Spanish, **if allowed by state policy.**
7h	**Side-by-Side Spanish/English Paper-Based Mathematics Assessment**[27] [29] [30]	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Paper-Based Edition in Spanish selected. • Materials: Side-by-Side Spanish/English Paper-Based Mathematics Assessment. Based on individual state policy, the mathematics assessment may be translated into additional languages. • Test Administrator Training: For English learners, and English learners with disabilities, administrators must review the following: o Appendix A: Accessibility Features and Accommodations for Students Taking the Paper-Based PARCC Assessments **During Testing:** The student takes a paper-based mathematics assessment with content presented in both Spanish and English (or other native language as requested), **if allowed by state policy**.

7i	**Side-by-Side Spanish/English Large Print Mathematics Assessment**	**Before Testing:**
		• Identification for SR/PNP: Student's SR/PNP must have Large Print Edition selected.
		• Materials: Large print test kit includes a large print assessment booklet, standard test booklet or answer document for transcription, and supplementary large print mathematics materials (large print ruler & protractor), when appropriate.
		• Test Administrator Training: Test administrators of students with visual impairments must review:
		  o PARCC Assessments and Students with Visual Impairment, Including Blindness
		  o Appendix A: Accessibility Features and Accommodations for Students Taking the Paper-Based PARCC Assessments
		
		During Testing: A side-by-side Spanish/English large print paper-based form of the mathematics assessment is available for a student with a visual impairment who is unable to take a computer-based assessment due to his or her disability, **if allowed by state policy**. The font size for the PARCC large print edition will be 18 point on paper sized 11 x 17. Students will not record their answers in standard print test booklets or answer documents. Instead, students will circle their answers in the large print test booklets. Students will need to write their answers in boxes at the

[29] Distribution quantities for any paper based accommodations and accessibility feature are derived from the student registration process. Any materials required for paper-based accommodations and accessibility features for students registered after the deadline for paper registration must be ordered via Additional Orders.

[30] PARCC will provide online and paper translations of the mathematics assessments in Spanish for use at the discretion of PARCC states. If other languages are needed, states may request additional translations.

Accommodation		Administration Guidelines
		top of the Answer Grids, but they do not need to bubble in their answers. Test administrators should refer to the TAM Scripts for instances where they should demonstrate an activity or display information. Demonstrations should be conducted where they are visible for each student (e.g., on the board, near the student). **After Testing:** • Responses must be transcribed verbatim in Spanish by a test administrator in a standard student test booklet or answer document, which is included in the Large Print test kit. Only transcribed responses will be scored. At least two persons must be present during transcription of student responses (one transcriber and one observer confirming accuracy). It is recommended that one of the individuals be an LEA or School Test Coordinator. • Refer to Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses.
7j	**Text-to-Speech for the Mathematics Assessments in Spanish** *(or other languages)*	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Text-to-Speech in Spanish selected. Once a student is placed into a test session, the student will be assigned a form with embedded text-to-speech on the online bilingual form. Proctor caching is strongly encouraged. If this content is not cached, it may present challenges for students during testing. The volume level must be determined prior to testing. Once testing begins, the volume cannot be changed. Student must be tested in a separate setting if unable to wear headphones. • Test Administrator Training: Refer to the Text-to-Speech Tutorial on parcc.pearson.com for training on functionality. **During Testing:** The student selects the "Text-to-Speech Player" icon on the toolbar on the right side of the screen. The test is read aloud to the student in Spanish using embedded text-to-speech software, **if allowed by state policy**. The student may pause and resume the audio as needed. To choose a speed (slow, normal, fast), select the "Text-to-Speech Settings" icon. Once the test begins, the volume level cannot be changed. Student must be tested in a separate setting if unable to wear headphones.

7k	**Human Reader for the Mathematics Assessments in Spanish** *(or other language as needed)*	**Before Testing:**
		• Identification for SR/PNP: Student's SR/PNP must have Human Reader in Spanish (or other languages) selected. Once a student is placed into a test session, the student will be assigned a Human Reader form.
		• Test Administrator Training: Human Readers providing this accommodation must review:
		  o Appendix B: Test Administration Protocol for the Human Reader Accommodation for English Language Arts/Literacy Assessments, and the Human Reader Accessibility Feature for Mathematics Assessments.
		  o According to state policy, an onsite translator may provide (or assist a test administrator to provide) a human read aloud accommodation in the student's native language. Test

Section 3

Accommodation		Administration Guidelines
		administrators providing this accommodation should ideally be literate and fluent in English, as well as in the student's native language; or may be assisted by a translator, if available. **During Testing:** In cases where a test administrator reads aloud to a student, **if allowed by state policy**, the student must be tested in a separate setting. Students may be tested in an individual or small group setting. The number of students in a small group is determined by individual states.

Section 4: Decision-Making Process for Selecting, Using, and Evaluating Accessibility Features and Accommodations for Students with Disabilities, English Learners, and English Learners with Disabilities

Including All Students in State Assessments

English Learners

Federal law requires that students not be excluded from assessments with the intention of holding schools accountable for the academic performance of all students, with a narrow exception granted to English learners in their first year of instruction in a U.S. school (see above). English learners in PARCC states may not be excluded from PARCC summative assessments in ELA/literacy (with the exception of English learners in their first year in a U.S. school) and mathematics assessments. English learners whose parents have waived services may not be excluded from state assessments and are still eligible to receive accommodations allowed to English learners on PARCC assessments.

Students with Disabilities

The ESEA and IDEA require that all students with disabilities be administered state assessments, either with or without accommodations, or through an alternate assessment. The results of those assessments are intended to hold schools accountable for the academic performance of all students. It is important that IEP teams and 504 plan coordinators actively engage in a planning process that includes:

- Participation of all students in the PARCC assessments at the grade level or course in which they are enrolled;
- Assurance of the provision of appropriate accommodations to facilitate student access to instruction and assessments based on grade-level or course standards; and
- Use of alternate assessments based on the content standards, where necessary to assess the academic performance of students with the most significant cognitive disabilities.

Equal Access to Grade-Level Content

The CCSS are educational targets for students to learn at each grade level or course. Teachers should regularly ensure that students are working toward grade-level learning standards by using instructional strategies that are appropriate for each student based on individual needs, strengths, and challenges. Providing appropriate accommodations during instruction and assessments is likely to promote equal access to grade-level and course content.

To accomplish the goal of equal access, educators (including general educators, special educators, educators specializing in English language acquisition, other members of IEP teams, 504 plan coordinators, and English learner teams, if applicable) should:

- Be familiar with the CCSS and the accountability system, including applicable assessments, at the state and district level;
- Be familiar with the PARCC assessment administration procedures and the PARCC Accessibility Features and Accommodations Manual; and
- Collaborate regularly to maximize and ensure the student's access to grade-level or course standards.

All students must have access to grade-level or course academic learning standards. Most of these students will be able to achieve these standards when the following three conditions are met:

1. Classroom instruction is provided by teachers who are qualified to teach the CCSS and who know how to differentiate instruction and provide educationally appropriate instruction for diverse learners;
2. IEPs and 504 plans for students with disabilities, and English learner plans for English learners, where appropriate, are developed to ensure the provision of equal access to the general curriculum and state- and district-wide assessments; and
3. Appropriate accessibility features and/or accommodations are determined and provided to help students access grade-level or course content.

The Common Core State Standards can be accessed here: http://www.corestandards.org.

The PARCC Model Content Frameworks can be accessed here: http://www.parcconline.org/parcc-model-content-frameworks.

Step 1: Expect All Students to Achieve Academic Grade-Level and Course Content Standards
In accordance with the Elementary and Secondary Education Act (ESEA) and Individuals with Disabilities Education Improvement Act of 2004 (IDEA), PARCC expects that all students in PARCC states who are not taking an alternate assessment will participate in the PARCC assessments. The PARCC assessment system sets and maintains high expectations that all students will have access to the full range of grade- level and course content standards.

Several laws require the participation of students with disabilities and English learners in standards-based instruction and assessment. Refer to Appendix K: Legal Background for additional information.

Step 2: Learn About Accessibility Features and Accommodations
It is critical that educational teams learn about accessibility features and accommodations that provide increased access for students or reduce or eliminate the effects of a student's disability, or English learner status, and provide equitable access to grade-level or course content for diverse learners. For information on which accessibility features and accommodations are available on the PARCC assessments, refer to Sections 2 and 3 of this manual.

Modifications for PARCC Assessments
Modifications, as contrasted with accessibility features and accommodations, involve changes in the PARCC assessment or in the conditions in which a student takes the assessment that would result in unacceptable changes in what the assessment is designed to measure (e.g., reducing or changing expectations for students), or provide an unfair advantage to a student. Therefore, modifications are not permitted on the PARCC assessments.

Examples of modifications that would result in invalidated results on PARCC include:

- Allowing a student to be assessed off grade-level;
- Instructing a student to skip selected items, reducing the scope of assessments, so a student completes only a limited number of problems or items;

- Modifying the complexity of assessments to make them easier (e.g., deleting response choices on a multiple-choice assessment so that a student selects from two or three options instead of four);
- Providing hints, clues, or other coaching that directs the student to correct responses;
- Defining vocabulary on the assessment, or explaining assessment items;
- Allowing the student to complete an assessment of English language arts in a language other than English; and
- Using a bilingual dictionary that provides definitions (rather than an acceptable word-to-word dual-language dictionary).

Providing a student with modifications during a PARCC assessment may constitute a test irregularity and will result in an invalidated score (i.e., the score will not be counted) and/or an investigation by the state into the school's or district's testing practices. Moreover, providing modifications to students during statewide assessments may have the unintended consequence of reducing their opportunities to learn critical content and may result in adverse effects on the student throughout his or her educational career.

Step 3: Select Accessibility Features and Accommodations for Individual Students
The team or group responsible for selecting accessibility features for all students, and accommodations for English learners and/or students with disabilities should:

- Discuss which accessibility features and accommodations might assist a student during daily instruction in the classroom;
- Determine which accessibility features and accommodations to "try out" with the student during instruction in each content area;
- Document and evaluate the effectiveness of the accessibility features and accommodations used over time;
- Adjust the use of accessibility features and accommodations as needed for the future; and
- Based on the effectiveness of the supports used in the classroom, determine which accessibility features and accommodations should also be used on PARCC assessments, and whether they are allowed.

In selecting appropriate accessibility features and accommodations for PARCC assessments, it is important that educators be aware of the following:

- Accessibility features and accommodations should be considered and discussed separately for each PARCC content-area assessment.
- Students should receive the accessibility features and accommodation they need to participate in the assessment, but should not receive more accessibility features and accommodations than are necessary to participate meaningfully.
- Accessibility features and accommodations are intended to increase a student's access to the assessment but will not compensate for a student's lack of academic/content knowledge and skills.
- Students need opportunities beforehand to try out accessibility features and accommodations and learn which are most helpful in classroom instruction, as well as on large-scale assessments.
- The more input students have in selecting their accessibility features and accommodations, the more likely the accessibility features and/or accommodations will be used.
- Accommodations that provide access to students on assessments should be based on their needs as students with disabilities or English learners not their lack of content knowledge or skills.

- Teams should be careful to avoid selecting accessibility features and accommodations using a "kitchen-sink" approach that provides the student with unnecessary or mutually-contradictory accommodations in an attempt to provide every possible advantage on the assessment. This approach could make accessing the test more difficult and confusing for the student.

The Decision-Making Process

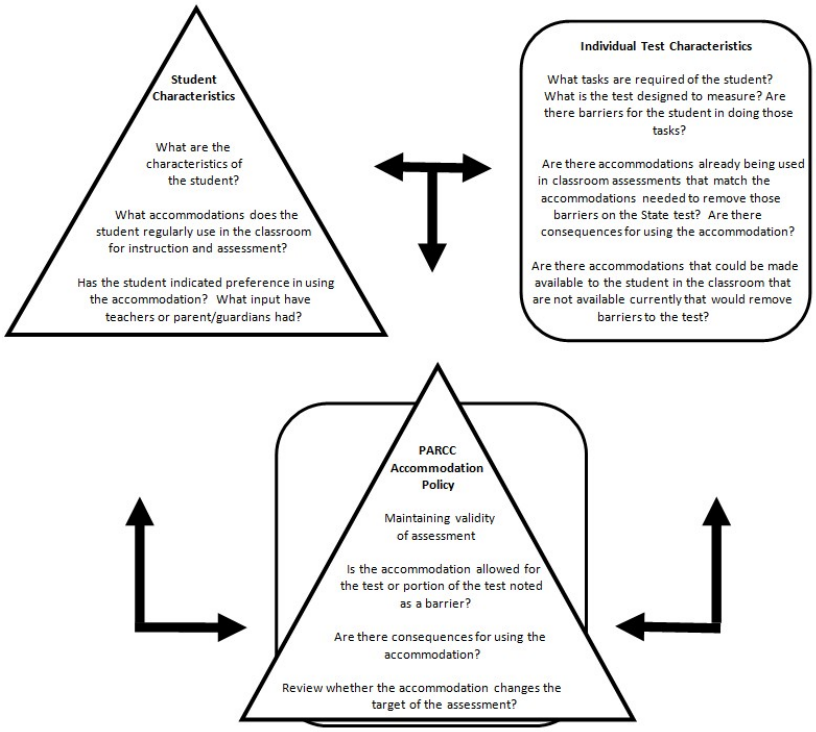
Figure 1 shows considerations for selecting PARCC assessment accommodations for students with disabilities, English learners, and English learners with disabilities. This process could be replicated for selecting accessibility features. The decision-making process should include consideration of at least the following three factors:

Factor 1: Student characteristics and learning needs (e.g., disabilities, language proficiency, accommodations used in classroom instruction/assessments to access and perform in academic standards and assessments)

Factor 2: Individual assessment characteristics (i.e., knowledge about what tasks are required on PARCC assessments and ways to remove physical and other barriers to students' ability to perform those tasks)

Factor 3: PARCC accessibility features and accommodations policies that maintain the validity of assessment results.

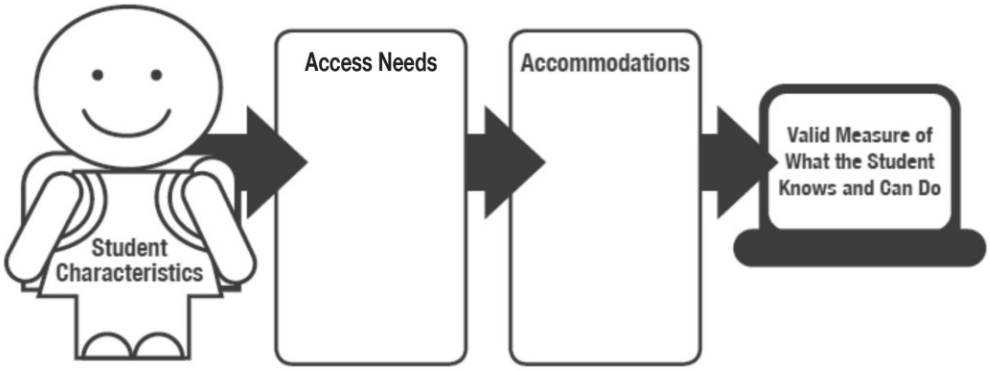
Figure 1: Considerations When Making Decisions for Assessment Accommodations



Decision-Making Process – Factor #1: Student Characteristics and Learning Needs

Figure 2 shows the process of how student characteristics and access needs impact the selection of accessibility features and accommodations. Accessibility features and accommodations should remove barriers to learning.

Figure 2: Student Characteristics and Learning Needs



Decision-Making Process – Factor #2: Individual Test Characteristics

It is important to examine the tasks students are being asked to do on the PARCC assessments by asking the following questions:

- What are the characteristics of the assessment and what will the tasks and items look like?
- Are the assessment tasks similar to classroom assessment tasks, and does the student have the opportunity to practice similar tasks prior to testing?
- Does the student use an accessibility feature and/or accommodation for a classroom task that is allowed for similar tasks on the PARCC assessments?
- Do other barriers exist that could be removed by using accessibility features and/or accommodations that are not already offered or used by the student?

Decision-Making Process – Factor #3: PARCC Accessibility Features and Accommodations Policies That Maintain the Validity of Assessment Results

It will be important for educators, parents, and teams selecting accommodations for the PARCC assessments to review the test security, test administration, and test accommodation policies in order to determine whether the accommodation is allowed on the PARCC assessments(s), and if there will be any consequences for the school, district, or student if the accommodation is used. For example, if certain instructional accommodations are used for testing, the validity of assessment results may be compromised if the accommodation involves modifying the assessment, giving assistance to the student to respond to questions during testing, or providing an accommodation that gives the student an unfair advantage on all or part of the assessment. Assessment policies must be reviewed thoroughly before accommodations are selected for the assessments, and any discrepancies between instructional and assessment accommodations should be communicated to the parent and the educators working with the student.

Questions to Guide Accessibility Feature and Accommodation Selection for Students with Disabilities
Teams should use these questions to guide the selection of appropriate accessibility features and accommodations for students with disabilities:

- What are the student's learning strengths and challenges, and are these based on language needs, a disability, or both?
- How do the student's learning and/or language needs affect the achievement of grade-level or course content CCSS?
- What specialized instruction, if any (e.g., learning strategies, organizational skills, reading skills) is required by the student to achieve grade-level or course content CCSS?
- Which accessibility features and/or accommodations are regularly used by the student during instruction and assessments?
- Which new accessibility features and/or accommodations, if any, would increase the student's access to instruction and assessment by addressing the student's learning needs and reducing the effects of the student's disability?
- Should an existing accessibility feature and/or accommodation be implemented differently?
- What were the outcomes when accessibility features and/or accommodations were used and when they were not used during classroom assignments and on assessments?
- What is the student's perception of how well an accessibility feature and/or accommodation "works"?
- What difficulties did the student experience when using accessibility features and/or accommodations?
- What are the perceptions of parents, teachers, and specialists about the effectiveness of the accessibility feature and/or accommodation?
- Should the student continue to use an accessibility feature and/or accommodation "as is," are changes needed, or should use be discontinued?

The following should also be considered in the selection of accessibility features and/or accommodations:

- Whether the accessibility feature and/or accommodation is respectful of a student's age and grade (e.g., older students may prefer accessibility features and/or accommodations provided through use of technology, rather than those administered by an adult);
- Student's willingness to learn to use the accessibility feature and/or accommodation;
- Explicit instruction in how to use the accessibility feature and/or accommodation in classroom and testing settings; and
- The conditions for use of the accessibility feature and/or accommodation on PARCC assessments.

Individuals Involved in Selecting Accessibility Features and Accommodations for Students with Disabilities
Effective decision-making on how a student will participate in the PARCC assessments, including the provision of appropriate accessibility features and accommodations, begins with gathering and reviewing information about the student's disability, present level of academic achievement, and functional performance in relation to the CCSS. This process is best accomplished by a team of people who know the student best. The team should include individuals who can present information to the discussions about providing the student equal learning opportunities, and identifying practices and approaches intended to help the student overcome learning obstacles during instruction and assessment.

Test accessibility features and accommodations should not be assigned broadly to all students with the same disability. Accessibility features and accommodations should be selected based on the student's learning preferences, previous record of success using the accessibility feature or accommodation, disability-related needs, and level of the student's comfort using the accessibility feature or accommodation in question. The selected accessibility features and accommodations must be listed in the student's IEP or 504 plan and consistently provided in the classroom in order to obtain useful feedback on their effectiveness. Providing accessibility features and accommodations that the student does not need may actually adversely impact his or her performance on the test and interfere with the test's ability to measure the student's achievement. IEP teams and 504 plan coordinators should consider whether the recommended accessibility feature(s) and/or accommodation(s):

- Are necessary to access the test items;
- Have been useful to other students with similar profiles; and
- Will negatively affect the integrity, validity, and security of the assessment.

All IEP team members/504 plan coordinators, and other key individuals should provide information and perspectives for the entire team to consider during team meetings regarding the selection, implementation, and evaluation of appropriate accessibility features and accommodations.

Students

Students can provide valuable information to the IEP team or 504 plan coordinator on their strengths and areas of challenge, the effectiveness of the accessibility features and accommodations they use, and their degree of comfort in using them. This information can greatly assist team decision-making regarding which accessibility features and/or accommodations to recommend. Including students in the decision-making process will enhance their self-advocacy, their understanding of the need for the accessibility feature and/or accommodation, and may result in an increased willingness to use the accessibility feature and/or accommodation consistently. Students can also signal when they are outgrowing the need for an accessibility feature and/or accommodation.

School Administrator (Principal/Assistant Principal)

The school administrator promotes the expectation that students with disabilities are capable learners who can and will achieve at high levels in all local, state, and PARCC assessments if they are included in high-quality standards-based instruction. The principal is responsible for:

- implementing the district's policies that provide equal access to instructional and assessment programs for all students;
- ensuring that assessment accessibility features and/or accommodations are fully, consistently, and appropriately implemented during the administration of PARCC assessments, as specified in each student's IEP or 504 plan; and
- exercising leadership and discretion in resolving circumstances in which last-minute changes occur in a student's status. For example, if a student no longer is eligible for special education services, changes in accessibility features and/or accommodations for the assessment may be needed.

Principals should be familiar with the policies and procedures outlined in the *Test Administrator Manuals* and the *PARCC Accessibility Features and Accommodations Manual*.

General Educator (Content Area Teacher)
General education teachers are important team members who should be familiar with and knowledgeable of the accessibility features and/or accommodations required by each student, and how to administer them appropriately.

The general education teacher plays an active and significant role in the determination and use of instructional and assessment accessibility features and accommodations for students with disabilities. General educators are familiar with curriculum content and the purposes of the PARCC assessments. In collaboration with special education teachers, general educators provide appropriate instructional and assessment accessibility features and/or accommodations to ensure that students with disabilities have full access to grade-level and/or course content that is available to their nondisabled peers. The results of the assessments, in turn, can provide teachers with information that will support individual students in achieving the CCSS.

Special Educator
The special education teacher plays an important role in providing information on how to match the learning characteristics of students to the appropriate instructional and assessment accessibility features and/or accommodations, ensuring that the student is able to demonstrate his or her knowledge and skills without barriers or restrictions due to his or her disability.

Related Service Providers
Related service providers, such as speech-language pathologists, school psychologists, physical therapists, and occupational therapists, serve essential roles in supporting the education of students with disabilities in school environments. As members of IEP teams (and 504 plan coordinator discussions, as appropriate), related service providers can lend their unique expertise and perspectives to discuss how to improve learning and assessment opportunities for students with disabilities.

Parents/Guardians
Students who use accessibility features and/or accommodations will often need them at home, in the community, and as they get older, in postsecondary education and at work. Parents are familiar with the strengths and needs of their children and can provide valuable information to enhance discussions about the appropriateness of selected instructional and assessment accessibility features and/or accommodations. Parents also have information and perspectives on the strategies their child uses routinely to complete homework assignments and other tasks around the home. To enable parents to participate in meaningful discussions, it is important that they receive information in a language that is accessible to them about the:

- Need and rationale for assessment accessibility features and/or accommodations;
- Types of available assessment accessibility features and accommodations and how assessments will be administered; and
- Purpose of assessments, what they measure, and how the results will be used.

Documenting Accommodations on a Student's IEP
For students with disabilities served under IDEA, determining appropriate instructional and assessment accommodations should not pose any particular problems for IEP teams that follow good IEP team practices. With information obtained from the required summary of the student's "present levels of

academic achievement and functional performance," the decision of identifying and documenting accommodations is a fairly straightforward process. The term "present levels of achievement and functional performance" refers to a federal requirement in which IEP team members must state "how the child's disability affects the child's involvement and progress in the general education curriculum— the same curriculum as nondisabled children" [20 USC § 1414(d)(1)(A)(i)(I)].

There are three areas in which accommodations can potentially be addressed in the IEP:

1. "Participation in Assessments" [20 USC § 1412(a)(16)]. This section of the IEP documents accommodations needed to facilitate the participation of students with disabilities in State and district assessments.
2. "Consideration of Special Factors" [20 USC § 1414(d)(3)(B)]. This is where communication and assistive technology supports are considered.
3. "Supplementary Aids and Services" [20 USC §1401(33)and 20 USC §1414(d)(1)(A)(i)]. This area of the IEP includes "aids, services, and other supports that are provided in regular education classes or other education related settings to enable students with disabilities to be educated with nondisabled students to the maximum extent appropriate.

Documenting Accommodations on a Student's 504 Plan

Section 504 of the Rehabilitation Act of 1973, specifies that no otherwise qualified person with a disability shall, solely by reason of his or her disability, be excluded from participating in federally-funded programs or activities, including elementary, secondary, or postsecondary schooling. "Disability" in this context refers to a "physical, sensory, or mental impairment, which substantially limits one or more major life activities." This can include physical impairments; illnesses or injuries; communicable diseases; chronic conditions like asthma, allergies and diabetes; and learning problems. A 504 plan spells out the accommodations that will be needed for these students to have an opportunity to *access* the test to the same extent as his/her nondisabled peers, and might include such things as wheelchair ramps, blood sugar monitoring, interpreting/transliteration services, preferential seating, an extra set of textbooks, a peanut-free lunch environment, home instruction, or a tape recorder or keyboard for taking notes.

Each student who meets the eligibility guidelines for accommodations under Section 504 will have a Section 504 plan developed for him/her to use in school. The plan specifies the nature of the impairment, the major life activity affected by the impairment, accommodations necessary to meet the student's needs, and the person(s) responsible for implementing the accommodations. It is recommended that accommodations be listed separately in the 504 plan for instruction and for assessments, since they may differ or be allowed for one and not the other.

Individuals Involved in Selecting Accessibility Features and Accommodations for English Learners

Determining appropriate linguistic support for English learners during classroom instruction and on assessments is facilitated by gathering and reviewing information about the student and the student's level of performance in relation to district and state academic standards and current English language proficiency level. The process of determining the amount and types of instructional and assessment supports involves attempts by members of the educational team to remove barriers and "level the playing field" for the student so that he or she can participate in the general education curriculum and assessments.

Decisions about assessment accessibility features and accommodations for English learners should be made by a group of individuals familiar with the student who can identify the appropriate accessibility features and accommodations for each English learner. In some states, this is called an "English learner team;" in other states, it will be an informal group of educators familiar with the student who makes decisions. In either case, the educators working with the student should document the accessibility features and/or accommodations made available to the student.

Individuals involved in the decision-making process may include any of the following:

Students
Students can provide valuable information on their strengths and areas of challenge based on linguistic needs, the effectiveness of the accessibility features and/or accommodations they use, if any, and their degree of comfort in using them. This information can greatly assist decision-making regarding which accessibility features and/or accommodations to recommend. Including students in decision-making will enhance their self-advocacy, their understanding of the need for the accessibility feature and/or accommodation, and may result in an increased willingness to use the accessibility feature and/or accommodation consistently. Students can also signal when they are outgrowing the need for an accessibility feature and/or accommodation due to their maturation or increased language proficiency.

ESL/Bilingual Educator
The ESL/bilingual educator can apply his or her knowledge of language acquisition with familiarity with the individual student's linguistic needs to devise strategies and supports that facilitate learning the English language during instruction and provide accessibility during assessment.

School Administrator (Principal/Assistant Principal)
The school administrator promotes the expectation that English learners can and will achieve at high levels in all local, state, and PARCC assessments if they are included in high-quality standards-based instruction. The principal is responsible for:

- implementing the district's policies that provide equal access to instructional and assessment programs and resources for all students;
- ensuring that assessment accessibility features and accommodations are fully, consistently, and appropriately implemented during the administration of PARCC assessments; and
- exercising leadership and discretion in resolving circumstances in which last-minute changes for assessment are needed. For example, allowing a student to be tested in a separate setting apart from other students.

General Educator (Content Area Teacher)
General education teachers are important team members who should be familiar with and knowledgeable of the linguistic accommodations required by each student, and how to administer them appropriately. They are familiar with curriculum content and the purposes of the PARCC assessments. In collaboration with ESL/bilingual teachers (and special education teachers, if appropriate), general educators provide appropriate instructional and assessment accessibility features and accommodations to ensure that English learners have full access to the programs and services that are available to their native English speaking peers. The results of the assessments, in turn, can provide teachers with information that will support individual students in achieving the CCSS.

Special Educator
If the English learner student has a disability, the special education teacher plays an important role in providing information on how to match the learning characteristics of the student to the appropriate instructional and assessment accessibility features and/or accommodations, ensuring that the student is able to demonstrate his or her knowledge and skills without barriers or restrictions due to his or her disability.

Parents/Guardians
Students who use accessibility features and/or accommodations will often need them at home, in the community, and as they get older, in postsecondary education and at work. Parents are familiar with the strengths and needs of their children and can provide valuable information to enhance discussions about the appropriateness of selected instructional and assessment accessibility features and/or accommodations. Parents also have information and perspectives on the strategies their child uses routinely to complete homework assignments and other tasks around the home. To enable parents to participate in meaningful discussions, it is important that they receive information about the:

- Need and rationale for assessment accessibility features and/or accommodations;
- Types of available assessment accessibility features and/or accommodations and how assessments will be administered; and
- Purpose of assessments, what they measure, and how the results will be used.

Educators responsible for selecting accessibility features and accommodations for English learners can use the guidance found in this section to make appropriate decisions on assigning accessibility features and accommodations to English learners in the SR/PNP. To be effective, accommodations must address the unique linguistic needs of the students for whom they are provided and should assist the student in overcoming the language barriers that prevent him or her from learning in the classroom and accessing the content of the PARCC assessments. Educators should also review and select appropriate accessibility features available for English learners on the computer-based PARCC assessments and design a SR/PNP for the student.

Decision-making teams are encouraged to determine and assign accessibility features and accommodations to English learners as early as possible in the school year to ensure that the student is familiar with their use. Accessibility features and accommodations should be evaluated over time for their effectiveness. The student should not be introduced to an accessibility feature and/or accommodation on the day of the assessment.

Guidelines for Selecting Appropriate Accessibility Features and Accommodations for English Learners
Because English learner status itself is transitional in nature, there are accessibility features and accommodations specific to English learners that provide different degrees and types of linguistic support to English learners as they progress through levels of English language proficiency. Appropriate accessibility features and accommodations enable English learners to more effectively demonstrate their knowledge of the content.

The following process can be used to select accessibility features and accommodations for English learners:

1. The classroom teacher examines the types of support that help a student access the curriculum, and tries them out to determine whether they meet the student's needs: *Does the accessibility*

feature and/or accommodation help the student overcome the barrier posed by his/her developing English language proficiency? Is the student comfortable using the accessibility features and/or accommodation?

The student's teacher should observe the student in the classroom (or range of classrooms/school settings) using the accessibility feature(s) and/or accommodation(s) and inform members of the team of educators as to which accessibility features and/or accommodations are most appropriate and effective.

2. The teacher should document and provide information on a student's use of linguistic accommodations during classroom instruction and assessment.

3. Once classroom information and data are compiled about the student's background, instructional needs, and use of the accessibility features and/or accommodation(s), the educators selecting accessibility features and/or accommodations for the English learner can help the classroom teacher and student evaluate whether to continue using the accessibility feature(s) and/or accommodation and/or suggest additional accessibility feature(s) and/or accommodations, supports, or approaches that may be effective for use with the student.

   Based on the accessibility feature(s) and/or accommodations used successfully in the classroom, and the list of Allowable Accommodations for English Learners on PARCC Assessments (Table 6), educators can select appropriate accessibility features and/or accommodations for use on the PARCC assessments.

   These considerations should also be used to match each English learner's unique linguistic needs with PARCC English learner accessibility features and/or accommodations:

When selecting accessibility features and/or accommodations for English learners, consider the student's:

1. **Level of English language proficiency (ELP) on the state ELP test**
   - Beginning, Intermediate, or Advanced
2. **Literacy development in English and/or the native language**
   - Native language literacy
   - Interrupted schooling/literacy background
3. **Background factors that impact effective accommodations use**
   - Grade/age
   - Affective filter (i.e., level of student anxiety/comfort with English)
   - Time in U.S. schools

Additional considerations for selecting accommodations include:

1. Level of English language proficiency (ELP) on state ELP test.
   Determine the student's Composite ELP Level based on the overall performance level on the state's ELP test (Table 8), and select appropriate English learner accessibility features and/or accommodations for each content area assessment that is most likely to benefit students at that ELP level.[31]

Table 8: Composite ELP Levels Linked with Commonly-Used State English Proficiency Assessments[32]

WIDA *ACCESS for ELLs*® English Language Proficiency (ELP) Levels		Proficiency Levels on individual State's English proficiency tests (approximate)	Composite ELP Level (Acosta et al., 2008)
Level 1	Entering	Level 1	Beginning
Level 2	Emerging	Level 2	
Level 3	Developing	Level 3	Intermediate
Level 4	Expanding	Level 4	
Level 5	Bridging	Level 5	Advanced
Level 6	Reaching	Level 6	

Guidelines for Matching Accommodations to a Student's Overall ELP Level

English learners with Beginning ELP
English learners at the Beginning level have very limited proficiency in reading and writing. These students tend to experience the greatest need for accommodations but are often least equipped to use them. In general, the use of oral supports (in English) is recommended, rather than written accommodations, but even oral accommodations may not produce an effect for students at the lowest proficiency levels.

English learners with Intermediate ELP
English learners at the Intermediate level typically have developed some literacy in English and can benefit from a wider range of written and oral accommodations. Decision makers should note that the need for accommodations at this level varies considerably depending upon the unique background and characteristics of the student, as well as the literacy demands of the test. Research suggests that native language accommodations, such as bilingual word-to-word dictionaries, as well as English-language accommodations, are useful at the Intermediate level. Where possible, and as needed, it may be beneficial to have the text on the mathematics assessments read aloud to these students. Scribing responses may also be appropriate for these students.

English learners with Advanced ELP
English learners at the Advanced level would be expected to have a decreased need for most accommodations. Native language support such as bilingual word-to-word dictionaries (and extra time to use them) may be helpful if the English learner is literate in his/her native language and has received recent instruction in that language (whether in the United States or abroad).

[31] The considerations for determining level of English language proficiency may be modified as states move toward adoption of a common English learner definition in the future.
[32] Many States use WIDA *ACCESS for ELLs*® and *ELDA* ELP assessments to determine English language proficiency.

2. **Literacy development in English and/or the native language**
   Factors that influence the selection of accommodations include the following:
   - **Native Language Literacy**
     For students with literacy in their native language, consider providing the student with a word-to-word bilingual dictionary, along with extended time in which to use it.
   - **Interrupted Schooling/Literacy Background**
     For students who have experienced interrupted formal education and, as a result, have comparatively low levels of literacy in both their native language and in English, it is likely that the English learner will be more orally-dominant in his/her developing English language proficiency. In this case, consider providing the English learner with oral language support accessibility features and/or accommodations that are more likely to benefit English learners at the Beginning ELP, such as verbatim reading of the mathematics assessment.

3. **Background factors that impact effective accommodations use**
   Selecting accessibility features and/or accommodations based on the background of the student increases the likelihood that use of the accessibility feature and/or accommodation will be successful. Such factors include: grade/age of student, time in U.S. schools, and the affective needs of the student (i.e., comfort level and/or anxiety with English). In addition, the following may also impact a student's ability to use and benefit from English learner accommodations:
   - Students who have recently arrived in the U.S. will need to gain familiarity with U.S. testing practices and expectations.
   - Anxiety can increase the student's "affective filter" and adversely impact test performance.
   - Older students may refuse an accessibility feature and/or accommodation because they do not want to draw attention to themselves in front of classmates for receiving special attention or consideration.

Eligibility for English Learner Accommodations

Only students currently classified as English learners (or EL, LEP) are eligible to receive accommodations designated for English learners on PARCC assessments, including students classified as English learners whose parent/guardian has refused language support program services. Refer to Section 3 for accommodations that are allowable on PARCC assessments for English learners.

Selecting Accessibility Features and/or Accommodations for English Learners with Disabilities

English learners with disabilities are eligible for accessibility features and/or accommodations allowed for English learners, as well as accessibility features and/or accommodations allowed for students with disabilities. The IEP team or 504 plan coordinator should collaborate with school English learner (i.e., language) staff and evaluation professionals to determine the English language development needs of an English learner with an identified disability.

Making assessment accessibility features and accommodations decisions in isolation can result in providing inappropriate access to the student. Therefore, an English learner staff familiar with the student should be a member of, or collaborate with, the IEP team or 504 plan coordinator in order to:

- Determine the appropriate accommodation(s) that address both the student's linguistic needs and disability;
- Discuss the effective implementation of the accommodations; and
- Determine the effectiveness of such accommodations.

Step 4: Administer Accessibility Features and Accommodations during Assessments

Planning to Administer Accessibility Features and Accommodations during PARCC Assessments
Once decisions have been made about which accessibility features and accommodations will be provided, the logistics of providing the accessibility features and accommodations during PARCC assessments must be coordinated well ahead of the test administration. It is important to engage the appropriate personnel in planning the logistics regarding the provision of assessment accessibility features and accommodations on test day. Student SR/PNP information should be compiled with the names of students, the accessibility features and/or accommodations they require, test locations, and staff responsible for administering tests with accessibility features and accommodations. Special educators and English language educators are often given the responsibility for arranging, coordinating, and providing assessment accessibility features and/or accommodations in a school and to assist general educators in understanding how to properly provide specific accessibility features and/or accommodations. It is essential for test administrators to know and understand the requirements for providing accessibility features and/or accommodations on PARCC assessments. Staff must adhere to specific guidelines for correctly administering accessibility features and accommodations to the correct students so that scores are valid. Test administrators should also anticipate whether a student will be allowed extra time to complete the test once the official testing time is ended.

For the computer-based PARCC assessments, school or district staff will need to enter data into a student's SR/PNP in advance of testing to enable all necessary accessibility features and accommodations and ensure they are provided on test day. Finally, it is important to monitor the provision of accessibility features and accommodations on test day to ensure that they are delivered properly and that the technology is operating appropriately.

Involving Students in Using Accommodations
The more students are involved in the accommodation selection process, the more likely the accommodations will be used, especially as students reach adolescence and the desire to be more independent increases. Students need self-advocacy skills to learn how to make certain those accommodations are provided on the assessments, in instructional settings, and outside of school. Teachers and other team members can play a key role in working with students to advocate for themselves in the context of using their accommodations.

Introducing Students to Accessibility Features and Accommodations
Whether a student has a specific accessibility need, a disability, is an English learner, or all of the above, accessibility features and accommodations should be introduced to students long before the PARCC assessments are administered, during routine instruction to determine their effectiveness. Typically, accessibility features and accommodations should never be used for the first time on an assessment.

It is highly recommended that students who need accessibility features and accommodations on the PARCC assessments be provided time to interact with the accessibility features and/or accommodations on the available practice assessments. Allowing this practice time will help the student learn to use the accessibility features and/or accommodation in a new environment and can help determine if the available accessibility features and/or accommodation is effective for the student.

Monitoring Accommodations Use by PARCC States

Most PARCC states currently collect information on which accommodations were used on state assessments by individual students. As described in Section 2, PARCC states will capture their own data via the SR/PNP File Layout. However, PARCC states differ as to how accessibility features and accommodations monitoring occurs. In some PARCC states, representatives may visit schools to monitor assessment procedures and observe the use of accommodations to ensure they are implemented appropriately. In other states, districts require their own trained staff to observe and report on accommodations provided during instruction and assessment. In still other states, test administration and accommodations discrepancies are reported to the state and result in the investigation of the irregularities.

Step 5: Evaluate and Improve Accessibility Features and Accommodations Use

It will be necessary to collect and analyze data on the use and effectiveness of accessibility features and accommodations to ensure that the participation of all students in assessments is meaningful, and to carefully document decisions and information on the selection, use, and evaluation of accessibility features and accommodations. Data on the use and impact of accessibility features accommodations during assessments may support continuing to use some while rethinking others, and may also reveal patterns of accommodation use in a school or district. Examination of the data may also indicate areas in which the IEP teams, 504 plan coordinators, and English learner educators and/or test administrators need additional training and support.

Observations conducted during test administration, interviews with test administrators, and talking with students after testing is likely to yield data that can be useful in guiding the formative evaluation process of accessibility features and accommodations use at the school, district, and student levels. Information on the use of accessibility features and accommodations is collected through the SR/PNP along with other demographic information in each PARCC member state. The following questions should guide the analysis of accessibility features and accommodations data at the school, district, and student level.

Questions to Guide Evaluation of Accessibility Features and Accommodation Use at the School and District Levels

1. Are procedures in place to ensure that test administration procedures are not compromised due to provision of accessibility features and accommodations?
2. Are students receiving accessibility features and accommodations as documented in their IEP, 504 plan, English learner plan (if applicable), or other documentation used for English learners?
3. Are procedures in place to ensure that test administrators comply with directions for the administration of accessibility features and accommodations?
4. What is the frequency of use of different types of accessibility features and accommodations?

Questions to Guide Evaluation at the Student Level

1. What accessibility features and accommodations are used by the student during instruction and assessments?
2. What are the results of classroom assignments and assessments when accessibility features and accommodations are used versus when accessibility features and accommodations are not used?
3. If the student is not meeting the expected levels of performance, is it because he or she is not receiving access to the necessary instruction; did not receive the accessibility feature and/or accommodation; or is using an accessibility feature and/or accommodation that was not effective?

4. What is the student's perception of how well the accessibility feature and/or accommodation worked?
5. What combination of accessibility features and/or accommodations seems to be effective?
6. What are the perceptions of teachers, parents, and others about how the accessibility feature and/or accommodation appears to be working?
7. What difficulties, if any, were encountered in the use of the accessibility feature(s) and/or accommodation(s)?

The responses to these questions can guide an ongoing (formative) process to evaluate the use and effectiveness of accessibility features and accommodations used by students. It is critical that, to the extent possible, all individuals involved in selection and delivery be involved in gathering information and making subsequent decisions on whether to continue, modify, or discontinue the use of an accessibility feature and/or accommodation.

Gathering information on selected accessibility features accommodations use on technology-based assessments will be accomplished largely through the collection of information on each student's SR/PNP. However, educators and teams at the local level may have additional questions they want researched based on the collection of this data, which will assist in applying district- and school-based resources effectively in the future.

Appendix A: Accessibility Features and Accommodations for Students Taking the Paper-Based PARCC Assessments

Students who may participate in a Paper-Based PARCC Assessment

Although PARCC assessments are computer-based using an online testing platform, there may be specific instances which require a student to take a paper-based assessment instead. The following conditions may result in a school choosing to administer a paper-based assessment:

- Condition #1: A student is unable to use a computer due to the impact of his or her disability. The student's inability to participate in computer-based assessments should be documented in an Individualized Education Program (IEP) or 504 plan.
    - Examples may include:
        - A student with a disability who cannot participate in the online assessment due to a health-related disability, neurological disorder, or other complex disability, and/or cannot meet the demands of a computer-based test administration;
        - A student with an emotional, behavioral, or other disability who is unable to maintain sufficient concentration to participate in a computer-based test administration, even with test accommodations;
        - A student with a disability who requires assistive technology that is not compatible with the testing platform.
- Condition #2: A student who recently entered the school and has had very little or no prior experience or familiarity with technology.
- Condition #3: The school is providing paper-based assessments for its students as the primary mode of administration.
- Condition #4: A student who is unable to access an online assessment due to religious beliefs.

Refer to the *PARCC Accessibility Features and Accommodations Manual* for additional information concerning test administration considerations, accessibility features, and accommodations.

Table A1: Accessibility Features for All Students Taking Paper-Based Assessments
Table A1 includes Features for All Students & Accessibility Features Identified in Advance.

CBT Comparable Accessibility Feature		PBT Accessibility Feature	PBT Administration Guidelines
1a	**Answer Masking** *(SR/PNP[33])*	**External Masking Cards (Visual Aids/Organizers)**	**Before Testing:** • Materials: Test administrator provides student with blank masking cards. **During Testing:** The student may cover or uncover answer options with external blank masking cards as needed.

[33] Student Registration/Personal Needs Profile (SR/PNP)

CBT Comparable Accessibility Feature		PBT Accessibility Feature	PBT Administration Guidelines
1b	**Audio Amplification**	**Auditory Aids**	**Before Testing:** The student brings familiar auditory aid assistive technology to the test administration. If needed, test administrator tests technology during an "Infrastructure Trial." **During Testing:** The student uses amplification device assistive technology (e.g. FM System), noise buffers, or white noise machines (provided by the school or student).
1c	**Bookmark**	**Place Markers (Visual Aids/Organizers)**	**Before Testing:** • Materials: Test administrator provides student with place markers. **During Testing:** The student uses non-sticky place markers to "bookmark" items to review later. All place markers must be removed before test booklet or answer document is submitted for scoring.
1d	**Color Contrast (Background/Font Color)** *(SR/PNP)*	**Colored Overlays**	**Before Testing:** • Identification for SR/PNP: Test administrator provides student with colored overlays. **During Testing:** The student uses colored overlays when taking the assessment. The color is pre-selected and should match what is currently used during instruction
1e	**Blank Scratch Paper** *(provided by test administrator)*	**Same as CBT**	**Before Testing:** Test Administrators must supply at least one page of blank scratch paper (i.e., either unlined, lined, or graph) per student, per unit. If graph paper is used during mathematics instruction, it is recommended that schools provide graph paper as scratch paper for mathematics units. Students with visual impairments may also use braille paper, raised line paper, bold line paper, raised line graph paper, bold line graph paper, abacus, or Math Window. **During Testing:** The student uses blank scratch paper (lined, un-lined, or graph) to take notes and/or work through items during testing. Additional pages may be provided as needed. **After Testing:** Test administrators are responsible for collecting **all** scratch paper after testing is completed to be securely destroyed. Scratch paper must be securely shredded if it has been used. Schools may reuse unused scratch paper only if paper is completely blank.
1f	**Eliminate Answer Choices**	**Writing Instrument**	**During Testing:** The student may use removable markers (e.g. small strips of paper) to indicate that they are eliminating an answer. Placing any stray marks in the answer area may conflict with accurate scoring.

CBT Comparable Accessibility Feature		PBT Accessibility Feature	PBT Administration Guidelines
			After Testing: The test administrator ensures no small strips of paper are still in the booklets.
1g	**General Administration Directions Read Aloud and Repeated as Needed** *(by test administrator)*	**Same as CBT**	**During Testing:** The test administrator reads aloud the general administration directions only. A student may raise his or her hand and request the directions be repeated.
1h	**General Administration Directions Clarified** *(by test administrator)*	**Same as CBT**	**During Testing:** The test administrator clarifies general administration directions only. No passages or test items may be clarified.
1i	**General Masking** *(SR/PNP)*	**External Masking Cards** *(Visual Aids/Organizers)*	**Before Testing:** • Materials: Test administrator provides student with blank masking cards. **During Testing:** The student may cover or uncover answer options with external blank masking cards as needed.
1j	**Highlight Tool**	**Highlighter**	**Before Testing:** • Materials: Test administrator provides student with highlighter(s). Multiple colors may be provided. **During Testing:** The student highlights text as needed to recall and/or emphasize. Multiple colors may be provided.
1k	**Headphones or Noise Buffers**	**Same as CBT**	**Before Testing:** • Materials: Test administrator provides student with headphones. **During Testing:** The student uses headphones or noise buffers to minimize distraction or filter external noise during testing. If headphones are used only as noise buffers, they should not be plugged into the student's device.
1l	**Line Reader Tool**	**Straight Edge** *(Visual Aids/Organizers)*	**Before Testing:** • Materials: Test administrator provides student with blank straight edge. **During Testing:** The student uses a blank straight edge as he or she reads and follows along with the text.

CBT Comparable Accessibility Feature		PBT Accessibility Feature	PBT Administration Guidelines
1m	**Magnification/ Enlargement Device**	**Magnification/ Enlargement Device**	**Before Testing:** • Materials: Test administrator provides student with magnification/enlargement device. **During Testing:** • The student uses external magnification or enlargement devices to increase the font or graphic size (e.g., projector, CCTV, eye-glass mounted or hand-held magnifiers, electronic magnification systems, etc.).
1n	**Note Pad**	**Blank Scratch Paper**	***See Blank Scratch Paper***
1o	**Pop-up Glossary**	**Glossary in Footnotes**	**During Testing:** The student refers to a glossary of pre-selected, construct-irrelevant words in the footnotes of the paper-based test.
1p	**Redirect Student to the Test (by test administrator)**	**Same as CBT**	**During Testing:** The test administrator redirects the student's attention to the test without coaching or assisting the student in any way. There is no limit to the number of times a test administrator can redirect a student back to the test. Examples: Providing reminders to stay on task and focused during the assessments; Providing a visual cue to the student to remain on task.
1q	**Spell Check or External Spell Check Device**	**External Spell Check Device**	**Before Testing:** • Materials: Test administrator provides student with external spell check device. **During Testing:** The student uses an external spell check device. Device may not have embedded grammar check, connect to the internet, or save information.
1r	**Text-to-Speech for the Mathematics Assessments** *(SR/PNP)*	**Human Reader**	***See Human Reader***

CBT Comparable Accessibility Feature		PBT Accessibility Feature	PBT Administration Guidelines
1s	**Human Reader or Human Signer for the Mathematics Assessments** *(SR/PNP)*	**Same as CBT**	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Human Reader/Human Signer selected. For the human reader/human signer, students must be placed in a Read Aloud session type when creating test sessions. • Test Administrator Training: Test Administrators providing this accessibility feature must review: o Read Aloud Kits at least two school days prior to testing, with kits provided to schools for this purpose. Review of Read Aloud Kits must occur in a secure environment. o Appendix B: Test Administration Protocol for the Human Reader Accommodation for English Language Arts/Literacy Assessments, and the Human Reader Accessibility Feature for Mathematics Assessments. o Appendix L: Human Signer Guidelines (signers only) o Appendix M: PARCC Assessments for Students with Visual Impairment, Including Blindness **During Testing:** A test administrator reads aloud to a student (human reader or human signer). The student must be tested in an individual or small group setting. Small groups should only be used if all students are able to work at approximately the same pace. The number of students in a small group is determined at the state level.
1t	**Writing Tools**	**Writing Instrument**	**During Testing:** The student uses a writing instrument on written responses to underline, bold, or add bullets for formatting.

Administrative Considerations for All Students
Detailed guidelines on the administration of the PARCC assessments will be included in the *Test Administrator Manuals* and the *Test Coordinator Manuals.*

Although students are generally tested in their regular classroom and follow the standard test administration schedule for the grade and content area being assessed, the principal has the authority to schedule students in testing spaces other than regular classrooms, and at different scheduled times, as long as all requirements for testing conditions and test security are met as set forth in the *Test Administrator Manuals and Test Coordinator Manuals*. Decisions may be considered, for example, that benefit students who are easily distracted in large group settings by testing them in a small group or individual setting. In general, changes to the timing, setting, or conditions of testing are left to the discretion of the principal or test coordinator.

In accordance with principles of universal design for assessment, PARCC is providing the following administrative guidance regarding the timing and scheduling of assessments, and setting/locations for testing. These administrative considerations are available to all students. The principal may determine that any student can receive one or more of the following test administration considerations, regardless of the student's status as a student with a disability or English learner.

Table A2: Administrative Considerations for All Students Taking Paper-Based Assessments, at School's Discretion

PBT Administrative Consideration		Description
2a	**Small Group Testing**	Student is tested in a separate location with a small group of students with matching accessibility features, accommodations, or testing needs as appropriate. Check individual state policies on the maximum number of students allowed in a small testing group.
2b	**Time of Day**	Student is tested during a specific time of day based on their individual needs (e.g., ELA/literacy in the morning; no testing after lunch).
2c	**Separate or Alternate Location**	Student is tested in a location other than their originally scheduled testing classroom.
2d	**Specified area or seating**	Student is tested in a specialized area or setting (e.g., front of the classroom, seat near the door, library, etc.).
2e	**Adaptive and specialized equipment or furniture**	Student is provided specialized equipment or furniture needed for a successful testing environment (e.g., low lighting; adaptive seat).
2f	**Frequent breaks**	Guidance on logistics for administrating the PARCC assessments with frequent breaks: • *Medical Breaks*: Student takes a break due to existence or sudden onset of a temporary or long-term medical condition. Student's testing time stops during a medical break. • *Individual Bathroom Breaks*: Student requests a bathroom break within their overall allotted testing time. Student's testing time does not stop. • *In-Chair Stretch Break:* Student pauses and stretches. Student's testing time does not stop. • *Other Frequent Breaks,* according to state policy.

Table A3: Presentation Accommodations for Students with Disabilities Taking Paper-Based Assessments

CBT Comparable Accommodation		PBT Accommodation	PBT Administration Guidelines
3a	**Assistive Technology** *(Non-Screen Reader)*	**Assistive Technology** *(external)*	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have assistive technology selected. • Testing: Assistive technology should be tested during an "Infrastructure Trial" to assess its compatibility with the testing platform. Note that PARCC assessments are designed to be Web Content Accessibility Guidelines (WCAG) compliant. For information on how to test assistive technology devices and software for use on the PARCC assessments with the TestNav 8 platform via an "Infrastructure Trial," refer to the Assistive Technology Guidelines available at: www.parcconline.org/parcc-accessibility-features-and-accommodations-manual. **During Testing:** Students may use a range of assistive technologies on the PARCC assessments, including those that are used externally on a separate computer. **After Testing:** Test administrators are responsible for collecting all non-scorable student work created from assistive technology devices. Content must be cleared off all devices. Paper non-scorable student work must be securely shredded.
3b	**Screen Reader Version** *(for a student who is blind or visually impaired)*	**Hard Copy Braille Edition**	***See Hard Copy Braille Edition***
3c	**Student Reads Assessment Aloud to Him- or Herself**	**Same as CBT**	**During Testing:** The student reads aloud the assessment to themselves. Students may use an external device such as a whisper phone. The student must be tested in a separate setting.
3d	**Refreshable Braille Display with Screen Reader Version for ELA/Literacy**	**Hard Copy Braille Edition**	***See Hard Copy Braille Edition***

CBT Comparable Accommodation		PBT Accommodation	PBT Administration Guidelines
3e	**Hard Copy Braille Edition**	**Hard Copy Braille Edition**	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Hard Copy Braille Edition selected. • Materials: Braille Kits are required for administration. Braille Kits include Test Administrator Braille Scripts, one copy of the student's Hard Copy Braille Assessment, standard test booklet or answer document for transcription, and supplementary math materials (braille ruler, braille protractor) where appropriate. • Test Administrator Training: Test administrators of students with visual impairments must review: o Braille Kits, which will be provided to schools at least two full school days prior to testing in a ***secure environment*** for test administrator review[34] o Appendix M: PARCC Assessments for Students with Visual Impairment, Including Blindness o Braille test booklets or answer documents may be disassembled for testing (but must be reassembled for return). It is critical that test administrators check the number of pages in the test booklet or answer document prior to disassembling the test booklets or answer documents to help ensure that all pages are returned. **During Testing:** A student who is blind or has a visual impairment and is unable to take the computer-based test with a refreshable braille display may take the ELA/literacy and mathematics assessments using the hard-copy contracted braille edition. Tactile graphics are already embedded in the hard copy braille edition. For students using braille forms, the test administrator directions for filling in a circle, making marks, and erasing do not apply. Students should number their responses to be sure that their answers can be transcribed accurately into a scorable test booklet or answer document. **After Testing:** • Responses must be transcribed verbatim by a test administrator in a standard student test booklet or answer document, which is included in the braille test kit. Only transcribed responses will be scored.

[34] Refer to your state policy on the official number of days schools can review secure test materials.

CBT Comparable Accommodation		PBT Accommodation	PBT Administration Guidelines
			• Refer to Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses for protocol. • Test administrators are responsible for collecting all non-scorable student work created from assistive technology devices. Content must be cleared off all devices. Non-scorable student work must be securely shredded. • If the braille test booklet or answer document was disassembled, it must be reassembled for return. To reassemble test booklets or answer documents, the test administrator may staple or binder clip all pages for return. Failure to return all pages will be considered a breach of security.
3f	**Tactile Graphics**	**Tactile Graphics**	**Before Testing:** Refer to Table 3c "Refreshable Braille Display with Screen Reader Version for ELA/Literacy" for details. **During Testing:** A student who is blind or has a visual impairment who uses a screen reader or refreshable braille will also need a tactile graphics booklet, consisting only of the graphics portion of test questions, and visual descriptions of pictures and multimedia, where applicable. Tactile graphics will also be embedded in the hard copy braille edition assessments, when needed.

3g	**Large Print Edition**[35]	**Large Print Edition**	**Before Testing:**
			• Identification for SR/PNP: Student's SR/PNP must have Large Print Edition selected.
			• Materials: Large print test kit includes a large print assessment booklet, standard test booklet or answer document for transcription, and supplementary large print mathematics materials (large print ruler & protractor), when appropriate.
			
			• Test Administrator Training: Test administrators of students with visual impairments must review:
			  o Appendix M: PARCC Assessments for Students with Visual Impairment, Including Blindness
			  o Appendix A: Accessibility Features and Accommodations for Students Taking the Paper-Based PARCC Assessments

[35] Distribution quantities for any paper based accommodations and accessibility feature are derived from the student registration process. Any materials required for paper-based accommodations and accessibility features for students registered after the deadline for paper registration must be ordered via Additional Orders.

CBT Comparable Accommodation		PBT Accommodation	PBT Administration Guidelines
			During Testing: A large print paper-based form of each assessment is available for a student with a visual impairment who is unable to take a computer-based assessment. The font size for the PARCC large print edition will be 18 point on paper sized 11 x 17. Students will not record their answers in standard print test booklets or answer documents. Instead, students will circle their answers in a large print test booklet. For constructed response items, students will write their answers on the lines provided in their large print test booklets. In mathematics, students will need to write their answers in boxes at the top of the Answer Grids, but they do not need to bubble in their answers. Test administrators should refer to the TAM Scripts for instances where they should demonstrate an activity or display information. Demonstrations should be conducted where they are visible for each student (e.g., on the board, near the student). **After Testing:** • Responses must be transcribed verbatim by a test administrator in a standard student test booklet or answer document, which is included in the Large Print test kit. Only transcribed responses will be scored. At least two persons must be present during transcription of student responses (one transcriber and one observer confirming accuracy). It is recommended that one of the individuals be an LEA or School Test Coordinator. • Refer to Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses.
3h	**Paper-Based Edition**	**Paper-Based Edition**	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Paper-Based Edition selected. • Materials: Paper-Based Edition of the assessment • Test Administrator Training: Test administrators must review the following appendix for accessibility features and accommodations in a paper-based environment: o Appendix A: Accessibility Features and Accommodations for Students Taking the Paper-Based PARCC Assessments **During Testing:** For schools administering the computer-based assessments, a paper-based assessment is available for students who are unable to take a computer-based assessment due to a disability.

CBT Comparable Accommodation		PBT Accommodation	PBT Administration Guidelines
3i	**Closed-Captioning of Multimedia on the ELA/Literacy Assessments**	**N/A**	**N/A**
3j 3k 3l	**ELA/Literacy Assessments, including items, response options, and passages**[36] • **Text-to-Speech** • **ASL Video** • **Human Reader/ Human Signer**[37]	**ELA/Literacy Assessments, including items, response options, and passages** • **Human Reader/Human Signer**	**Before Testing:** • Purpose: The purpose of the human reader/human signer accommodation for the PARCC ELA/literacy assessment is to provide access to printed or written texts on the PARCC ELA/literacy assessments for a very small number of students with print-related disabilities who would otherwise be unable to participate in the assessment because their disability *severely limits or prevents* their ability to access printed text by decoding. This accommodation is not intended for students reading somewhat (i.e., only moderately) below grade level. • Identification for SR/PNP: Student's SR/PNP must have Human Reader/Human Signer selected. For the human reader/human signer, students must be placed in a Read Aloud session type when creating test sessions. • Tools for Identification: IEP Teams/504 Plan Coordinators should use the decision-making tool available in Appendix D: Text-to-Speech, ASL Video, or Human Reader/Human Signer Guidance for English Language Arts/Literacy Assessments to inform their decision-making. • Test Administrator Training: Test Administrators providing this accommodation must review: o Read Aloud Kits at least two school days prior to testing, with kits provided to schools for this purpose. Review of Read Aloud Kits must occur in a ***secure environment***. o Appendix B: Test Administration Protocol for the Human Reader Accommodation for English Language Arts/Literacy Assessments, and the Human Reader Accessibility Feature for Mathematics Assessments.

[36] Note: There may be unintended consequences related to the use of this accommodation for some students. Review the adjacent Administration Guidelines carefully. PARCC will conduct additional research to provide PARCC states with data to substantiate the need for providing this level of access to a small number of students.

[37] Distribution quantities for any paper based accommodations and accessibility feature are derived from the student registration process. Any materials required for paper-based accommodations and accessibility features for students registered after the deadline for paper registration must be ordered via Additional Orders.

CBT Comparable Accommodation		PBT Accommodation	PBT Administration Guidelines
			o Appendix L: Human Signer Guidelines (signers only) o Appendix M: PARCC Assessments for Students with Visual Impairment, Including Blindness. **During Testing:** A student receives an audio representation of the ELA/literacy assessment either through a human reader/signer. Note: The student that has a human reader or signer, the student must be tested in a separate setting. **Important Guidelines on identifying students for these accommodations:** IEP teams and 504 plan coordinators should carefully review the following guidelines before identifying students to receive these accommodations on the ELA/literacy assessments. In making decisions on whether to provide a student with this accommodation, IEP teams and 504 plan coordinators should consider whether the student has: • Blindness or a visual impairment and has not learned (or is unable to use) braille; OR • A disability that severely limits or prevents him/her from accessing printed text, even after varied and repeated attempts to teach the student to do so (e.g., student is unable to decode printed text); OR • Deafness or a hearing impairment and is severely limited or prevented from decoding text due to a documented history of early and prolonged language deprivation. Before listing the accommodation in the student's IEP or 504 plan, teams/coordinators should consider whether: • The student has access to printed text during routine instruction through a reader, other spoken-text audio format, or signer; • The student's inability to decode printed text or read braille is documented in evaluation summaries from locally-administered diagnostic assessments; and

CBT Comparable Accommodation		PBT Accommodation	PBT Administration Guidelines
			• The student receives ongoing, intensive instruction and/or interventions in the foundational reading skills to continue to attain the important college and career-ready skill of independent reading. Decisions about who receives this accommodation will be made by IEP teams and 504 plan coordinators. For a student who receives one of these accommodations, no claims should be inferred regarding the student's ability to demonstrate foundational reading skills (i.e., decoding and fluency). PARCC will collect data on the frequency of their use for the purpose of carefully monitoring and determining appropriate decision-making.
3m	**ASL Video for the Mathematics Assessments**	**Human Signer for Mathematics**	***See Human Signer for Mathematics (1T)***
3n	**Human Signer for Test Directions** *(No ASL Video Option)*	**Same as CBT**	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Human Signer for Test Directions selected. • Test Administrator Training: Human Signers must review: o Test Administrator Scripts included in the *Test Administration Manuals.* o Appendix L: Human Signer Guidelines (signer only) **During Testing:** A human signer will sign the test directions to a student. The student may either be tested in a small group or a separate setting based on the student's experiences during classroom assessments.

Table A4: Response Accommodations for Students with Disabilities Taking Paper-Based Assessments

CBT Comparable Accommodation		PBT Accommodation	PBT Administration Guidelines
4a	**Assistive Technology** *(Non-Screen Reader)*	**Assistive Technology** *(external)*	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have assistive technology selected. • Testing: Assistive technology should be tested during an "Infrastructure Trial" to assess its compatibility with the testing platform. Note that PARCC assessments are designed to be Web Content Accessibility Guidelines (WCAG) compliant. For information on how to test assistive technology devices and software for use on the PARCC assessments with the TestNav 8 platform via an "Infrastructure Trial," refer to the Assistive Technology Guidelines available at: www.parcconline.org/parcc-accessibility-features-and-accommodations-manual. **During Testing:** Students may use a range of assistive technologies on the PARCC assessments, including those that are used externally on a separate computer. **After Testing:** Test administrators are responsible for collecting all non-scorable student work created from assistive technology devices. Content must be cleared off all devices. Paper non-scorable student work must be securely shredded.

CBT Comparable Accommodation		PBT Accommodation	PBT Administration Guidelines
4b	**Braille Note-taker**	**Braille Note-taker**	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have braille note-taker selected. **During Testing:** A student who is blind or has a visual impairment may use an electronic braille note-taker. The grammar checker, internet, and stored file functionalities must be turned off. For students using braille forms, test administrator directions for filling in a circle, making marks, and erasing do not apply. Students should number their responses to be sure that their answers can be transcribed accurately into a scorable test booklet or answer document. **After Testing:** • Student responses generated using an electronic braille note-taker must be transcribed verbatim by a test administrator into the student's standard student booklet. Only transcribed responses will be scored. Responses must be transcribed by a teacher of the visually impaired or a Test Administrator supervised by a teacher of the visually impaired. • Refer to Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses. • Test administrators are responsible for collecting all non-scorable student work created using assistive technology devices. Test-related content must be deleted from all devices. Non-scorable student work must be securely shredded.
4c	**Braille Writer**	**Braille Writer**	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have braille writer selected. **During Testing:** A student who is blind or has a visual impairment may use a braille writer. For PARCC assessments, grammar checker, internet, and stored file functionalities must be turned off. For students using braille forms, test administrator directions for filling in a circle, making marks, and erasing do not apply. Students should number their responses to be sure that their answers can be transcribed accurately into a scorable test booklet or answer document. **After Testing:** • Student responses generated using an electronic braille note-taker must be transcribed verbatim by a test administrator into the student's standard

CBT Comparable Accommodation		PBT Accommodation	PBT Administration Guidelines
			test booklet or answer document. Only transcribed responses will be scored. Responses must be transcribed either by a teacher of the visually impaired or a Test Administrator supervised by a teacher of the visually impaired. • Refer to Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses. • Test administrators are responsible for collecting all non-scorable student work created using assistive technology devices. Test-related content must be deleted from all devices. Non-scorable student work must be securely shredded.
4d	**Calculation Device** *(on Calculator Sections of Mathematics Assessments)*	**Calculation Device** *(on Calculator Sections of Mathematics Assessments)*	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Calculation Device on Calculator Sections selected. • Materials: o Specific calculation devices must match the final PARCC Calculator Policy. Allowable calculators include: ▪ Grades 3-5: No calculators allowed ▪ Grades 6-7: Four-function with square root and percentage functions ▪ Grade 8: Scientific calculators ▪ High School: Graphing calculators (with functionalities consistent with TI-84 or similar models) **During Testing:** A student uses a specific calculation device (e.g., large key, talking, or other adapted calculator) other than the embedded grade-level calculator on the **calculator section** of the mathematics assessments. If a talking calculator is used, the student must use headphones or be tested in a separate setting. A student with a visual impairment may need other mathematics tools, such as a large print ruler (embedded PARCC ruler is designed in 18 point font), braille ruler, tactile compass, or braille protractor. Note that braille mathematics kits will include the appropriate grade-level braille ruler and braille protractors.

CBT Comparable Accommodation		PBT Accommodation	PBT Administration Guidelines
4e	**Calculation Device and Mathematics Tools** *(on Non-Calculator Sections of Mathematics Assessments)*	**Calculation Device and Mathematics Tools** *(on Non-Calculator Sections of Mathematics Assessments)*	**Before Testing:** • Purpose: The purpose of the calculation device on the non-calculator sections accommodation is to provide access for students with a disability that *severely limits or prevents* their ability to perform basic calculations (i.e., student is unable to perform single-digit addition, subtraction, multiplication, or division). Specific guidelines for determining if this accommodation would appropriate for a specific student, see the next page. For these students, a calculation device may be used on the non-calculator mathematics assessment sections (i.e., the device or tool would be permitted on test sections for which calculators are not allowed for other students). The IEP or 504 plan must specify which device(s) or manipulatives. • Identification for SR/PNP: Student's SR/PNP must have Calculation Device and Mathematics Tools on Non-Calculator Sections selected. Any mathematical tools not included on the list may require state assessment office approval, depending on state policies. Check with your district/state contact if you have questions. • Materials: o Allowable calculators for the calculator accommodation on non-calculator sections: ▪ Grades 3-5: Four-function with square root and percentage functions ▪ Grade 6-7: Four-function with square root and percentage (Student may also bring a four-function with square root and percentage functions in addition to a grade-level calculator.) ▪ High School: Graphing calculators with functionalities consistent with TI-84 or similar models (Student may also bring a scientific calculator or a four-function with square root and percentage functions.) o Allowable mathematics tools include: ▪ Arithmetic tables (e.g., addition charts, subtraction charts, multiplication charts; division charts)

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CBT Comparable Accommodation		PBT Accommodation	PBT Administration Guidelines
			▪ Two-color chips (e.g., single-sided or double-sided) ▪ Counters and counting chips ▪ Abacus ▪ Square tiles ▪ Base 10 blocks ▪ 100s chart **During Testing:** A student uses a calculation device (e.g., four-function calculator, large key, or other adapted calculator), arithmetic table (including addition/ **subtraction** and/or multiplication/division charts), and/or manipulatives (IEP or 504 plan must specify which device or manipulative) on the **non-calculator sections** of the mathematics assessments. If a talking calculator is used, the student must use headphones or be tested in a separate setting. **Important Guidelines for identifying students to receive this accommodation:** IEP teams and 504 plan coordinators should carefully review the following guidelines before identifying students to receive this accommodation. In making decisions whether to provide the student with this accommodation, IEP teams and 504 plan coordinators should consider whether the student has: • A disability that severely limits or prevents the student's ability to perform basic calculations (i.e., single-digit addition, subtraction, multiplication, or division), even after varied and repeated attempts to teach the student to do so. Before listing the accommodation in the student's IEP/504 plan, teams should also consider whether: • The student is unable to perform calculations without the use of a calculation device, arithmetic table, or manipulative during routine instruction. • The student's inability to perform mathematical calculations is documented in evaluation summaries from locally-administered diagnostic assessments. • The student receives ongoing, intensive instruction and/or interventions to learn to calculate without using a calculation device, in order to ensure that the student continues to learn basic calculation and fluency.

CBT Comparable Accommodation		PBT Accommodation	PBT Administration Guidelines
			For a student who receives this accommodation, no claims should be inferred regarding the student's ability to perform basic mathematical calculations without the use of a calculator.
4f 4g 4h 4i	**ELA/Literacy Selected Response Options**[38] • **Speech-to-Text** • **Human Scribe** • **Human Signer** • **External Assistive Technology Device**	**ELA/ Literacy Selected Response Options**[38] • **Speech-to-Text** • **Human Scribe** • **Human Signer** • **External Assistive Technology Device**	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Speech-to-Text, Human Scribe, Human Signer, or External Assistive Technology Device selected. • Materials: External device provided by the student, if needed. If the student uses speech-to-text software, such as Dragon Naturally Speaking, then a separate computer must be provided; one to run the assessment on TestNav and a second computer to run the software. TestNav8 does not contain embedded speech-to-text software. • Test Administrator Training: Test administrators providing the scribe accommodation must review: o Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses o Appendix L: Human Signing Guidelines (signers only)
4j 4k 4l 4m	**Mathematics Response Options** • **Speech-to-Text** • **Human Scribe** • **Human Signer** • **Assistive Technology Device**	**Mathematics Response Options** • **Speech-to-Text** • **Human Scribe** • **Human Signer** • **Assistive Technology Device**	**During Testing:** Student dictates responses either verbally, using an external speech-to-text device, an augmentative/assistive communication device (e.g., picture/word board), or by dictating, signing, gesturing, pointing, or eye-gazing. The student must be tested in a separate setting. The student must be familiar with any assistive technology external device used for test administration. **After Testing:** • Responses must be transcribed exactly as dictated/signed (e.g., the human scribe/signer may not change, embellish, or interpret a student's responses when transcribing) into the student's standard test booklet or answer document. Only transcribed responses will be scored. • Refer to Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses for protocol. • Test administrators are responsible for collecting all paper non-scorable student work created using assistive technology devices. Test-related content

[38] This accommodation applies to Evidence Based Selected Response, and Technology Enhanced Constructed Response items (not Prose Constructed Response items) on the English Language Arts/Literacy assessments.

CBT Comparable Accommodation		PBT Accommodation	PBT Administration Guidelines
			must be deleted from all devices. Non-scorable student work must be securely shredded.
4n 4o 4p 4q	**ELA/Literacy Constructed Response Options**[39] • **Speech-to-Text** • **Human Scribe** • **Human Signer** • **Assistive Technology Device**	**ELA/Literacy Constructed Response Options**[39] • **Speech-to-Text** • **Human Scribe** • **Human Signer** • **Assistive Technology Device**	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Speech-to-Text, Human Scribe, Human Signer, or External Assistive Technology Device selected. • Materials: External device provided by the student, if needed. • Test Administrator Training: Test administrators providing the scribe accommodation must review: o Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses o Appendix L: Human Signing Guidelines (signers only) **During Testing:** Student dictates responses either verbally, using an external speech-to-text device, an augmentative/assistive communication device (e.g., picture/word board), or by dictating, signing, gesturing, pointing, or eye-gazing. The student must be tested in a separate setting. The student must be familiar with any assistive technology external device used for test administration. **After Testing:** • Responses must be transcribed exactly as dictated/signed (e.g., the human scribe/signer may not change, embellish, or interpret a student's responses when transcribing) into the student's standard test booklet or answer document. Only transcribed responses will be scored. • Refer to Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses for protocol. • Test administrators are responsible for collecting all non-scorable student work created using assistive technology devices. Test-related content must be deleted from all devices. Non-scorable student work must be securely shredded. **Important Guidelines for identifying students to receive these accommodations:** IEP teams and 504 plan coordinators should carefully review the following guidelines before identifying a student to receive this accommodation.

[39] This accommodation applies to Prose Constructed Responses on the ELA/Literacy assessments.

CBT Comparable Accommodation		PBT Accommodation	PBT Administration Guidelines
			In making decisions whether to provide the student with this accommodation, IEP teams and 504 plan coordinators should consider whether the student has: • A physical disability that severely limits or prevents the student's motor process of writing through keyboarding; OR • A disability that severely limits or prevents the student from expressing written language, even after varied and repeated attempts to teach the student to do so. Before listing the accommodation in the student's IEP or 504 plan, teams/coordinators should also consider whether: • The student's inability to express in writing is documented in evaluation summaries from locally-administered diagnostic assessments; • The student routinely uses a scribe for written assignments; and • The student receives ongoing, intensive instruction and/or interventions to learn written expression, as deemed appropriate by the IEP team or 504 plan coordinator.

CBT Comparable Accommodation		PBT Accommodation	PBT Administration Guidelines
4r	**Word Prediction External Device**	**Word Prediction External Device**	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Word Prediction selected. • Materials: External Word Prediction Device **During Testing:** The student uses an external word prediction device that provides a bank of frequently- or recently-used words onscreen after the student enters the first few letters of a word. The student must be familiar with the use of the external device prior to assessment administration. The device may not connect to the internet or save information. **Important Guidelines for identifying students to receive this accommodation:** IEP teams and 504 coordinators should carefully review the following guidelines before identifying a student to receive this accommodation. In making decisions whether to provide the student with this accommodation, IEP teams and 504 plan coordinators are instructed to consider whether the student has: • A physical disability that severely limits or prevents the student from writing or keyboarding responses; OR • A disability that severely limits or prevents the student from recalling, processing, and expressing written language, even after varied and repeated attempts to teach the student to do so. Before listing the accommodation in the student's IEP/504 plan, teams/coordinators are instructed to consider whether: • The student's inability to express in writing is documented in evaluation summaries from locally administered diagnostic assessments; • The student routinely uses a word-prediction device or software during classroom writing assignments; and • The student receives ongoing, intensive instruction, and/or intervention in language processing and writing, as deemed appropriate by the IEP team/504 plan coordinator.

Table A5: Timing & Scheduling Accommodation for Students with Disabilities Taking Paper-Based Assessment

CBT Comparable Accommodation		PBT Accommodation	PBT Administration Guidelines
5a	**Extended Time**	**Extended Time**	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have extended time selected. The amount of time a student receives must be indicated in the student's IEP or 504 plan. • Test Administrator Training: Test administrators providing this accommodation must review: o Appendix E: Guidance for Selecting and Administering the Extended Time Accommodation **During Testing:** Students have until the end of the school day to complete a single test unit administered during the prescribed testing window. It is recommended to test students receiving the extended time accommodation in a separate setting to minimize distractions to other students, and to schedule these students for testing in the morning to allow adequate time for completion of a test unit by the end of the school day.

Table A6: Guidance on Selection of Accommodations for English Learners on PARCC Assessments[40]

KEY for Table A6:
- ● **Highly recommended** for use by English learners at this ELP level
- ◉ **Recommended** for use by English learners at this ELP level
- ○ **May not be appropriate** for students at this ELP level

Accommodations	Most likely to benefit English learners at this ELP Level		
	Beginning	Intermediate	Advanced
Extended time	●	●	●
Word-to-Word Dictionary (English/Native Language)	○	●	●
Mathematics Response Speech-to-Text **Mathematics Response Human Scribe**	●	◉	○

[40] Differing laws, regulations, and policies exist among PARCC states as to whether they will allow, require, or prohibit translations of state assessments.

Accommodations	Most likely to benefit English learners at this ELP Level		
	Beginning	Intermediate	Advanced
General Administration Directions Read Aloud and Repeated in Student's Native Language (by test administrator)	●	⦿	○
General Administration Directions Clarified as Needed in Student's Native Language (by test administrator)	●	⦿	○
Bilingual Spanish/English Online Mathematics Assessment[27]	●	⦿	○
Side-by-Side Spanish/English Paper-based Mathematics Assessment[27]	●	⦿	○
Side-by-Side Spanish/English Large Print Mathematics Assessment	●	⦿	○
Text-to-Speech for the Mathematics Assessments in Spanish Human Reader for the Mathematics Assessments in Spanish	●	⦿	○

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Table A7 provides a list of ***accommodations*** for English learners. The table describes the activities needed before, during, and after testing necessary to administer these accommodations appropriately.

Table A7: Accommodations for English Learners Taking the Paper-Based Assessments

CBT Comparable Accommodation		PBT Accommodation	PBT Administration Guidelines
7a	**Extended Time**	**Extended Time**	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have extended time selected. The amount of time a student receives must be indicated in the student's IEP or 504 plan. • Test Administrator Training: Test administrators providing this accommodation must review: o Appendix E: Guidance for Selecting and Administering the Extended Time Accommodation **During Testing:** Students have until the end of the school day to complete a single test unit administered during the prescribed testing window. It is recommended to test students receiving the extended time accommodation in a separate setting to minimize distractions to other students, and to schedule these students for testing in the morning to allow adequate time for completion of a test unit by the end of the school day.
7b	**Word-to-Word Dictionary** *(English/Native Language)*	**Word-to-Word Dictionary** *(English/ Native Language)*	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have word-to-word dictionary selected. • Materials: Word-to-word dictionaries are provided to students by their school, based on those used by the student for routine classroom instruction. **During Testing:** The student uses a published bilingual, word-to-word dictionary that does not definitions, phrases, sentences, or pictures. The student should be familiar with the dictionary they will use during testing. Students should be given ample time to complete the test using the accommodation. If no printed word-to-word dictionary can be found for a specific language, an electronic translator may be used. The device may not connect to the internet or store information, and therefore, web-based translators are not allowed. A sample list of approved bilingual word-to-word dictionaries is available at: http://www.doe.mass.edu/mcas/testadmin/lep-bilingual-dictionary.pdf.

CBT Comparable Accommodation		PBT Accommodation	PBT Administration Guidelines
7c 7d	**Mathematics Response** • **Speech-to-Text** • **Human Scribe**	**Mathematics Response** • **Speech-to-Text** • **Human Scribe**	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Speech-to-Text or Human Scribe selected. • Materials: If student uses software, a separate computer will be needed in addition to the computer used to administer the test. An external device may also be brought to the assessment. • Test Administrator Training: Test administrators providing the scribe accommodation must review: o Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses **During Testing:** A student dictates responses verbally, using an external speech-to-text device or by dictating. The student must be tested in a separate setting. The student must already be familiar with any external device used for this accommodation. **After Testing:** • Responses must be transcribed exactly as dictated/signed (e.g., the human scribe/signer may not change, embellish, or interpret a student's responses when transcribing) into the student's standard test booklet or answer document. Only transcribed responses will be scored. • Refer to Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses for protocol. • Test administrators are responsible for collecting all non-scorable student work created using assistive technology devices. Test-related content must be deleted from all devices. Non-scorable student work must be securely shredded.

CBT Comparable Accommodation		PBT Accommodation	PBT Administration Guidelines
7e	**General Administration Directions Read Aloud and Repeated in Student's Native Language** *(by test administrator)*	**General Administration Directions Read Aloud and Repeated in Student's Native Language** *(by test administrator)*	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have General Administration Directions Read Aloud and Repeated in Student's Native Language selected. • Materials: o For 2015-2016, PARCC will provide written general test administration directions in the following languages[41]: ▪ Arabic ▪ Chinese (Mandarin) ▪ Haitian Creole ▪ Navajo ▪ Polish ▪ Portuguese ▪ Russian ▪ Spanish ▪ Urdu ▪ Vietnamese o Translations in other languages may also be available on request. o If written general test administration directions are not available in the student's native language, a local translator fluent both in English and the student's native language may translate and read the directions in the language of the student. • Test Administrator Training: Test administrators, or other qualified interpreters, providing the general administration directions in languages other than English must review the directions in advance in order to provide consistent translations. Test administrators providing this accommodation will ideally be literate and fluent in English, as well as in the student's native language; or may collaborate with a local translator, if available. **During Testing:** The test administrator, or other qualified interpreter, reads aloud the general administration instructions in the student's native language. The student may request that directions be repeated. The student must be tested in a separate setting.

[41] Each year, PARCC will identify the languages for test administration directions based on PARCC state student enrollment data.

CBT Comparable Accommodation		PBT Accommodation	PBT Administration Guidelines
7f	**General Administration Directions Clarified in Student's Native Language** *(by test administrator)*	**General Administration Directions Clarified in Student's Native Language** *(by test administrator)*	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have General Administration Directions Clarified in Student's Native Language selected. • Test Administrator Training: Test administrators providing this accommodation should be literate and fluent in English, as well as in the student's native language. **During Testing:** The test administrator clarifies general administration directions only in the student's native language. Test administrators, or other qualified interpreters, providing this accommodation should ideally be literate and fluent in English, as well as in the student's native language; or test administrator may be assisted by a translator who speaks the language of the student, if available.
7g	**Bilingual Spanish/English Online Mathematics Assessment**[27]	**Side-by-Side Spanish/English Paper-Based Mathematics Assessment**	***See Side-by-Side Spanish/English Paper-Based Mathematics Assessment***
7h	**Side-by-Side Spanish/English Paper-Based Mathematics Assessment**[27]	**Side-by-Side Spanish/English Paper-Based Mathematics Assessment**	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Paper-Based Edition in Spanish selected. • Materials: Side-by-Side Spanish/English Paper-Based Mathematics Assessment. Based on individual state policy, the mathematics assessment may be translated into additional languages. • Test Administrator Training: For English learners with disabilities, administrators must review the following: o Appendix A: Accessibility Features and Accommodations for Students Taking the Paper-Based PARCC Assessments **During Testing:** The student takes a paper-based mathematics assessment in Spanish (or other native language as requested), **if allowed by state policy**.

CBT Comparable Accommodation		PBT Accommodation	PBT Administration Guidelines
7i	**Side-by-Side Spanish/English Large Print Mathematics Assessment**	**Side-by-Side Spanish/English Large Print Mathematics Assessment**	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Large Print Edition selected. • Materials: Large print test kit includes a large print assessment booklet, standard test booklet or answer document for transcription, and supplementary large print mathematics materials (large print ruler & protractor), when appropriate. • Test Administrator Training: Test administrators of students with visual impairments must review: o PARCC Assessments and Students with Visual Impairment, Including Blindness o Appendix A: Accessibility Features and Accommodations for Students Taking the Paper-Based PARCC Assessments **During Testing:** A side-by-side Spanish/English large print paper-based form of the mathematics assessment is available for a student with a visual impairment who is unable to take a computer-based assessment due to his or her disability, **if allowed by state policy**. The font size for the PARCC large print edition will be 18 point on paper sized 11 x 17. Students will not record their answers in standard print test booklets or answer documents. Instead, students will circle their answers in the large print test booklets. Students will need to write their answers in boxes at the top of the Answer Grids, but they do not need to bubble in their answers. In the Test Administrator scripts, there are several instances which instruct test administrators to demonstrate an activity or display information. Demonstrations should be conducted where they are visible for each student (e.g., on the board, near the student). **After Testing:** • Responses must be transcribed verbatim in Spanish by a test administrator in a standard student test booklet or answer document, which is included in the Large Print test kit. Only transcribed responses will be scored. At least two persons must be present during transcription of student responses (one transcriber and one observer confirming accuracy). It is recommended that one of the individuals be an LEA or School Test Coordinator. • Refer to Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses.

CBT Comparable Accommodation		PBT Accommodation	PBT Administration Guidelines
7j	**Text-to-Speech for the Mathematics Assessments in Spanish** *(or other languages)*	**Human Reader for the Mathematics Assessments in Spanish** *(or other translated language as needed)*	***See Human Reader for the Mathematics Assessments in Spanish*** *(or other translated language as needed)*
7k	**Human Reader for the Mathematics Assessments in Spanish** *(or other translated language as needed)*	**Human Reader for the Mathematics Assessments in Spanish** *(or other translated language as needed)*	**Before Testing:** • Identification for SR/PNP: Student's SR/PNP must have Human Reader in Spanish (or other languages) selected. Once a student is placed into a test session, the student will be assigned a Human Reader form. • Test Administrator Training: Human Readers providing this accommodation must review: o Appendix B: Test Administration Protocol for the Human Reader Accommodation for English Language Arts/Literacy Assessments, and the Human Reader Accessibility Feature for Mathematics Assessments. o According to state policy, an onsite translator may provide (or assist a test administrator to provide) a human read aloud accommodation in the student's native language. Test administrators providing this accommodation should ideally be literate and fluent in English, as well as in the student's native language; or may be assisted by a translator, if available. **During Testing:** In cases where a test administrator reads aloud to a student, **if allowed by state policy**, the student must be tested in a separate setting. Students may be tested in an individual or small group setting. The number of students in a small group is determined by individual states.

Appendix B: Test Administration Protocol for the Human Reader Accommodation for English Language Arts/Literacy Assessments, and the Human Reader Accessibility Feature for Mathematics Assessments

In cases where a student requires a text-to-speech accommodation on the PARCC English language arts/literacy and/or a text-to-speech accessibility feature on the PARCC mathematics assessments, but cannot participate in the computer-based assessment and takes the paper-based assessment instead, a human reader must provide the accommodation to the student. Human readers who provide the accommodation to a student on the PARCC English language arts/literacy or the accessibility feature on the PARCC mathematics assessments must follow these procedures during testing to ensure the standardization of the oral presentation of the assessments.

Procedures for Human Readers Providing the Human Reader Accommodation for ELA/Literacy Assessments or the Human Reader Accessibility Feature for the Mathematics Assessments

1. Readers must be trained locally to administer each assessment, as indicated in the *PARCC Test Administration Manual* (TAM). Readers must sign the Security Agreement in Appendix B of the PARCC TAM.
2. Readers must read verbatim (word for word) only what is printed in the test book (or in rare cases, on the computer screen) without changing, emphasizing, or adding words. Readers may not clarify (except for test directions), provide additional information, assist, or influence the student's selection of a response in any way.
3. Readers must speak in a clear and consistent voice throughout the test administration, using correct pronunciation, and without vocal inflections that may provide clues to, or mislead, a student. Readers should be provided a copy of the test and the Test Administrator's directions two schools days prior to the start of testing, in order to become familiar with the words, terms, symbols, signs, and/or graphics that will be read aloud to the student.
4. Readers should emphasize only the words printed in boldface, italics, or capital letters and inform the student that the words are printed that way. No other emphasis or vocal inflection is permitted.
5. Readers may repeat passages, test items, and response options, as requested, according to the needs of the student. Readers should not rush through the test and should ask the student if they are ready to move to the next item.
6. Readers may not attempt to solve mathematics problems, or determine the correct answer to a test item while reading, as this may result in pauses or changes in inflection which may mislead the student.
7. Readers must attempt to maintain a neutral facial expression, neither smiling nor frowning during the test, which may be interpreted by the student as approval or disapproval of the student's answers.
8. Readers must be familiar with the student's IEP or 504 plan, and should know in advance which accommodations are required by the student, and for which test (ELA/Literacy and/or Mathematics) the student is designated to receive a human reader.
9. Readers must be aware of whether a student requires additional tools, devices, or adaptive equipment that has been approved for use during the test, such as a magnifier, closed circuit television (CCTV), abacus, brailler, slate and stylus, etc.

10. If a reader is unsure how to pronounce an unfamiliar word, advise the student of the uncertainty and spell the word.
11. When reading a word that is pronounced like another word with a different spelling, the reader may spell the word after pronouncing it, if there is any doubt about which word is intended.
12. Readers must spell any words requested by the student.
13. When reading passages, readers must be aware of punctuation marks. Readers may read the passage, or selected lines a second time, with all punctuation marks indicated.
14. When test items refer to a particular line, or lines, of a passage, reread the lines before reading the question and answer choices. For example, the reader should say, "Question X refers to the following lines…," then read the lines to the student, followed by question X and the response options.
15. When reading selected response items, readers must be careful to give equal stress to each response option and to read all of them before waiting for a response.
16. If a reader is also scribing the student's responses, or if another adult will scribe, and the student designates a response choice by letter only ("D," for example), the reader must ask the student if he/she would like the response to be reread before the answer is recorded in the answer booklet.
17. If the student chooses an answer before the reader has read all the answer choices, the human reader must ask if the student wants the other response options to be read.
18. After the reader finishes reading a test item and all response options, the reader must allow the student to pause before responding. If the pause has been lengthy, say: "Do you want me to read the question or any part of it again?" When rereading questions, readers must avoid emphasis on words not bolded, italicized, or capitalized.
19. Readers must refer to Appendix I: PARCC ELA Audio Guidelines and/or Appendix J: PARCC Mathematics Audio Guidelines to ensure consistency in how items are read.

Procedures for Providing the Human Reader Accommodation for ELA/Literacy Assessments or the Human Reader Accessibility Feature for the Mathematics Assessments to a Small Group of Students

Human readers may read the test aloud to a small group of students, rather than individually, provided that each student has the human reader accommodation/accessibility feature listed in an IEP, 504 plan, or Personal Needs Profile (in the case of mathematics only).

The following procedures must be followed:

- **Check individual state policies on the maximum allowable number of students in a human reader group.**
- Students with the human reader accessibility feature for mathematics or human reader accommodation for ELA/literacy that need to be grouped together must be taking the same test form, since test questions will differ on each form of the test.
- Students not receiving the human reader accessibility feature for mathematics or the human reader accommodation for ELA/literacy may not be tested in the same location as students who are receiving the human accessibility feature for mathematics or human reader accommodation for ELA/literacy.

Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses

Scribing a student's responses by an adult test administrator is a response accommodation that allows students to provide test responses to an adult test administrator who writes or types the responses directly onto the assessment for the student. Students receiving the scribe accommodation may respond to assessment items either:

- verbally,
- using a speech-to-text device or other augmentative/assistive communication device (e.g., picture/word board),
- signing (e.g., American Sign Language, signed English, Cued Speech),
- gesturing,
- pointing, or
- eye-gazing

Note: Scribing may include "dragging and dropping" selected response items, as appropriate.

The scribe accommodation is appropriate for students with a physical disability that severely limits or prevents the student's motor process of writing, typing, or recording responses during testing. This includes students with reduced ability to record responses due to pain, fracture, paralysis, loss of function, or loss of endurance, as well as students whose handwriting is indecipherable or illegible. Scribes are also an appropriate accommodation for students who have a documented disability in the area of written expression which results in significant interference in their ability to express their knowledge in writing/keyboarding, even after varied and repeated attempts to teach the student to do so.

If a student requires a scribe due to a recently-occurring, though temporary, illness or injury, an Appendix G: Emergency Accommodations Form must be completed and kept on file at the school.

If a student requires a scribe due to an ongoing inability to express through writing/keyboarding, this should be documented in evaluation summaries from locally-administered diagnostic assessments, and must be listed in the student's IEP or 504 plan. The student should be receiving ongoing, intensive instruction and/or interventions to learn written expression, as deemed appropriate by the IEP team or 504 plan coordinator.

The use of a scribe is permitted in the following PARCC assessments:

- Mathematics
- English Language Arts/Literacy assessments for Evidence Based Selected Response, and Technology Enhanced Constructed Response items
- English Language Arts/Literacy Assessments for Prose Constructed Responses. Note: For this accommodation, refer to selection and administration guidelines in the *PARCC Accessibility Features and Accommodations Manual*

Qualifications of the Scribe

Individuals who provide the scribe accommodation to a student must:

- be trained by the school or district, as indicated in the PARCC Test Administration Manuals;
- sign a PARCC Security Agreement Form; and
- be fluent in receptive and expressive American Sign Language (ASL), signed English, or other sign system, for students who are deaf or hard of hearing.

Preferably, the scribe will already be familiar with and have experience scribing for the student. If the scribe is unfamiliar with the student, then scribe and student should have the opportunity to practice the scribing process together prior to taking the assessment.

Administering the Scribe Accommodation

- A scribe may administer the scribe accommodation only to one student at a time during a test session. The student must be tested in a separate setting.
- The scribe must produce legible text, if transcribing by writing into a test book.
- The scribe must transcribe responses verbatim from the student, and may not prompt or question the student, or correct a student's responses. The scribe may ask the student to restate (or sign) words or parts, as needed.
- A student using a scribe must be given the same opportunity as other students to plan and draft a constructed response. The scribe may write an outline, plan, or draft as directed by the student. The scribe must record or draft the draft response or outline exactly as dictated without any cueing and guidance to the student.
- The scribe should be informed of the preferred method or format for recording the student's response before the date of the assessment. During testing, the student may dictate constructed responses either:
    1. Directly to a human scribe who records the responses at the time they are given (computer- and paper-based testing)
    2. Into a speech-to-text converter (e.g., voice recognition software, etc.), augmentative communication device, or assistive technology device to be transcribed by the scribe at a later time into the online testing platform or unto a paper-based book/answer document). A student must be given the opportunity to review and edit his or her responses before they are finalized into the online testing platform or paper-based test book/answer document.
- When using a speech-to-text converter, augmentative communication device, or other assistive technology device, hard copies of the student's response must be printed out for transcription purposes unless the device being used does not have the capability to print. In cases where printing a response is not possible, scribing must take place as the student dictates or otherwise produces the response. All electronic files must be deleted immediately after the testing session.
- The scribe must allow the student to review the scribed response in order to make edits. If requested by the student, the scribe may read the scribed response back to the student. The student may dictate changes or edits to the scribe, and the scribe must make those changes exactly as dictated by student, even if a change is incorrect. All changes must be made during the test session.

Additional Guidelines for the English Language Arts/Literacy Assessment–Prose Constructed Responses

Capitalization and Punctuation

For the English Language Arts/Literacy Assessment—Prose Constructed Responses only, the student is responsible for all capitalization and punctuation. This can be accomplished in one of two ways:

1. After dictation: The student can dictate the entire response at one time. The scribe will write/type the response without capitalization and punctuation. When the student is finished dictating, the scribe will show the response to the student. The student will tell the scribe which letters are to be capitalized and where punctuation should be added.
2. During dictation: The student may add capitalization and punctuate as he/she dictates.
    a. For example, when stating the sentence "The fox ran." the student will say, "Capital T, the fox ran, period"
    b. If a sentence includes other punctuation, for example a comma, the student must indicate the comma. For example, when stating, "The boy bought apples, oranges, and bananas." The student will say, "Capital T, the boy bought apples, comma, oranges, comma, and bananas, period"

Students must be given the opportunity to proofread their responses, even if they provide capitalization and punctuation during dictation.

Rules for Capitalization

The *scribe can automatically capitalize* in these cases:

1. The scribe should capitalize the first letter of a sentence if the student has indicated the punctuation in the previous sentence. For example, if the student said, "Capital T, the fox ran, period. The fox jumped, period." The scribe would write "The fox ran. The fox jumped."
2. The first word in a new paragraph when students have indicated for the scribe to begin a new paragraph.

The *student must specify* capitalization in the following cases:

1. The first letter of a sentence, if the student has not indicated punctuation in the previous sentence. For example, if the student said, "Capital T, the fox ran, the fox jumped, period." The scribe would write "The fox ran the fox jumped."
2. Other capitalization (e.g., capitalization of proper nouns, acronyms, etc.)

Scribe Parameters during the Assessment

The following scribing practices are acceptable:

- The scribe may ask "Are you finished?" or "Is there anything you want to add or delete?"
- The scribe may respond to procedural questions asked by the student such as, "Do I have to use the entire space to answer the question?" The scribe may indicate "no."
- If the student requests that the scribe read a response that was already dictated, the scribe must read what the student dictated previously in an even voice, being careful not to cue the student to errors.

The following scribing practices are unacceptable:

- The scribe cannot influence the student's response in any way.
- The scribe cannot give the student specific directions, clues, or prompts; e.g., "First, set the equations equal to one another;" or "Make sure that the equation is set equal to zero."
- The scribe cannot tell the student if his/her answer is correct or incorrect.
- The scribe cannot answer a student's questions related to the content; e.g., "Is this the right way to set up the problem?" or "Can you tell me what this word means?"
- The scribe cannot alert the student to mistakes he/she made during testing.

Special Considerations When Scribing for a Student Who Uses Sign Language or Cued Speech

- The scribe for a student who signs their responses must be fluent in ASL, signed English, or other sign systems the student uses.
- When responses are dictated by a student using American Sign Language (or other signed system), the scribe may ask clarifying questions regarding the use of classifiers. Classifiers give descriptive information about a noun or verb such as location and kind.
- The scribe will write the student's responses in English. The transcription of ASL will not be done in a word-to-word format, but instead will be written in English without changing or enhancing the meaning of the content, adding information, or explaining concepts unknown to the student (e.g., student signs "HOUSE WHITE LIVE THERE ME." Scribe writes "I live in the white house.")
- Scribe must follow all other acceptable scribing practices.

Use of Speech-to-Text/Voice-Recognition Software/Devices

Speech-to-text conversion, or voice recognition, software allows students to dictate responses into their computer microphone and have the responses converted to printed text. For this accommodation, students will use their own assistive technology devices at a separate computer station equipped with speech-to-text/voice recognition software in order to respond to multiple-choice, open-ended items, and extended responses on the PARCC assessments. Students who use voice recognition software routinely, and for whom this accommodation is listed in their IEP, may use speech-to-text/voice recognition software as an accommodation on the PARCC assessments. Students must become familiar with the software and must have opportunities to practice using it prior to testing. It is also important that students who use speech-to-text devices be given the opportunity to develop planning notes using speech-to-text, and to view what they produce via speech-to-text.

Upon completion of a test, the student's responses should be printed out and the guidelines for transcribing student responses followed.

Guidelines for Transcribing Student Responses (Paper-based testing only)

Certain situations involving scribing of responses during administration of PARCC assessments may require a Test Administrator to transcribe a student's response in a standard, scorable test booklet or answer document. These situations may include:

- Answers were recorded in the wrong section of a Test Booklet or Answer Document, or in an incorrect Test Booklet or Answer Document.
- A student takes the test using a special test format that requires answers to be transcribed (e.g., large print).
- A student uses a speech-to-text converter, augmentative communication device, or assistive technology device to be transcribed by the scribe at a later time.

- As an accommodation, a student records answers in a test booklet, answer document, or on blank paper, instead of in the required Test Booklet or Answer Document.
- A Test Booklet or Answer Document becomes unusable (e.g., torn, wrinkled).

If a student's responses must be transcribed after test administration is completed, the following steps must be followed:

- At least two persons must be present during any transcription of student responses. One of these persons will be the transcriber, and the other will be an observer confirming the accuracy of the transcription. It is highly recommended that one of the individuals be an authorized LEA Test Coordinator or School Test Coordinator. Your state may have additional guidelines. Refer to Appendix C of the *Test Coordinator Manual* for additional information on your state's policy.

The student's response must be transcribed verbatim into the Answer Document or Test Booklet. The student's original response in an Answer Document/Test Booklet should be returned with secure test materials. The LEA Test Coordinator or School Test Coordinator should write "DO NOT SCORE" or draw an "X" in large font on the front of the original Answer Document/Test Booklet. Do not cover the barcode. Return them with nonscorable test materials.

- Braille transcription: Only an eligible Test Administrator who is a certified Teacher of Students with Visual Impairment, including Blindness, or someone working under the direct supervision of an eligible Test Administrator who is a certified Teacher of Students with Visual Impairment, including Blindness may transcribe the student's responses onto the paper or online form of the PARCC Assessments.
- Any original student responses that were printed from an assistive technology device or recorded separately on blank paper (or on other external devices) must be securely shredded.

Procedures for Transcribing Student Responses for Computer-Based Testing

Selected Response and Technology Enhanced Items

For selected response and technology enhanced items, student responses must be entered into TestNav during the test session by the Test Administrator. Once the student reaches the end of the test with all Selected Response and Technology Enhanced Items completed, the Test Administrator should have the student EXIT the test but not submit the test.

Constructed Response Items

During administration of computer-based PARCC assessments, students who require use of a speech-to-text converter, augmentative communication device, or assistive technology device will need constructed responses transcribed into TestNav by a Test Administrator before the online testing window closes. In these situations, the following steps must be followed.

- As the student encounters constructed responses, he/she should use his/her device to respond to the questions. The student will then continue testing in TestNav, leaving these items unanswered in TestNav.
- Once the student reaches the end of the test, the Test Administrator should have the student EXIT the test but NOT submit the test.
- The Test Administrator must set the test to Resumed status within PearsonAccess^{next}; refer to the *PearsonAccess^{next} User Guide* for instructions on how to resume students.

- The Test Coordinator must request the test be unlocked by calling Pearson Support at 1-888-493-9888 at least 24 hours in advance of transcribing responses.
    - Before calling, please have the following information available.
        - Full Name of Test Administrator conducting transcription
        - District Name and Code as displayed in PearsonAccess^{next} School Name and Code as displayed in PearsonAccess^{next}
        - Student Name
        - Student Unique ID
        - Class Name
        - Test Session Name
        - Grade/Subject
    - Notify the Pearson Support Agent that you need the test unlocked to transcribe responses for an approved student accommodation.
- Once the test has been unlocked, the Test Administrator must log into TestNav as the student and navigate to the items for transcription.
- At least two persons must be present during any transcription of student responses. One of the individuals must be an authorized Test Administrator.
- The student's responses must be transcribed verbatim into TestNav. (See note above about scribing signed responses in English).
- Once all items have been transcribed, the Test Administrator will submit the test.
- After transcription is complete, all original student responses that were printed from an assistive technology device must be securely shredded.

Appendix D: Text-to-Speech, ASL Video, or Human Reader/Human Signer Guidance for English Language Arts/Literacy Assessments

Individualized Education Program (IEP) or 504 Plan Decision-Making Tool

Directions: This tool has been developed to assist IEP teams and 504 plan coordinators in identifying students who may be appropriate candidates to receive the accommodation for text-to-speech (computer-based), ASL video (computer-based), or human reader/human signer (paper-based) for the PARCC ELA/literacy summative. PARCC states will each determine whether this tool is optional or required, based on their individual state policies or practices.

Student's Name: _____ D.O.B: _____ Grade: _____

School/Program: _____ State ID #/Local ID#: _____

District/LEA: _____State: _____

IEP Team Members or 504 Plan Coordinator/Staff		
Title	**Name**	**Date**
IEP Team Chairperson or 504 Coordinator:		
Special Education Teacher(s):		
General Education Teacher(s):		
IEP Team member(s) qualified to interpret reading evaluation results:		
Parent(s)/Guardian:*		
Student (if a team participant):		
Other IEP team member(s):		

Verification of Parent/Guardian Notification (optional):* _____ *(Parent/Guardian Initials)*
I have been informed by my child's school that my child will receive a text-to-speech, ASL video or human reader/human signer accommodation for a PARCC English language arts/literacy assessment.

* If the parent/guardian does not initial this form, the school should attach documentation of notification to the parent and date of notification to this form regarding the decision to provide the text-to-speech, ASL video, or human reader/human signer accommodation to the student, and keep this form with the student's records.

If all guidelines listed are met, and the student is given the **text-to-speech, ASL video, or human reader/human signer accommodation** for the PARCC English language arts/literacy assessment, he/she will receive a valid score on the assessment. If all guidelines are not met, and the student is given the **text-to-speech, ASL video, or human reader/human signer** accommodation on a PARCC English language arts/literacy assessment, the student's assessment score may be invalidated and the score would not be counted in the overall assessment results; i.e., the student would be considered a "non-participant" for the English language arts/literacy assessment.

Guidelines for IEP Team or 504 Plan Consideration	Additional Guidance	Agree/Disagree
The student has an Individualized Education Program (IEP) or 504 plan.	Student has an approved IEP or current 504 plan.	☐ Agree ☐ Disagree
In making decisions on whether to provide the student with this accommodation, IEP teams and 504 plan coordinators are instructed to consider whether the student has: • Blindness or a visual impairment and has not yet learned (or is unable to use) braille; OR • A disability that severely limits or prevents him/her from accessing printed text, even after varied and repeated attempts to teach the student to do so (e.g., student is unable to decode printed text); OR • Deafness or a hearing impairment and is severely limited or prevented from decoding text due to a documented history of early and prolonged language deprivation	For the screen reader accommodation, the IEP team or 504 plan coordinator must determine whether the student is blind or has a visual impairment and has not yet learned (or is unable to use) braille. For the **text-to-speech, ASL video, or human reader/human signer accommodation**, the IEP team or 504 plan coordinator must determine whether the student has a disability that severely limits or prevents him or her from decoding text. This accommodation is not intended for a student reading somewhat (i.e., moderately) below grade level. The IEP or 504 plan must document objective evidence from a variety of sources (including state assessments, district assessments, AND one or more locally-administered diagnostic assessments or other evaluation) that indicate that the student's ability to decode text is severely limited or prevented or that the student is blind or visually impaired and has not yet learned (or is unable to use) braille. States may provide additional guidance for their respective states based on state policy or practice.	☐ Agree ☐ Disagree

Before listing the accommodation in the student's IEP or 504 plan, teams and plan coordinators should also consider whether: • The student has access to printed text during routine instruction through a reader or other spoken-text audio format, or interpreter; • The student's inability to decode printed text or read braille is documented in evaluation summaries from locally-administered diagnostic assessments; or • The student receives ongoing, intensive instruction and/or interventions in the foundational reading skills to continue to attain the important college and career-ready skill of independent reading.	States may provide additional guidance for their respective states in order to define intensive instruction and interventions based on state policy or practice.	☐ Agree ☐ Disagree

List the data and/or evaluation sources that were used to document the decision to give the text-to-speech, ASL video, or human reader/human signer accommodation to the student on the English language arts/literacy assessment(s):

1) Name of Diagnostic Evaluation or Educational Assessment: _____
_____
Name and Title of Test Administrator: _____
Most Recent Testing Date: _____
Score(s): _____
Provide a Summary of the Results: _____
_____
_____
_____

2) Name of Diagnostic Evaluation or Educational Assessment: _____
_____
Name and Title of Test Administrator: _____
Most Recent Testing Date: _____
Score(s): _____
Provide a Summary of the Results: _____

Appendix D

3) List any additional assessment data, scores, and/or evaluation results that were used to guide the decision-making process for IEP teams or 504 plan coordinators regarding the text-to-speech, ASL video, or human reader/human signer accommodation for the PARCC English language arts/literacy assessment(s):

_____
_____
_____

List the instructional interventions and supports specifically related to reading that are currently provided to the student:

- Intensive reading interventions have been provided to the student for_____ years.
- List the specific school years and frequency_____
- Describe and list the specific reading intervention(s) provided to the student:
  _____
  _____

<u>List any additional relevant information regarding the student</u>:

_____
_____

Appendix D

Appendix E: Guidance for Selecting and Administering the Extended Time Accommodation

What is the Extended Time Accommodation?

Extended time is a provision which expands the allowable length of time to complete assignments, tests, and activities, and may also change the way the time is organized. For PARCC, this accommodation provides additional time for a student to complete the summative assessments beyond the time allotted for the test or test unit. Students with disabilities, students who are English learners (EL), and students who are EL with disabilities are eligible to receive the Extended Time Accommodation. The Extended Time Accommodation allows a student to have up to a single day to complete a single test unit. Single test units may not extend beyond one school day. (For exceptions, refer to Appendix F: Unique Accommodations Request Form).

Who can benefit from the Extended Time Accommodation?

The extended time accommodation is most beneficial for students who routinely need more time than is generally allowed to complete activities, assignments, and tests. Extra time may be needed:

- to process written text (e.g., for a student who processes information slowly or has a human reader)
- to write (e.g., for a student with limited dexterity)
- to use other accommodations or augmentative devices (e.g., assistive technology, audio materials, or a scribe)
- for a student who needs frequent breaks that may extend the time needed to complete testing.

Documenting the Extended Time Accommodation in a Student's Individualized Education Plan (IEP), 504 Plan, or if required by the PARCC member state, an EL Plan

For PARCC purposes, extended time must be documented in a student's IEP, 504 plan, or if required by the PARCC member state, an EL plan based on data or observations of the student's performance in past assessments. Where possible, each student's IEP, 504, or if required by the PARCC member state, an EL plan should document the amount of extended time anticipated for PARCC assessments. Decisions regarding extended time should align with state policies. These decisions must be made on a case-by-case basis based on the student's needs and any other accommodations being provided for the assessment for which the extended time will be needed. Teams should consider whether the unit time provided will meet the student's needs prior to including a provision for extended time in student plans.

Planning and Logistics for Administering the Extended Time Accommodation

Students who require this accommodation should need to take the test in a separate setting to minimize disruptions, especially if classrooms or the computer lab are scheduled for successive testing sessions. The planning process includes consideration of additional accommodations, available technology, physical space, and personnel coverage, all of which will need to be determined well in advance of testing.

Procedure for Ending the Extended Time Accommodation with Students

Students with extended time accommodations must be given a unit in a continuous block of time and may not be brought back to that unit at a later time. If the accommodation extends into the student's schedule lunch, then the test administrator must either accompany the student to lunch and remain with him or her, or bring the student's lunch to the testing room. If the Test Administrator observes that the student is no longer productively engaged, an inquiry may be made regarding testing status. Once the extended time provision is exhausted, the test administrator should proceed to the next test unit or end the testing process.

Appendix F: Unique Accommodation Request Form

Directions: If a student with a disability or an English learner requires an accommodation (i.e., a "unique accommodation") that is not listed in the *PARCC Accessibility Features and Accommodations Manual*, and does not change the construct being measured by the test, the school may request approval for use of the accommodation using this request form. If approved, the accommodation must be listed in the Individualized Education Program (IEP) or 504 plan for a student with a disability; and if required by the PARCC member state, an English Learner (EL) plan, for an English learner.

To request approval for a unique accommodation, this form must be completed and submitted to the PARCC member state by the principal or designee or District Assessment Coordinator, as required by the PARCC member state, at least six weeks prior to testing to ensure a timely state response is received. A copy of this form must be kept in the student's file and, if appropriate, retained at the district office.

Contact Information	
Name of Principal/Designee or District/LEA District Assessment Coordinator:	Date:
School Name:	Telephone Number:
District/LEA Name:	Fax Number:
Signature:	Email:
Student Information	
Name:	Student ID #:
Grade:	DOB:
Indicate type of plan: ☐ IEP ☐ 504 Plan ☐ EL Plan ☐ English Learner, without an EL Plan	
PARCC Test Administration	
For which PARCC assessment are you seeking approval to use the unique accommodation:	
Provide a brief description of the accommodation for which you are requesting approval:	
Describe the evidence that supports the need for this accommodation, including how it is used by the student in the classroom or on other assessments:	
Describe the planning needed for this accommodation on PARCC tests (e.g., school staff, space, and/or specialized tools or equipment needed):	

In submitting this form to your state for approval, the principal/designee or assessment coordinator assures that:

- This accommodation will be documented in the student's IEP, 504 plan, and if required by the PARCC member state, an EL plan. In the case of an IEP, the parent/guardian of the student must sign the amended IEP prior to testing.
- The school team has met and considered all listed accommodations before proposing this unique accommodation.
- The proposed accommodation is used, as appropriate, for routine class instruction and assessment.

For State (SEA) Use Only: Approval/Denial of Request
(This completed section will be returned to your school prior to testing.)

☐ This request has been approved. ☐ This request has been denied.

State Staff Name and Position:

Signature: Date:

Appendix F

Appendix G: Use of an Emergency Accommodation on a PARCC Assessment

Directions: This form is appropriate in cases where a student needs a new accommodation immediately prior to the assessment due to unforeseen circumstances. Cases could include students who have a recently-fractured limb (e.g., fingers, hand, arm, wrist, or shoulder); whose only pair of eyeglasses has broken; or a student returning from a serious or prolonged illness or injury. If the principal (or designee) determines that a student requires an emergency accommodation on the day of the PARCC test, this form must be completed and maintained in the student's assessment file. **The parent must be notified that an emergency accommodation was provided.** No state approval is required for emergency accommodations. **Please consult with your local district office for approval if required by your state.** If appropriate, this form may also be submitted to the district assessment coordinator to be retained in the student's central office file.

District/LEA Name:	**Date:**
School Name:	**Telephone Number:**
Student Name:	**Grade:**
Student ID #:	**DOB:**

Name and Title of Person Completing this Form:

_____ _____

Staff Member's Name *Title/Position*

Reason for needing an emergency test accommodation (attach documentation if needed):

_____

_____

_____

_____

Describe what the testing accommodation will be:

_____

_____

_____

Who will administer the accommodation? _____

_____ _____

Staff Member's Name *Title/Position*

_____ _____

Principal Signature *Date*

_____ _____

Local Accountability Coordinator Signature *Date*
(if appropriate or required)

Appendix G

Appendix H: Student Accommodation Refusal Form

Directions: If a student refuses an accommodation listed in his or her Individualized Education Program (IEP), 504 plan, or if required by the PARCC member state, an English Learner (EL) plan, the school should document in writing that the student refused the accommodation, and the accommodation must be offered and remain available to the student during testing. This form must be completed and placed in the student's file and a copy sent to the parent on the day of refusal. Principals (or designee) should work with test administrators to determine who, if any others, should be informed when a student refuses an accommodation documented in an IEP, 504 plan or if required by the PARCC member state, an English Learner (EL) plan.

Student Name: _____ Date: _____

Grade: _____ Student ID#: _____

School Name: _____

School District/LEA: _____

PARCC Assessment: _____

Test Administrator: _____

Accommodation(s) refused: _____

Reason for refusal: _____

_____

_____

Comments:

_____

_____

Student's Signature (optional): _____

Signature of Test Administrator: _____

Keep this form on file at the school.
A copy must be sent home to the parent.

Appendix H

Appendix I: PARCC ELA Audio Guidelines

Version 3.0

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Appendix I

Visuals

Guidelines for Text-to-Speech Descriptions

Use these guidelines to describe visuals for text-to-speech scripts:

- Read the title.
- Provide a general overview of the image. (i.e., A map of South America, a graphic organizer with a center circle and four circles radiating outward)
- Begin with the main section of the image.
- Describe the details in a succinct manner using grade-level appropriate vocabulary.
- Omit minor details that are irrelevant (a box to the left of the person).
- If facial expressions or body language are important, do not assume a blind student can interpret them. For example, it is better to describe a person as worried than to state that the person has furrowed brows.
- When describing several people in an image, label each one clearly so they are not mixed up. (i.e., tall man, elderly man, little boy)
- Describe only what is seen in the image. Do not provide interpretation or additional information.

Classifications for Embed Coding Scheme for Text Descriptions

An embed code within the alt text will be included for all test items with visual elements. The embed code will be classified as a 1, 2 or 3. The description of each level is listed below:

[1] is not construct-relevant and can be eliminated (e.g., it is only there for engagement purposes). For example, a picture of an elephant added purely for engagement would has alt text that reads "elephant [1]" or "picture of elephant [1]."

[2] is construct-relevant and can be represented using accompanying textual description. Example of text where reading the graph is construct-relevant: The graph title is Roller Rink costs. Key, dashed line represents Roller Rink A, solid line represents Roller Rink B. The x-axis is labeled number of people. The y-axis is labeled cost in dollars. The dashed arrow starts at zero people, sixty dollars and points to a little less than sixteen people, midway between one hundred and one hundred ten dollars. The solid arrow starts at zero people, a little less than ten dollars and points to a little more than fourteen people, a little less than one hundred ten dollars. [2]

[3] is construct-relevant and can be represented using accompanying textual description together with a tactile representation or physical manipulative. Example of text where reading the graph is construct-relevant: The graph title is Roller Rink costs. Key, dashed line represents Roller Rink A, solid line represents Roller Rink B. The x-axis is labeled number of people. The y-axis is labeled cost in dollars. [3]

Accessibility experts will be trained on this embedded coding scheme during the item tagging phase of item development.

Ellipses

Example

22. Which statement best represents a turning point in the story?

    A. "Suddenly he seemed to know that if he were to survive, he must learn how to fly . . . "

    B. "Albert jumped up and down and screeched for them to rescue him, but they could do nothing."

    C. "When he tried to climb the rocks to the ridge top, he slid backward on his rear."

    D. "Albert watched as his brother pumped his wings wildly and zigzagged far above the ground."

Audio Guideline

Text Only/Text and Graphics

When an ellipsis is used to signify missing text in a sentence, read as "pause 'dot, dot, dot' pause."

Note: Pauses in each application of the audio guidelines in this document are represented by an En Dash with a space on either side of the En Dash.

Application of Audio Guideline

Example

Which statement best represents a turning point in the story?

A: Suddenly he seemed to know that if he were to survive, he must learn how to fly – dot - dot – dot –

Quotations and Quotation Marks

Example 1

5 In this poem, "the smell of the damp" reminds the speaker of the

- A. dark shade.
- B. strips of sunlight.
- C. moss that is growing.
- D. wooden porch boards.

Example 2

10 Inside the bottle, the "white-tipped waves" are made out of

A. water.
B. paper.
C. clay.
D. wood.

Example 3
Mill argues against using St. Paul's epistles as a means for discrimination against women because "'The powers that be are ordained of God' gives his sanction to military despotism to that alone, as the Christian form of political government, or commands passive obedience to it."

Audio Guideline
Text Only/Text and Graphics

a. Quotation marks should be read as "quote" before the text and "end quote" after the text.
b. If the quotes surround the title of a work, do not say, "quote."
c. If both single and double quotes occur in a single passage, item, or paragraph, specify with "single quote," "end single quote," "double quote," and "end double quote."

Application of Audio Guideline
Example 1:
In this poem – quote - the smell of the damp - end quote - reminds the speaker of
A dark shade.
B strips of sunlight.
C moss that is growing.
D wooden porch boards.

Example 2:
Inside the bottle, the – quote - white-tipped waves - end quote - are made out of
A water.
B paper.
C clay.
D wood.

Example 3
Mill argues against using St. Paul's epistles as a means for discrimination against women because - double quote - single quote - the powers that be are ordained of God – end single quote - gives his sanction to military despotism to that alone, as the Christian form of political government, or commands passive obedience to it - end double quotes -

Emphasis for Underline, Bold, Italics, Capitalization

Example 1

❸ Based on the first paragraph, a cradle is a kind of

- A. bed.
- B. house.
- C. craft.
- D. weapon.

Example 2

⓫ In paragraph 11, what do the words to its fullest **most likely** mean?

- A. with each other
- B. some of the time
- C. with other tribes
- D. as much as they could

Example 3

❷ The suffix *-less* in the words helpless and careless means

A. most.
B. tiny.
C. some.
D. without.

Audio Guideline
Text Only/Text and Graphics

Emphasize words that are underlined, bolded, italicized, or capitalized.

Pause before and after the emphasized word(s) to differentiate between emphasis and normal formatting.

Appendix I

Do not read differently or pause for italics, underline, or bold if they are being used for the directions before a passage or item and are not part of the prompt, question, or answers.

Application of Audio Guideline

Example 1

Based on the first paragraph, a – cradle - is a kind of

A: bed.

B: house.

C: craft.

D: weapon.

Example 2

In paragraph eleven, what do the words – to its fullest - most likely - mean?

A: with each other

B: some of the time

C: with other tribes

D: as much as they could

Example 3

The suffix - less - in the words – helpless - and – careless - means

A: most.

B: tiny.

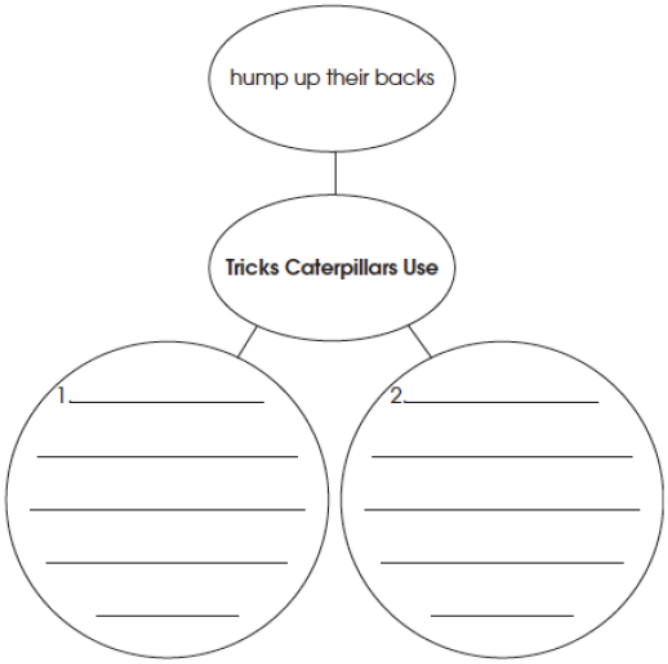
C: some.

D: without.

Word Webs

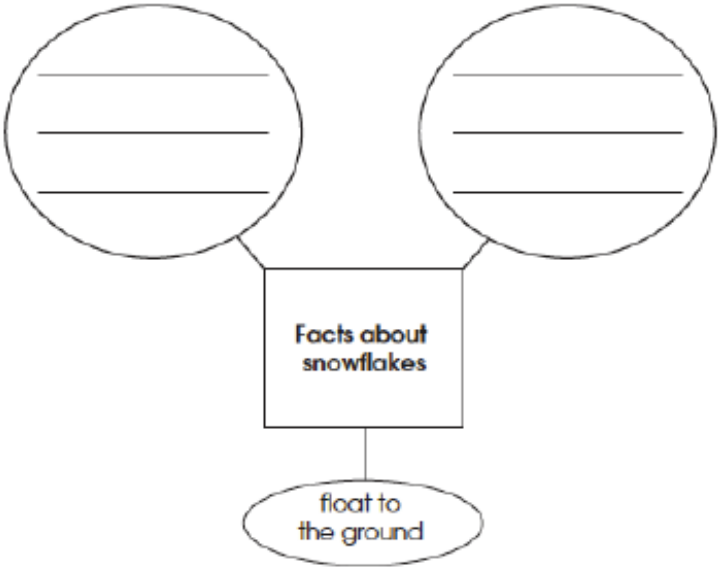
Example 1

13. Using the reading selection, write two other tricks caterpillars use to try to get away from their enemies.



Example 2

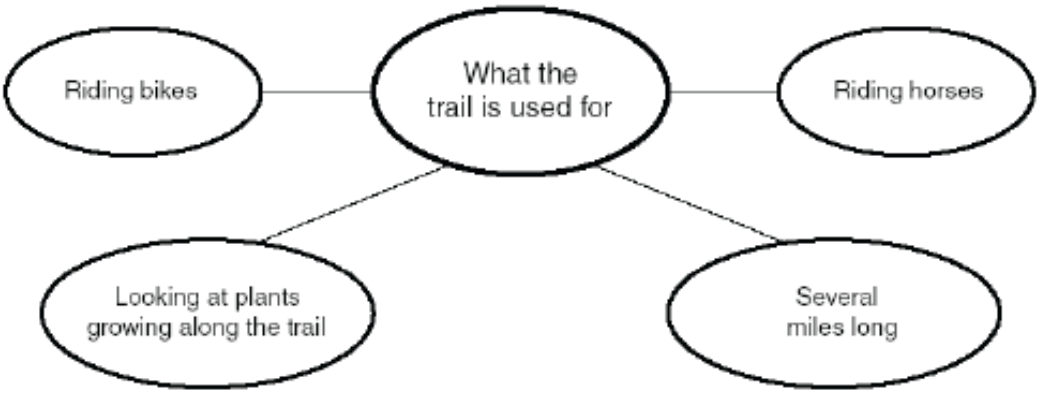
10. Use details from the reading selection to complete the web below.



Appendix I

Example 3

Jimmy made this web. Use it to answer questions 14 and 15.



Audio Guideline

Text Only
Read the title of the word web, if available, before reading the rest of the text in the word web.

Text and Graphics
Begin by giving a very brief orientation that includes

- that it is a word web
- the attributes of the word web (number of cells, rows, etc.)

Read the word web in a logical manner that helps the student easily navigate the information. While many word webs can be read left to right, top to bottom, some word webs are better read bottom to top or from the middle.

Use common language throughout the item and the test when referring to word webs and their attributes (labels, blank cells, stems, etc.).

Application of Audio Guideline

Example 1
A word web containing four cells. The center cell is labeled "Tricks Caterpillars Use." A cell connecting to the center cell is labeled "hump up their backs." The two other cells connecting to the center cell contain space to write two other tricks caterpillars use.

Example 2
A word web containing four cells. The center cell is labeled "Facts about snowflakes." A cell connecting to the center cell is labeled "float to the ground." The two other cells connecting to the center contain space to write.

Example 3
A web containing five cells. The center cell is labeled “What the trail is used for.” The four cells connecting to the center cell are labeled “Riding bikes,” “Riding horses,” “Looking at plants growing along the trail,” and “Several miles long.”

Pronunciation

Example 1

2 Which word rhymes with cone?

- A. both
- B. done
- C. corn
- D. own

Example 2

11 Which word has the same vowel sound as soak?

- A. stir
- B. look
- C. kick
- D. rope

Example 3

62 Which phrase from the report contains an underlined word that is spelled incorrectly?

A ancient mazes

B friends and nieghbors

C previous ones

D several surprises

Audio Guideline

Text Only
If the question or stem has the word that rhymes or has a specific sound, read that word, but do not read the answers.

Appendix I

Do not try and read aloud misspelled words as pronunciation is somewhat subjective.

Text and Graphics
When an item is measuring rhyming of words or sounds of words, speak the individual letters in the word instead of speaking the word. If the question or stem has the word that rhymes or has a specific sound, read that word and spell out the answer options.

For questions containing intentionally misspelled words, spell out any word for which the student needs to consider spelling correctness/incorrectness.

Do not try and read aloud misspelled words as pronunciation is somewhat subjective.

Application of Audio Guideline

Example 1

Text Only
Which word rhymes with cone?
A: A
B: B
C: C
D: D

Text and Graphics
Which word rhymes with - cone?
A: B – O – T - H
B: D – O – N - E
C: C – O – R - N
D: O – W - N

Example 2

Text Only
Which word has the same vowel sound as soak?
A: A
B: B
C: C
D: D

Text and Graphics
Which word has the same vowel sounds as - soak?
A: S – T – I - R
B: L – O – O - K
C: K – I – C - K
D: R – O – P - E

Example 3

Text Only
Which phrase from the report contains an underlined word that is spelled incorrectly?
A: A
B: B
C: C
D: D

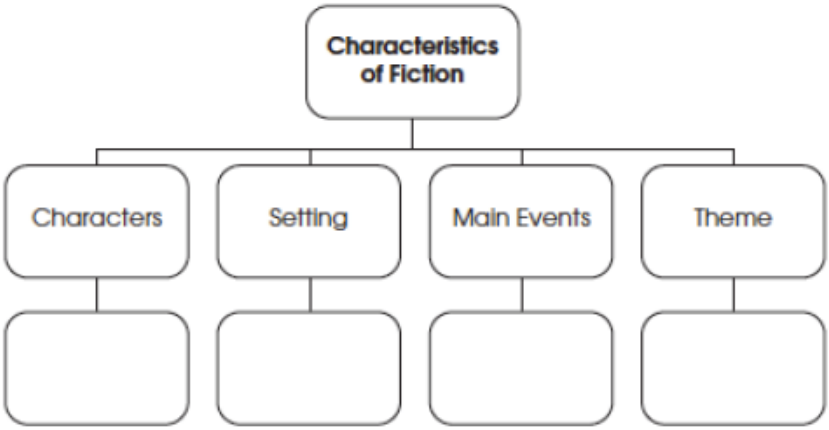
Text and Graphics
Which phrase from the report contains an underlined word that is spelled incorrectly?
A: A – N – C – I – E - N - T mazes
B: friends and N – I – E – G – H – B – O – R - S
C: P – R – E – V – I – O – U - S ones
D: several S – U – R – P – R – I – S – E – S

Graphic Organizers

Example 1

38. "We put the crushed cocoa beans into a chocolate pot."

Which column in the graphic organizer below would include this detail?

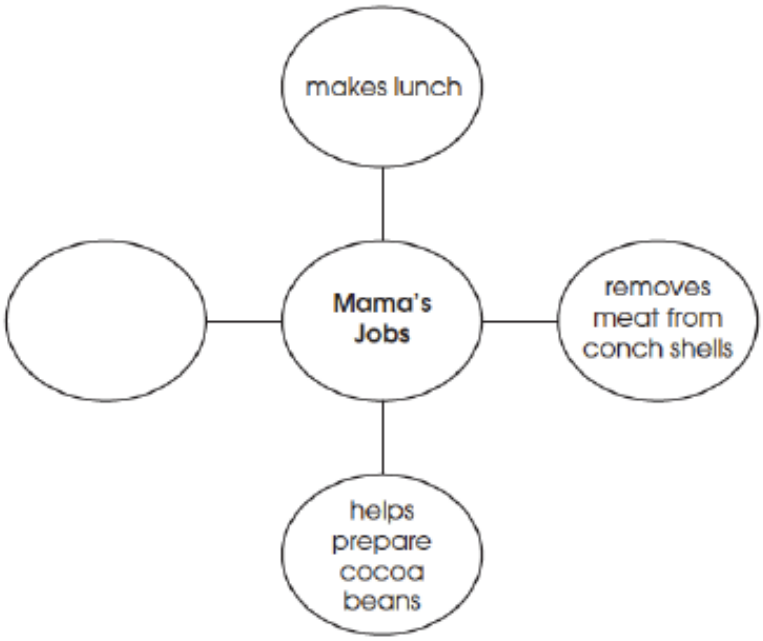


A. Characters
B. Setting
C. Main Events
D. Theme

Appendix I

Example 2

41.



According to information in the selection, which phrase should be added to the graphic organizer above?

A. makes chowder from conchs

B. hollows a log to make a canoe

C. plants cacao trees in the shade

D. crushes cocoa beans in a mortar

Audio Guideline

Text Only
Read the title of the graphic organizer, if available, before reading the rest of the text in the graphic organizer.

Text and Graphics
If the organizer is structured like a table or has a structure similar to a table, refer to the PARCC Math Audio Guidelines document.

If the organizer is structured like a word web, follow the rules in this document for word webs.

Application of Audio Guideline

Example 1
Graphic organizer with a cell labeled "Characteristics of Fiction" at the top. Below the top cell there are four columns and two rows. The first row has columns labeled "Characters," "Setting," "Main Events," and "Theme." Below each labeled cell is a blank cell.

Example 2
Center cell, Mama's Jobs; connecting cells, read clockwise from the top, makes lunch, removes meat from conch shells, helps prepare cocoa beans, blank.

Different Types of Text

Play, Example 1

Setting: Deep in the forest. Tall stool is center, shorter stool is left.
At Rise: Leopard is seated on tall stool, beating drum. Turtle enters left and slowly moves to center and sits on smaller stool.
Leopard (pounding drum and chanting): The forest is mine all night and all day. . .
Turtle (shouting over drum): Good morning, Leopard. I've been listening to your music. You have a fine sounding drum and a fine voice as well.
(Leopard stops pounding drum and looks up.)

Play, Example 2

Jay: Who's that? (Turning the flashlight on the man)
Louie: Get that light outta my face and go back to sleep, Kid.
Jay: There's nothing here to steal, Mister. I swear.
Louie: Is that you, Jay?
Jay: Yeah, who are you?
Louie: It's Uncle Louie.
Jay: Uncle Louie? No kidding? . . . Arty! It's Uncle Louie.

Application of Audio Guideline

Example 1

Setting: - (Voice 1) - Deep in the forest. Tall stool is center, shorter stool is left.
At Rise: - (Voice 1) - Leopard is seated on tall stool, beating drum. Turtle enters left and slowly moves to center and sits on smaller stool.
Leopard - (Voice 1) - pounding drum and chanting: - (Voice 2) - The forest is mine all night and all day- dot – dot – dot -
Turtle - (Voice 1) - shouting over drum: - (Voice 2) - Good morning, Leopard. I've been listening to your music. You have a fine sounding drum and a fine voice as well. - (Voice 1) - Leopard stops pounding drum and looks up.

Example 2

Jay - (Voice 1) - Who's that? - (Voice 2) - Turning the flashlight on the man.
Louie - (Voice 1) - Get that light outta my face and go back to sleep, Kid.

Jay - (Voice 1) - There's nothing here to steal, Mister. I swear.
Louie - (Voice 1) - Is that you, Jay?
Jay - (Voice 1) - Yeah, who are you?
Louie - (Voice 1) - It's Uncle Louie.
Jay - (Voice 1) - Uncle Louie? No kidding? – dot – dot – dot - Arty! It's Uncle Louie.

Poem, Example 1

Carrying the Snake to the Garden
In the cellar
was the smallest snake
I have ever seen.
It coiled itself
in a corner
and watched me
with eyes
like two little stars
set into coal,
and a tail
that quivered.
One step
of my foot
and it fled
like a running shoelace,
but a scoop of the wrist
and I had it
in my hand.
I was sorry
for the fear,
so I hurried
upstairs and out the kitchen door
to the warm grass
and the sunlight
and the garden.
It turned and turned
in my hand
but when I put it down
it didn't move.
I thought
it was going to flow
up my leg
and into my pocket.
I thought, for a moment,
as it lifted its face,
it was going to sing.
And then it was gone.
—*Mary Oliver*

Appendix I

Poem Example 2

Sheepdog

In the green field stand the scattered sheep,
pretending innocence,
and the Shepherd standing
just beyond the field—
and at the Shepherd's feet, poised,
the rough-coat collie dog, with one thought only.
It is the woolies.
Her eyes, one blue, one brown
never leave them.

When the Shepherd's whistle
releases her,
she's off, like an arrow, running east,
her bared teeth showing
the wolf that still lives in her.
She circles wide, closing in,
a black and white blur at
the edge of a sheep's bad dream.
But the Shepherd whistles, twice for *right*
and once for *left,*
and the dog holds back,
bringing order out of her own wildness,
serving the man's need.

By sundown,
the circle is complete.
The sheep are penned.
The tired Shepherd, the panting dog
head for home, each
more than they would be alone,
the ring the dog marked, running,
symbol of their union.

Appendix I

Audio Guideline

Text Only
Read the poem paying attention to the layout of the stanzas. Do not reference given line numbers.
Use extended pauses for the start of a new stanza.

Text and Graphics
Read the poem paying attention to the layout of the stanzas. Reference the line numbers associated with the first and last line of a stanza. For example, say, "Start of stanza line 12 . . . End of stanza line 18."
Use extended pauses for the start of a new stanza or reference the new stanza if deemed necessary.
Use the above rules for emphasis.

Application of Audio Guideline
Example 1
Read the poem as is line by line.

Example 2
In the green field stand the scattered sheep,
pretending innocence,
and the Shepherd standing
just beyond the field
and at the Shepherd's feet, poised,
the rough-coat collie dog, with one thought only.
- *It is the woolies.* -
Her eyes, one blue, one brown
never leave them. – End of stanza – line 9
Start of stanza – line 10 - When the Shepherd's whistle
releases her,
she's off, like an arrow, running east,
her bared teeth showing
the wolf that still lives in her.
She circles wide, closing in,
a black and white blur at
the edge of a sheep's bad dream.
But the Shepherd whistles, twice for - right
and once for - left,
and the dog holds back,
bringing order out of her own wildness,
serving the man's need. – end of stanza – line 22
start of stanza – line 23 - By sundown,
the circle is complete.
The sheep are penned.
The tired Shepherd, the panting dog
head for home, each
more than they would be alone,
the ring the dog marked, running,
symbol of their union. – end of stanza – line 30 –

Political Cartoons

Example

Look at the cartoon below. Then answer the following.

"I'M SORRY, KID, BUT IT REALLY HURTS ME MORE THAN IT HURTS YOU"

According to the cartoon, what is a criticism of the juvenile justice system?

A. The system gives judges little choice in punishment.
B. The juvenile justice system wastes too much money.
C. The government has too much control over the lives of juveniles.
D. The courts make the community responsible for juveniles' actions.

Audio Guideline

Text Only
Read the title of the political cartoon, if available, before reading the rest of the text in the political cartoon.

Text and Graphics
Start by stating that it is a political cartoon.
Pay special attention to any writing in the cartoon (labels, titles, signs, etc.).
Read the caption of the cartoon.

Application of Audio Guideline

Example
A political cartoon showing an officer standing behind a boy who is standing before a judge. The judge has an open book that is titled "Comprehensive guidelines for sentencing juvenile offenders." The caption of the cartoon is I'm sorry, kid, but it really hurts me more than it hurts you.

Maps

Example
(Part of a passage and section on Machu Picchu that references many of the countries, cities, and geographical features labeled)

Audio Guideline

Text Only
Read the title of the map if available, then read the key, compass rose, and map from top to bottom, left to right as much as possible.

Text and Graphics
Read the title of the map if available, then read the key, compass rose, and map from top to bottom, left to right as much as possible.
For maps, a few words can be used to describe the map unless the item requires the student to use the map to answer the question.

Application of Audio Guideline

Example
A map showing a portion of South America: Ecuador; Amazon River; Urbamba River; Peru; Vilcabamba, Brazil; Machu Picchu; Andes Mountains; Cuzco, Bolivia; Atacama Desert; Chile; Argentina.

Timelines

Example 1

Timeline

Edmund Halley is born	Halley observes the comet for the first time	Halley visits Isaac Newton to discuss the laws of gravity	Halley focuses on the study of comets	Halley dies	The comet returns to view as Halley predicted
1656	1682	1684	1704	1742	1759

Example 2

Born in an Indian village in Mexico	Left home and walked 41 miles to Oaxaca	Began his education at a seminary	Became governor of the state of Oaxaca	Escaped to New Orleans after General Santa Anna seized the government	Returned to Mexico and helped the revolution overthrow Santa Anna	Became Minister of Justice	Elected President of Mexico	Died in Mexico City
1806	1818	1821	1847	1853	1855	1857	1861	1872

Audio Guideline

Text Only
Read the title of the timeline and text from top to bottom, column to column.

Text and Graphics
State that it is a timeline and read the title first or any brief note of what the timeline represents.

State the direction of the timeline and direction of reading.

Read the timeline in chronological order, keeping text with the corresponding date.

Read the date first, followed by the corresponding text that accompanies it.

Application of Audio Guideline

Example 1
A timeline of Edmund Halley's life. From left to right, the timeline reads, sixteen fifty-six, Edmund Halley is born; sixteen eighty-two, Halley observes the comet for the first time; sixteen eighty-four, Halley visits Isaac Newton to discuss the laws of gravity; seventeen oh-four, Halley focuses on the study of comets; seventeen forty-two, Halley dies; seventeen fifty-nine, The comet returns to view as Halley predicted.

Example 2
A timeline of Benito Juarez's life. From left to right the timeline reads, eighteen oh-six, Born in an Indian village in Mexico; eighteen eighteen, Left home and walked forty-one miles to Oaxaca; eighteen twenty-one, Began his education at a seminary; eighteen forty-seven, Became governor of the state of Oaxaca; eighteen fifty-three, Escaped to New Orleans after General Santa Anna seized the government; eighteen fifty-five, Returned to Mexico and helped the revolution overthrow Santa Anna; eighteen fifty-seven, Became Minister of Justice; eighteen sixty-one, Elected President of Mexico; eighteen seventy-two, Died in Mexico City.

Fill in the Blank

Example

❷ The word clothes belongs in which sentence?

- ○ A. My old _____ no longer fit me.
- ○ B. Please _____ the door on your way out.
- ○ C. The lights will come on at the _____ of the show.
- ○ D. She had to _____ the store because of the storm.

Audio Guideline

Text Only
Read the blank element with a pause, then "blank" followed by a pause.

Text and Graphics
Read the blank element with a pause, then "blank" followed by a pause.

If the space to be filled in has a question mark, read it as "unknown x" where x is the line, box, bubble, cell, etc.

For technology enhanced items where the blank is in the shape of a box, read the blank box with a pause, then "blank box" followed by a pause.

Application of Audio Guideline
Example
Text Only; Text and Graphics
A: My old - blank - no longer fit me.
B.: Please - blank - the door on your way out.
C: The lights will come on at the – blank - of the show.
D: She had to - blank - the store because of the storm.

Pictures

Example 1

An Air Force LC-130, equipped with skis for landing, transports scientists and workers to Antarctica and back.

American scientists and their helpers who are traveling to the interior of Antarctica fly from Christchurch, New Zealand, on U.S. Air Force planes, operated by the 109th Airlift Wing of the New York Air National Guard. These LC-130s are outfitted with skis instead of wheels for landing on the ice runways.

The flight from Christchurch to McMurdo Station, the biggest American base in Antarctica, takes eight hours. Boomerang flights—ones that turn around midway—are common. The planes can't carry enough fuel to fly to Antarctica and back again to New Zealand. They must refuel in Antarctica. But when there's a blizzard on the ice, the pilots can't land to refuel. So at the midway point, the pilot always radios ahead. If there's a chance of a storm, the plane turns around and flies back to New Zealand. One third of all flights headed for Antarctica are forced to turn around midway. This midway point is called the point of no return.

Example 2

Read the following two selections. Think about how they are alike and how they are different.

Reminiscing

by Ralph Cortez

Watermelons were so much sweeter then,
When boys were the stuff of super men,
And summers seemed so much longer too,
With nothing pending and nothing due.
We were swordsmen—swashbuckling heroes,
Eternal victors—never zeroes;
Second basemen and clean-up hitters;
Forever winners, never quitters.
Play was a ritual in those days,
To go on magical mind forays,
To play the game with aplomb and ease,
To venture forth when and where we'd please.
We would feign death, and then rise up again.
Watermelons were so much sweeter then.

Piano

by D. H. Lawrence

Softly, in the dusk, a woman is singing to me:
Taking me back down the vista of years, till I see
A child sitting under the piano, in the boom of the tingling strings
And pressing the small, poised feet of a mother who smiles as she sings.

In spite of myself, the insidious mastery of song
Betrays me back, till the heart of me weeps to belong
To the old Sunday evenings at home, winter outside
And hymns in the cozy parlor, the tinkling piano our guide.

So now it is vain for the singer to burst into clamor
With the great black piano appassionato. The glamour
Of childish days is upon me, my manhood is cast
Down in the flood of remembrance, I weep like a child for the past.

[Public Domain]

CSR11098

Appendix I

Example 3

Whites and African Americans participated and sometimes worked together. Many of the African Americans were escaped slaves themselves, but they continued to risk their lives to help others. There were ordinary farmers, ministers, and housewives. Many well-known political and religious leaders from the black and white communities were also active supporters. In 1859, a congressman named Owen Lovejoy gave a speech in which he announced that he worked with the Underground Railroad. In the speech, he boldly said: ***"Owen Lovejoy . . . aids every fugitive that comes to his door and asks it. Proclaim it then from the housetops. Write it on every leaf that trembles in the forest, make it blaze from the sun at high noon."***

Audio Guideline

Text Only
After the paragraph that refers to the picture, read the title, if available. Read embedded text and/or caption, and then read text.

Text and Graphics
Before describing the picture, it should be determined whether the details of the picture are necessary to understanding and responding to the item(s). In many cases, the picture will be used to accompany a passage or reading excerpt as a piece of visual interest that is not essential in responding to the item. In this case, a very brief description may suffice.

In other cases, the caption or embedded text will describe the picture and only limited additional information is necessary.

In general, read the title of the picture or caption (if it is meant to serve as a title) if there is one.

Application of Audio Guideline

Example 1
A picture showing an airplane.

American scientists and their helpers who are traveling to the interior of Antarctica fly from Christchurch, New Zealand, on U.S. Air Force planes, operated by the 109th Airlift Wing of the New York Air National Guard. These LC-130s are outfitted with skis instead of wheels for landing on the ice runways.

The flight from Christchurch to McMurdo Station, the biggest American base in Antarctica, takes eight hours. Boomerang flights—ones that turn around midway—are common. The planes can't carry enough fuel to fly to Antarctica and back again to New Zealand. They must refuel in Antarctica. But when there's a blizzard on the ice, the pilots can't land to refuel. So at the midway point, the pilot always radios ahead. If there's a chance of a storm, the plane turns around and flies back to New Zealand. One third of all flights headed for Antarctica are forced to turn around midway. This midway point is called the point of no return.

Example 2
A picture of a sliced watermelon.

A picture of a piano with musical notes coming from it.

Example 3
A picture of a slave with chains on his hands and feet. The caption reads "Am I Not a Man and a Brother?"

Boxed Sentences or Paragraphs

Example 1

"This is your last chance to change your mind" said the operator.

What does the sentence suggest about a ride on the Space Shot?

Example 2

Nothing was different except the warm glow that was in my belly and my arms and my legs and my head and wouldn't go away.

Which of the following words is an adjective as it is used in the sentence?

Audio Guideline

Text Only
Read the boxed sentence/word as is with a pause before and after to reflect a return to normal formatting.

Text and Graphics
Preface the boxed sentence/word by saying "boxed x" (x being sentence, word, etc.).

Pause after reading the information in the box to indicate a return to normal formatting.

Application of Audio Guideline

Example 1
What does the sentence suggest about a ride on the Space Shot?

Boxed sentence, - This is your last chance to change your mind, - said the operator. -
(Answer options are read.)

Example 2
Which of the following words is an adjective as it is used in the sentence?

Boxed sentence, - Nothing was different except the warm glow that was in my belly and my arms and my legs and my head and wouldn't go away. -

(Answer options are read.)

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Appendix J: PARCC Mathematics Audio Guidelines

Version 3.0

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Visuals

Guidelines for Text-to-Speech Descriptions
Use these guidelines to describe visuals for text-to-speech scripts:

Read the title.

Provide a general overview of the image. (i.e., A map of South America, a graphic organizer with a center circle and four circles radiating outward)

Begin with the main section of the image.

Describe the details in a succinct manner using grade-level appropriate vocabulary.

Omit minor details that are irrelevant (a box to the left of the person).

If facial expressions or body language are important, do not assume a blind student can interpret them. For example, it is better to describe a person as worried than to state they have furrowed brows.

When describing several people in an image, label each one clearly so they are not mixed up. (i.e., tall man, elderly man, little boy)

Describe only what is seen in the image, do not provide interpretation or additional information.

Classifications for Embed Coding Scheme for Text Descriptions
An embed code within the alt text will be included for all test items with visual elements. The embed code will be classified as a 1, 2 or 3. The description of each level is listed below:

[1] is not construct-relevant and can be eliminated (e.g., it is only there for engagement purposes). For example, a picture of an elephant added purely for engagement would has alt text that reads “elephant [1]” or “picture of elephant [1].”

[2] is construct-relevant and can be represented using accompanying textual description. Example of text where reading the graph is construct-relevant: The graph title is Roller Rink costs. Key, dashed line represents Roller Rink A, solid line represents Roller Rink B. The x-axis is labeled number of people. The y-axis is labeled cost in dollars. The dashed arrow starts at zero people, sixty dollars and points to a little less than sixteen people, midway between one hundred and one hundred ten dollars. The solid arrow starts at zero people, a little less than ten dollars and points to a little more than fourteen people, a little less than one hundred ten dollars. [2]

[3] is construct-relevant and can be represented using accompanying textual description together with a tactile representation or physical manipulative. Example of text where reading the graph is construct-relevant: The graph title is Roller Rink costs. Key, dashed line represents Roller Rink A, solid line represents Roller Rink B. The x-axis is labeled number of people. The y-axis is labeled cost in dollars. [3]

Accessibility experts will be trained on this embedded coding scheme during the item tagging phase of item development.

Symbols

Money ($)

Example 1
$4.35

Example 2
$2.50

Example 3
$5,390

Audio Guideline
Read dollars and cents if there is a decimal point.

Do not read shortcuts for numbers. For instance $.25 and $1.50 should be read as twenty-five cents instead of a quarter. This will allow a more standardized presentation of monetary quantities.

If the amount is less than one dollar, read "X cents" and do not read the zero ($0.35 is "thirty-five cents" not "zero dollars and thirty-five cents").

Read the number place value unless the question is measuring place value (refer to the large number section for details).

Application of Audio Guideline

Example 1
Four dollars and thirty-five cents

Example 2
Two dollars and fifty cents

Example 3
Five thousand three hundred ninety dollars

Angles/Triangles (∠ and Δ)

Example 1
∠ RST

Example 2
Δ RST

Example 3
Δ R'S'T'

Audio Guideline
Read angles and shapes by leading with "angle," "shape," etc. and then reading letters individually.

When reading a transformed or reflected angle or shape that uses " ' ", describe as "prime."

Do not reference the case of the letter unless an item includes uppercase and lowercase letters. In this instance, make reference to the uppercase letters guideline.

Application of Audio Guideline
Example 1
Angle RST

Example 2
Triangle RST

Example 3
Triangle R prime S prime T prime

Ratios (:)

Example
3:2

Audio Guideline
Read as "the ratio x to y."

Sometimes the ratio symbol is used for fractions. This can usually be determined by context. If this is the case, refer to the fraction guideline.

If the "the ratio of" is used in the item, read as "x to y" to avoid being redundant.

Application of Audio Guideline
Example
The ratio three to two

Equal Signs (=)

Example
2 + 3 = 5

Audio Guideline
Read as “equals.”
Application of Audio Guideline

Example
Two plus three equals five.

Pi (π)

Audio Guideline
Read as “pi.”

Approximately equal to (≈)

Example
π ≈ 3.14

Audio Guideline
Read as “is approximately equal to.”

Application of Audio Guideline
Example
Pi is approximately equal to three point one four.

Less than (<)

Example 1
3<5

Example 2
x<y<z

Audio Guideline
Read as “is less than.”
If there is more than one “less than” sign in a string, then read the whole relationship together. Read the last part as “is less than.”

Application of Audio Guideline
Example 1
Three is less than five.

Example 2
X is less than y is less than z.

Less than or equal to (≤)

Example
$2x \leq 6$

Audio Guideline
Read as "is less than or equal to."

Application of Audio Guideline
Two x is less than or equal to six.

Greater than (>)

Example 1
7>5

Example 2
x>y>z

Audio Guideline
Read as "is greater than."

If there is more than one "greater than" sign read the whole relationship together. Start the last part as "is greater than."

Application of Audio Guideline
Example 1
Seven is greater than five.

Example 2
X is greater than y is greater than z.

Greater than or equal to (≥)

Example
$3x \geq 6$

Audio Guideline
Read as "is greater than or equal to."

Application of Audio Guideline
Three x is greater than or equal to six.

Dashes (–)

Example 1
Pages 3–7

Audio Guideline
When the dash is used to reference material or as a group of conditions, use “through” for consecutive and non-consecutive numbers.

Application of Audio Guideline
Example 1
Pages three through seven

Temperatures (°F and °C)

Example 1
35°F

Example 2
25°C

Audio Guideline
Read as “degrees Fahrenheit” and “degrees Celsius.”

Application of Audio Guideline
Example 1
Thirty-five degrees Fahrenheit

Example 2
Twenty-five degrees Celsius

Parallels ($\overline{RS} \mid\mid \overline{XY}$)

Audio Guideline
Read as “is parallel to.”

Application of Audio Guideline
Line segment RS is parallel to line segment XY.

Perpendiculars (⊥)

Example
$\overline{EF} \perp \overline{GH}$

Audio Guideline
Read as “is perpendicular to.”

Application of Audio Guideline
Line segment EF is perpendicular to line segment GH.

Abbreviations (ft., km)
Example 1
3ft.

Example 2
What is the correct abbreviation for kilometer?
A: kl
B: K
C: km
D: klm

Audio Guideline
Present abbreviations by speaking the whole word the abbreviation represents.

If the item measures the ability to identify the meaning of the abbreviation, then read the abbreviation letter by letter.

If speaking the abbreviation violates the construct being measured, then read letter by letter.

If the item has measurements that are all uppercase or lowercase, then it is not necessary to reference the cases.

Application of Audio Guideline
Example 1
Three feet

Example 2
What is the correct abbreviation for kilometer?
A: kl
B: K
C: km
D: klm

Measurement (“ ‘ cm^2)

Example 1
6”

Example 2
12’

Example 3
$4cm^2$

Example 4
$5cm^3$

Appendix J

Audio Guideline
Present measurements by speaking the whole word the symbol represents.

Application of Audio Guideline
Example 1
Six inches

Example 2
Twelve feet

Example 3
Four square centimeters

Example 4
Five cubic centimeters

Number Signs (#)

Example
Refer to step #5.

Audio Guideline
Read as "number."

Rule refers only to when symbol is being used to signify "number" as opposed to other non-mathematical uses of the symbol (for example, the pound key and the hash key).

Application of Audio Guideline
Example
Refer to step number five.

Empty/Unknown Boxes (□)

Example 1
4 + 2x = □

Example 2
3 + y = □

Audio Guideline
Refer to an empty box in a formula or equation as "blank."

Refer to a box with a question mark in it as "question mark."

Application of Audio Guideline
Example 1
Four plus two x equals blank.

Example 2
Three plus y equals question mark.

Not equal to (≠)

Example
$2x \neq 7$

Audio Guideline
Read as "is not equal to."

Application of Audio Guideline
Two x is not equal to seven.

Arc (⌒)

Example
$\overset{\frown}{RT}$

Audio Guideline
Read as "arc."

Application of Audio Guideline
Example
Arc RT

Infinity (∞)

Example
As $x \rightarrow \infty$, $f(x) \rightarrow -\infty$

Audio Guideline
Read as "infinity."

Application of Audio Guideline
Example
As x approaches infinity, f of x approaches negative infinity.

Percent (%)

Example
35%

Audio Guideline
Read as "percent."

Application of Audio Guideline
Thirty-five percent

Appendix J

Lines: Line Segment, Line, and Ray ($\overline{FG}$, $\overleftrightarrow{JK}$, $\overrightarrow{LM}$)

Example 1: Line Segment
$\overline{FG}$

Example 2: Line
$\overleftrightarrow{JK}$

Example 3: Ray
$\overrightarrow{LM}$

Audio Guideline
Read as "line segment," "line," or "ray" when they appear above letters or numbers.

Application of Audio Guideline
Example 1
Line segment FG

Example 2
line JK

Example 3
ray LM

Similar to (~)

Example
$\Delta EFG \sim \Delta JKL$

Audio Guideline
Read as "is similar to."

Application of Audio Guideline
Example
Triangle *EFG* is similar to triangle *JKL*.

Therefore ($\therefore$)

Example
$A=B$ and $B=C$ $\therefore A=C$

Audio Guideline
Read as "therefore."

Application of Audio Guideline
Example
A equals *B* and *B* equals *C*, therefore *A* equals *C*.

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Congruent (≅)

Example

$\angle FGH \cong \angle JKL$

Audio Guideline

Read as "is congruent to."

Application of Audio Guideline

Example

Angle FGH is congruent to angle JKL.

Factorial (!)

Example

$5! = x$

Audio Guideline

Read as "factorial."

Application of Audio Guideline

Example

Five factorial equals x.

Plus or Minus (±)

Example

The margin of error is $4.5 \pm .8$

Audio Guideline

Read as "plus or minus."

Application of Audio Guideline

Example

The margin of error is four point five plus or minus point eight.

Subscript (A_i)

Example

A_i represents the maximum amount of interest.

Audio Guideline

Read as "x subscript y."

Application of Audio Guideline

A subscript *i* represents the maximum amount of interest.

Appendix J

Numbers

Negative/Positive Numbers

Example 1
–4

Example 2
4 – –5

Example 3
What is the distance between +4 and –3 on the number line?

Audio Guideline
Read as "negative." Do not read the negative sign as a minus sign.

In most cases, consecutive negatives that are intended to show the negative of a negative will be represented with a set of parentheses. If this is the case, then refer to the parentheses section.

If the negative of a negative does not include parentheses, read as "negative (pause) negative."

Two consecutive negatives should not be read as "negative negative *X*" if the operation is focused on subtraction. In this case, read as "minus negative *X*."

If a positive sign precedes a number and is not part of an operation, then read as "positive."

Application of Audio Guideline
Example 1
Negative four

Example 2
Four minus negative five

Example 3
What is the distance between positive four and negative three on the number line?

Large Whole Numbers

Example 1
103,457

Example 2
Item 2

Virginia covers one hundred two thousand, five hundred fifty-eight square kilometers of land. Which shows this number? A. 1,258 B. 12,558 C. 102,558 D. 1200,558

Audio Guidelines
For items not measuring place value, read large numbers by referencing all of the number place values.

If the item measures place value knowledge, read the number digit by digit using commas.

If reading the number as a whole number violates the construct being measured, read the number digit by digit.

Application of Audio Guideline
Example 1
One hundred three thousand, four hundred fifty-seven
Note: Use this application unless cueing occurs; then use the application in Example 2.

Example 2
A: one comma two five eight
B: one two comma five five eight
C: one zero two comma five five eight
D: one comma two zero zero comma five five eight

Fractions/Improper Fractions
Example 1
$\frac{1}{2}+\frac{3}{8}$

Example 2
$\frac{3}{14}+\frac{15}{100}-\frac{\mathrm{x}}{2\mathrm{y}}$

Example 3
$\frac{3x+y}{z}$

Example 4
$\frac{6}{3}$

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Example 5
$\frac{3x}{5} + x^2$

Audio Guidelines
Read common fractions by presenting the numerator as the number it represents and the denominator as the ordinal number using two words for the whole presentation.

Read any fraction with a numerator of____ (pause)…and denominator of _____.

If the denominator is between 2 and 10 then read it is as one third, one fourth, one fifth, one sixth, one seventh, one eighth, one ninth, or one tenth.
An exception to the first guideline is $\frac{1}{2}$, which should always be read as one-half.
An exception to the first guideline is 1 in the denominator. For example, $\frac{3}{1}$ should be read as numerator of 3 (pause)…and denominator of 1.

When a fraction is complex (e.g., has more than one number in the numerator/denominator, includes an arithmetic operation, or involves parentheses/exponents) denote the numerator and denominator using the language "fraction with numerator…and denominator…."

When an operation follows a fraction, pause between the fraction and the next operation.

Application of Audio Guidelines
Example 1
One-half plus three-eighths

Example 2
Fraction with numerator of 3 (pause) and denominator of 14 plus the fraction with numerator of fifteen, denominator of one hundred minus fraction with numerator of x, denominator of two y

Example 3
Fraction with numerator three X plus Y - denominator of Z

Example 4
Six-thirds

Example 5
Fraction with numerator of three x and denominator of 5 (pause) plus x squared

Mixed Numbers
Example 1
$4\frac{3}{4}$

Example 2
$5\frac{13}{28}$

Audio Guidelines
Read with “and” between the whole number and the fraction.
Use fraction audio guidelines for reading fraction portion of mixed numbers.

Application of Audio Guidelines
Example 1
Four and three fourths

Example 2
Five and numerator of thirteen (pause) denominator of 28

Decimal Points

Example 1
40.6500

Example 2
0.100000

Example 3
0.0000000002

Example 4
0.333…

Example 5
3,450.0844397

Audio Guidelines
If there are up to six repeating zeroes or numbers before or after the decimal point, read them as “zero and three repeating.”

If there are more than six repeating zeroes or numbers after the decimal point (beyond millionths), say “point” and read the digits in order from left to right.

Read “repeating” where “…” represents the number of group of numbers that repeats.

Application of Audio Guidelines
Example 1
Forty point six five zero zero

Example 2
Zero point one zero zero zero zero zero

Example 3
Zero point zero zero zero (pause) zero zero zero (pause) zero zero zero two

Example 4
Zero point three repeating

Example 5
Three thousand four hundred fifty point zero eight four (pause) four three nine seven

Roman Numerals

Example 1
Find the point in quadrant II that is furthest from the origin.

Example 2
V. Three students walked to school taking different routes.

Example 3
What is the numeric value of Roman numeral VII?

Audio Guidelines
If an item uses Roman numerals but is not measurement knowledge of Roman numerals, read the Roman numeral reference and then the number.

If the item measures knowledge of Roman numeral value, read "Roman numeral" followed by the letters one at a time.

Application of Audio Guidelines
Example 1
Find the point in quadrant two that is furthest from the origin.

Example 2
Question five. Three students walked to school taking different routes.

Example 3
What is the numeric value of Roman numeral V I I?

Time

Example 1
6:30

Example 2
9 a.m.

Example 3
5:45

Audio Guidelines
Read the time literally without using shortcuts or reading the time in reference to a different version of

time (e.g., noon, quarter of six, ten after five).

Read a.m. and p.m. without adding language about the time of day (e.g., “in the morning” or “at night.”)

Application of Audio Guidelines
Example 1
Six thirty

Example 2
Nine a m

Example 3
Five forty five

Date
Example 1
1976

Example 2
Feb. 5, 2003

Audio Guidelines
Read years as they would be read in plain language usage.

Read months as the full name even if abbreviations are presented in text.

Read days as you would when reading a date instead of reading the day as number (e.g., “second” instead of “two,” “third” instead of “three,” or “fourth” instead of “four”).

Application of Audio Guidelines
Example 1
Nineteen seventy six

Example 2
February fifth, two thousand three

Ordered Pairs
Example
Point X is

Audio Guideline
Read coordinate pairs as “ordered pair X, Y.”

Application of Audio Guideline
Point X is the ordered pair negative two, four.

Probability

Example

P(orange) = $\frac{1}{6}$

Audio Guideline

"P(text)" is the notation for probability. When reading a probability, do not read parentheses as "open parenthesis/close parenthesis." Read as "P of" word in parentheses "is" remaining text.

Application of Audio Guideline

Example

P of orange is one-sixth

Expressions/Equations/Operations

Multiplication

Example 1

$3 \times 5 = X$

Example 2

$xy + 4x = 10$

Example 3

$(3 + x)(y - 2)$

Audio Guidelines

Read the multiplication symbol as "times" when it appears in a math item.

When a number, symbol, or another set of parentheses appears before a set of parentheses, read the number or symbol as is and "open parenthesis" before what is within the parentheses. When multiple sets of parentheses appear consecutively, read as "open parenthesis and closed parenthesis."

If there are two variables or a variable and a number consecutively, do not read "times" to represent implied multiplication.

Application of Audio Guidelines

Example 1

Three times five equals *X*.

Example 2

xy plus four *x* equals ten.

Example 3

Open parenthesis three plus *x*, close parenthesis, (pause) open parenthesis *y* minus two, close parenthesis.

Addition

Example
4 + 2 + 3

Audio Guideline
Read as “plus.”

Application of Audio Guideline
Four plus two plus three

Subtraction

Example
5 – 3

Audio Guideline
Read as “minus.”

Application of Audio Guideline
Five minus three

Division

Example 1
12 ÷ 4

Example 2
What is 57 ÷ 5
A: 10 R7
B: 11 R2
C: 12

Audio Guideline
Read as “divided by.”

If the item presents the remainder as “R” read as “remainder” unless the item is measuring the meaning of “R.” In this case, read it as “R.”

Application of Audio Guideline
Example 1
Twelve divided by four

Example 2
What is fifty-seven divided by five?
A: ten, remainder seven
B: eleven, remainder two
C: twelve

Parentheses

Example 1

$3(x + y) = 6$

Example 2

$2(x + 3) + \frac{(y - 2)}{3} = 9$

Example 3

$(x + 4)[(x + 4) - (x - 2)]$

Audio Guideline

Read the parentheses by referring to the opening of the parentheses using the language "open parenthesis" and the closing of the parentheses using the language "close parenthesis."

It is important to reference the close of the parentheses to be clear on when the parenthetical expression ends.

When reading an equation or expression with multiple parts and sets of parentheses, pause to help differentiate between sections.

Read brackets using the same language as parentheses in the first guideline.

Application of Audio Guideline

Example 1

Three open parenthesis *x* plus *y* close parenthesis equals six.

Example 2

Two open parenthesis *x* plus three close parenthesis (pause) plus (pause) the fraction with numerator open parenthesis *y* minus two close parenthesis and denominator three (pause) equals nine.

Example 3

Open parenthesis *x* plus four close parenthesis, open bracket, open parenthesis, *x* plus four close parenthesis minus open parenthesis *x* minus two close parenthesis, close bracket.

Mathematical Exponents (x^2, x^3, 4^5)

Example 1

$y = x^2$

Example 2

$y = 4^5 + 2$

Example 3

$y = 2^{x + 5} + 3$

Appendix J

Example 4
$16^{\frac{3}{2}} = 8^2$

Audio Guidelines
Read the base first—the base can be either a numeral or the variable.

If the exponent has a value of 2, then read "squared." If the exponent has a value of 3, read "cubed;" otherwise, read "raised to the *x*th power."

To indicate a return to the base, use a pause.

Read all negative exponents as "y raised to the negative xth power."

Read fraction exponents following the fractions rule.

Application of Audio Guidelines
Example 1
Y equals *x* squared.

Example 2
Y equals four raised to the fifth power (pause) plus two.

Example 3
Y equals two raised to the *x* plus five power (pause) plus three.

Example 4
Sixteen raised to the three halves power equals eight squared.

Variables/Letters

Example 1
$x + y = 3$

Example 2
In the triangle, what is the measurement of angle *A* that is opposite side *a*?

Example 3
$N + 4$

Example 4
$-x^3$

Audio Guideline
Read lowercase variables in a math item without referring to case.

If uppercase variables are used in a math item along with lowercase variables, then specify both cases

using the language “lowercase” and “uppercase.”

If an uppercase variable appears in a math item without a lowercase variable, then do not specify uppercase.

If a variable is preceded by a negative sign, read as the “opposite of” the variable, rather than the “negative of” the variable.

Application of Audio Guideline
Example 1
X plus *y* equals three.

Example 2
In the triangle below, what is the measurement of angle uppercase *A* that is opposite side lowercase *a*?

Example 3
N plus four

Example 4
Opposite of *x* cubed

Logs

Example 1
$Log_{10}100 = 2$

Example 2

69 **If $\log 2 \approx 0.301$ and $\log 3 \approx 0.477$, what is the approximate value of log 72?**

A 0.051

B 0.778

C 0.861

D 1.857

Example 3
ln x

Audio Guidelines

Read “log” followed by the base, the word “of,” and then the number or variable.

If the log is shown without an explicit base, then read as “log” and the number or variable shown. Do not interpret the implied base of 10 if it is not written.

Read “ln x” as “natural log of x.”

Application of Audio Guidelines
Example 1
Log base ten of one hundred equals two.

Example 2
If log two is approximately equal to zero point three zero one and log three is approximately equal to zero point four seven seven, what is the approximate value of log seventy-two?

Example 3
Natural log of x

Radicals

Example 1
$\sqrt{2}$

Example 2
$\sqrt[4]{144} = \sqrt[x]{288}$

Example 3
$\sqrt[m+n]{x+y}$

Audio Guidelines
For radicals with an implied radical index of two, read as “the square root of *x*.”

For radicals with a radical index of three, read as “the cube root of *x*.”

For radicals with a number for a radical index other than two or three, start by reading the index as “the *X*th root of.”

If the radical index is a variable, read as “the *x* root of *y*.”

When multiplying numbers by radicals (e.g.,), say “*x* times the square root of *y*.”

Application of Audio Guidelines
Example 1
The square root of two

Example 2
The fourth root of one hundred forty-four equals the *x* root of two hundred eighty-eight.

Example 3
The *m* plus *n* root of quantity *x* plus *y*

Appendix J

Absolute Values

Example 1
$|-16|$

Example 2
$|2 + 7|$

Example 3
$|x| + 1$

Audio Guidelines
Read as "the absolute value of."

Pause if an absolute value is part of a larger expression or equation.

Application of Audio Guidelines
Example 1
The absolute value of negative sixteen

Example 2
The absolute value of the quantity two plus seven

Example 3
The absolute value of *x* (pause) plus one.

Functions ($f(x)$)

Example 1
$f(x) = 5$

Example 2
$f(x + 1)$

Example 3
$f(g(x))$

Example 4
$f^{-1}(x) = -\frac{2}{3}x - 2$

Audio Guidelines
For function notation in general, read the first letter shown then the word "of," followed by the variable and/or number in parentheses.

When the expression inside the parentheses is more complex or includes another function, use the same rule of reading the letter first, then the word "of," followed by the variable or expression in parentheses.

When the inverse of a function is presented, read it as "f inverse of *x*."

Application of Audio Guidelines

Example 1

F of *x* equals five

Example 2

F of open parenthesis *x* plus one close parenthesis

Example 3

F of *g* of *x*

Example 4

The inverse of f of *x* equals negative two-thirds *x* minus two.

For function tables where one column/row is paired with one row/column:

The table should be read as it is organized, as (*x*, *y*) pairs, according to p. 44 (If the orientation of the table lends itself to reading the table information column by column and this is a more logical manner to present the table, then do so.)

Example

This table shows a relationship between *x* and *y*:

x	*y*
3	14
7	30
9	38

"The table has two columns and three rows. The first column heading is, *x*; the second column heading is, *y*. First row, 3, 14; second row, 7, 30; third row, 9, 38."

Example

This table shows a relationship between *x* and *y*:

x	3	7	9
y	14	30	38

"The table has two rows and three columns. The first row heading is, *x*; the second row heading is, *y*. First column, 3, 14; second column, 7, 30; third column, 9, 38."

System of Equations/Inequalities

Example 1

$$\begin{cases} x + y = 4 \\ x - y = 2 \end{cases}$$

What is the solution to the system of equations?

Appendix J

Example 2

7 **Which point lies in the solution set for the system** $\begin{cases} 2y - x \geq -6 \\ 2y - 3x < -6 \end{cases}$?

A $(-4, -1)$
B $(3, 1)$
C $(0, -3)$
D $(4, 3)$

Audio Guidelines
Start by reading "system of equations" or "system of inequalities." Then read the information in the system starting from the top to the bottom; reference the row position and insert a pause between rows.

Read equations and inequalities according to equation and inequality guidelines above.

Application of Audio Guidelines
Example 1
What is the solution to the system of equations? Top row, *x* plus *y* equals four (pause) bottom row, *x* minus *y* equals two.

Example 2
Which point lies in the solution set for the system of inequalities, top row, two *y* minus *x* is greater than or equal to negative six (pause) bottom row, two *y* minus three *x* is less than negative six.

Trigonometry

Example 1
sin15°=cos75°

Example 2
$\tan\theta = -1$

Audio Guidelines
Read the abbreviated versions of trigonometry functions in full words if doing so does not violate the construct being measured.

If the item is measuring knowledge of these abbreviations read letter by letter.

Use the Greek alphabet in reading trigonometric functions and items. The most used letter is theta (θ)

Application of Audio Guidelines
Example 1

Appendix J

Sine fifteen degrees equals cosine seventy five degrees

Example 2
Tangent theta equals negative 1

Tables

Example 1

Seashell Collection

Size	Number of Seashells
Small	3
Medium	6
Large	4

Example 2
Rock Types

	Shiny	Air Holes	Flat Layers	Fossils
Metamorphic	X		X	X
Igneous	X	X		
Sedimentary			X	X

Audio Guidelines
Text Only
Read the table title only. Allow for all content elements in the table to be read on demand.

Text and Graphics
Read the table title, and then state the number of rows and columns. Then read the column headings from left to right followed by reading the information in each row from left to right.

If the orientation of the table lends itself to reading table information column by column and this is a more logical manner to present the table, then do so.

Read the units of measure for each cell unless they are not specified in the table.

When reading a data table that has blank cells, skip over them if they are unnecessary to answer the question. Blank cells should be read if this information is essential to answer the item.

Remain consistent with the style of reading from table to table. Using a standardized version will help students better understand the patterns of the descriptions.

Many charts that are set up in a table format can be read in the manner described. Determine the layout

of such charts before deciding the best way to read the information being presented.

Application of Audio Guidelines

Example 1

The table title is Seashell Collection. The table has two columns and three rows. The first column heading is Size, the second column heading is Number of Seashells; first row, Small, three seashells); second row, Medium, six seashells; third row, Large, four seashells.

Example 2

The table title is Rock Types. The table has four columns and three rows. The first column heading is Shiny, the second column is Air Holes, the third column heading is Flat Layers, and the fourth column heading is Fossils; first row, Metamorphic, Shiny, Flat Layers, Fossils; second row, igneous, Shiny, and Air Holes; third row, Sedimentary, Flat Layers, and Fossils.

Tally Charts

Example

Name	Number of Votes
Tigers	𝍸 |
Rockets	|||
Sharks	𝍸 ||
Bobcats	||||

Audio Guideline

Text Only

Read the tally chart title only. Allow for all content elements in the chart except for the tally marks to be read on demand.

Text and Graphics

Read the tally chart title, column headings, and row headings.

Read the number of tally marks only if it does not violate the construct being measured. If reading tally marks does violate the construct being measured, tactile representation is required to make this item accessible to blind students and some low-vision students.

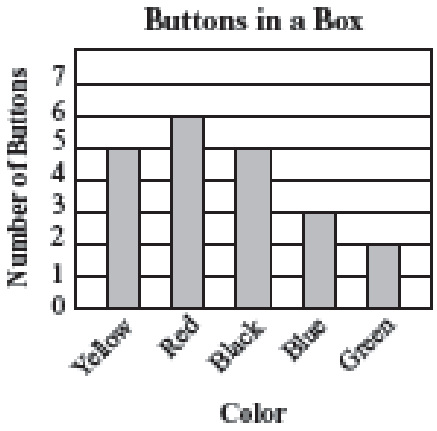
Application of Text and Graphics Guidelines

Example

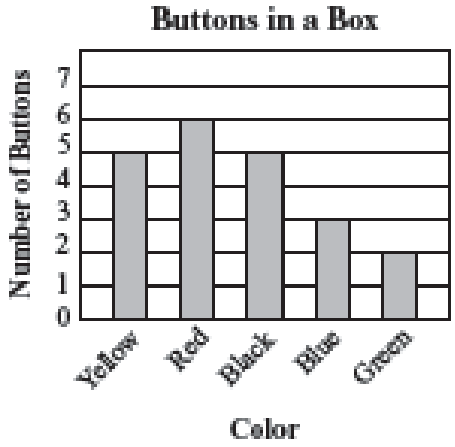
The tally chart has two columns and four rows. The first column heading is Name, and the second column heading is Number of Votes; first row, Tigers, six votes; second row, Rockets, three votes; third row, Sharks, seven votes; and fourth row, Bobcats, four votes.

Bar Graphs

Example 1



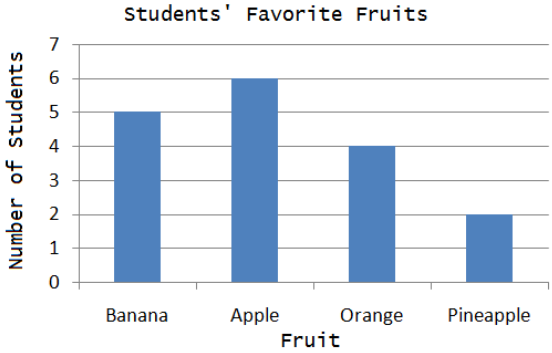
Example 2



How many red buttons are in the box?

Example 3

Kate asked the students in her class what their favorite fruit was. The results of her survey are shown in the graph below.



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Audio Guideline

Text Only

Read the bar graph title. Allow for all words and numbers on the bar graph to be available to be read on demand.

Text and Graphics

Read the bar graph title first, followed by the x-axis label and the y-axis label.

Describe each bar, being careful to take into account the question, so as not to violate the construct being measured. In each description, use the units of measure on the x- and y-axis labels if applicable.

If a bar is between two horizontal lines, then do not estimate or approximate numbers. Instead, use more general language such as “a little less than,” “a little more than,” and “midway between.”

If the items measure the student’s ability to identify the number associated with the bar, then describe the graph without noting the heights of the bars. In this case, tactile representation is required to make this item accessible to blind students and some low-vision students.

Application of Text and Graphics Guidelines

Example 1

The bar graph title is Buttons in a Box. The x-axis label is Color and the y-axis label is Number of Buttons; Yellow bar, five buttons; Red bar, six buttons; Black bar, five buttons; Blue bar, three buttons; and Green bar, two buttons.

Example 2 (item specifically asks students to identify associated with a bar)

The bar graph title is Buttons in a Box. The x-label is Color and shows five colors: Yellow, Red, Black, Blue, and Green. The y-axis label is Number of Buttons.

Example 3

The bar graph title is Students’ favorite fruits. The x-axis label is Fruit, and the y-axis label is Number of students. Four bars are shown, from left to right, banana, apple, orange, pineapple.

Three functions plotted on a graph

If this graph is described with a tool like that above used to select different graphs on the same coordinate grid, it should be read as follows:

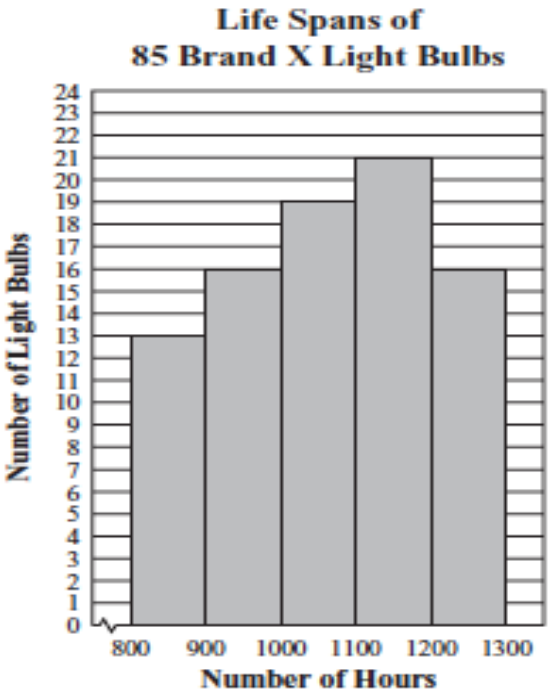
First row, F of X; second row, G of X; third row, H of X.

Note: If only two types of graph can be selected with the tool, it may be appropriate to read according to instructions beginning on page 43 for systems of equations (top row…bottom row…).

Histograms

Example 1

13 Abe tested 85 Brand X light bulbs to determine their life spans. The histogram below shows the results of his test.



What was the total number of Brand X light bulbs that had life spans greater than or equal to 1000 hours?

A. 72

B. 56

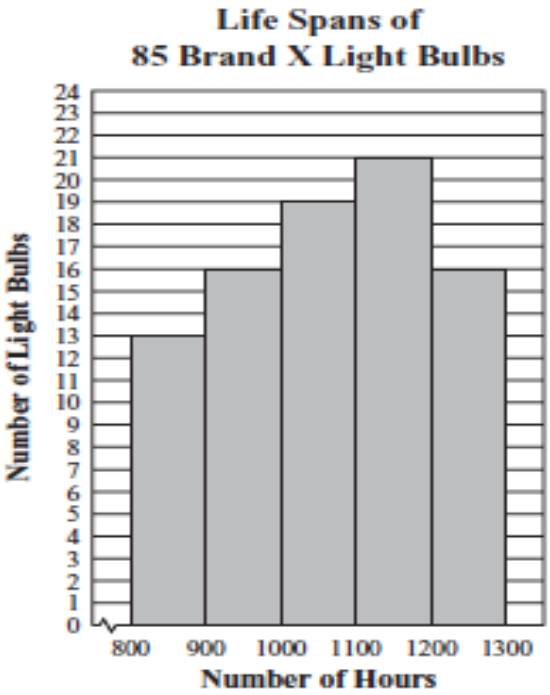
C. 51

D. 21

Appendix J

Example 2

13 Abe tested 85 Brand X light bulbs to determine their life spans. The histogram below shows the results of his test.



What was the total number of Brand X light bulbs that had life spans greater than or equal to 1000 hours?

A. 72

B. 56

C. 51

D. 21

Audio Guideline

Text Only

Read the histogram title. Allow for all words and numbers on the histogram to be available to be read on demand.

Text and Graphics

Read the histogram title first, followed by the *x*-axis label and the *y*-axis label.

Describe each bar range on the *x*-axis, being careful to take into account the question, so as not to violate the construct being measured. In each description use the units of measure on the *x*- and *y*-axis labels if applicable.

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If a bar is between two horizontal lines, then do not estimate or approximate numbers. Instead, use more general language such as “a little less than,” “a little more than,” and “midway between.”

If the item measures the student’s ability to identify the number associated with the bar, then describe the graph without noting the heights of the bars. In this case, this item is not accessible to blind and some low-vision students without tactile representation.

If there are a large number of bars (more than 10) consider associating bars together or focusing on trends or more general frequency in your description.

Application of Text and Graphics Guidelines

Example 1

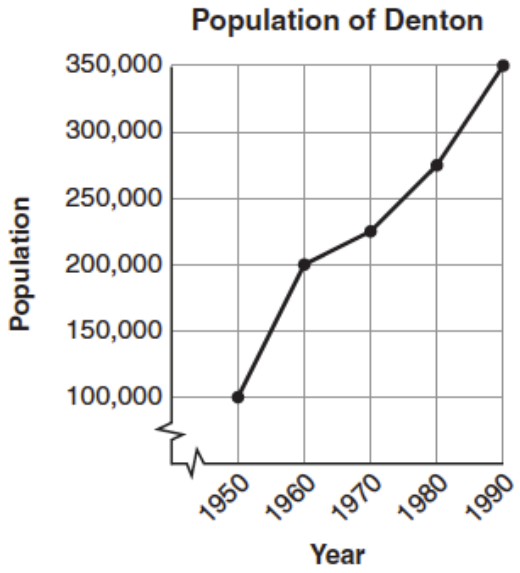
The histogram title is Life Spans of Eighty-Five Brand X Light Bulbs. The *x*-axis label is Number of Hours and the *y*-axis label is Number of Light Bulbs; bar one, eight hundred through eight hundred ninety nine hours, thirteen light bulbs; bar two, nine hundred through nine hundred ninety nine hours, sixteen light bulbs; bar three, one thousand through one thousand ninety nine hours, nineteen light bulbs; bar four, one thousand one hundred through one thousand one hundred ninety nine hours, twenty one light bulbs; bar five, one thousand two hundred through one thousand two hundred ninety nine hours, sixteen light bulbs.

Example 2 (item specifically asks student to read information from one of the bars)

The histogram title is Life Spans of Eighty-Five Brand X Light Bulbs. The *x*-axis label is Number of Hours and the *y*-axis label is Number of Light Bulbs. Five bars show the number of light bulbs with a life span of eight hundred through eight hundred ninety nine hours, nine hundred through nine hundred ninety nine hours, one thousand through one thousand ninety nine hours, one thousand one hundred through one thousand one hundred ninety nine hours, one thousand two hundred through one thousand two hundred ninety nine hours.

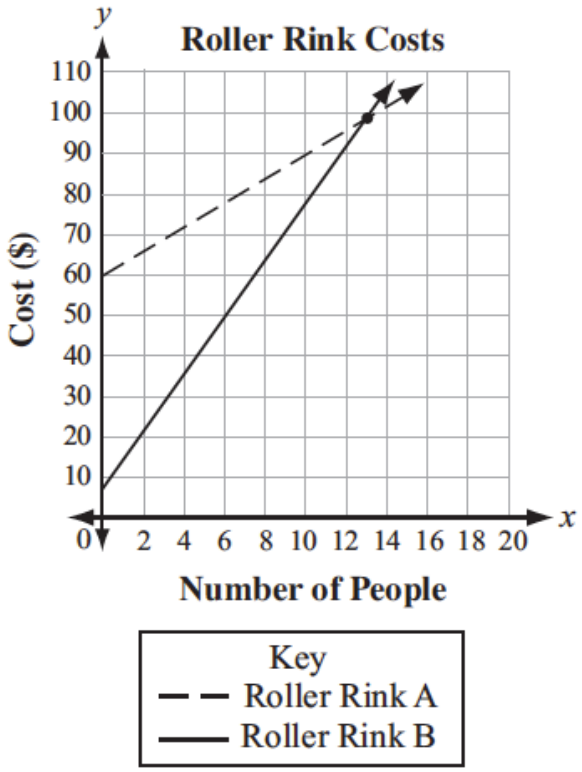
Line Graphs

Example 1



Appendix J

Example 2



Audio Guidelines

Text Only

Read the graph title only. Allow for all words and numbers in the graph area to be available to be read on demand.

Text and Graphics

For all graphs, read the title first.

Read the Key title and then key section (refer to Key rule specifically).

Read the axis labels.

When describing the graph, be as concise as possible while providing the necessary information to understand and answer the question.

If a line or point being described falls between two marked x- or y-axis values, then do not estimate or approximate numbers Instead, use more general language such as “a little less than,” “a little more than,” and “midway between.”

It is not necessary to describe the visual attributes of the graph unless there is an explicit need, such as a key that references line types or an item referencing the attributes or if doing so would help the student is

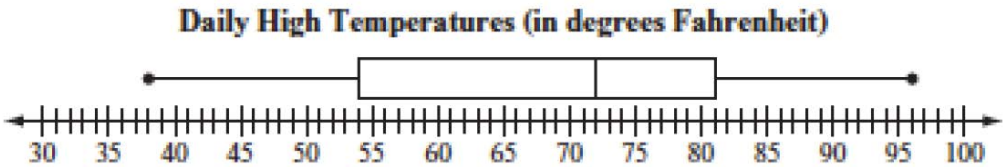
reading a tactile or a magnified version of the test.
If the description violates the construct being measured, then consider amending it to give less specific information. In this case, tactile representation is required to make this item accessible to blind students and some low-vision students.

When possible, reference the starting and ending point of the line segments or starting points of rays to provide context to the student.

Application of Text and Graphics Guidelines
Example 1
The graph title is Population of Denton. The x-axis label is Year and the y-axis label is Population. The line starts at nineteen fifty, one hundred thousand, rises to nineteen sixty, two hundred thousand, then nineteen seventy, midway between two hundred and two hundred fifteen thousand, then nineteen eighty, midway between two hundred fifty and three hundred thousand, and ends at nineteen ninety, three hundred fifty thousand.

Example 2
The graph title is Roller Rink Costs. Key, dashed line represents Roller Rink A, solid line represents Roller Rink B. The x-axis is labeled Number of People. The y-axis is labeled Cost (in dollars). The dashed line starts at zero people, sixty dollars and moves up through midway between twelve and fourteen people, one hundred dollars and fourteen people, a little more than one hundred dollars. The solid line starts at zero people, a little less than ten dollars and moves up through between twelve and fourteen people, one hundred dollars and fourteen people, a little less than one hundred ten dollars.

Box Plots
Example 1
The box plot shows the distribution of the daily high temperatures, in degrees Fahrenheit, in the town of Clifton during the year 2004.



Based on the box plot, in which of the intervals of temperatures is it most likely that exactly 50% of the daily high temperatures are located?

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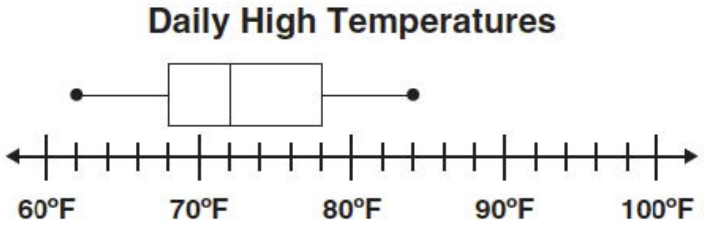
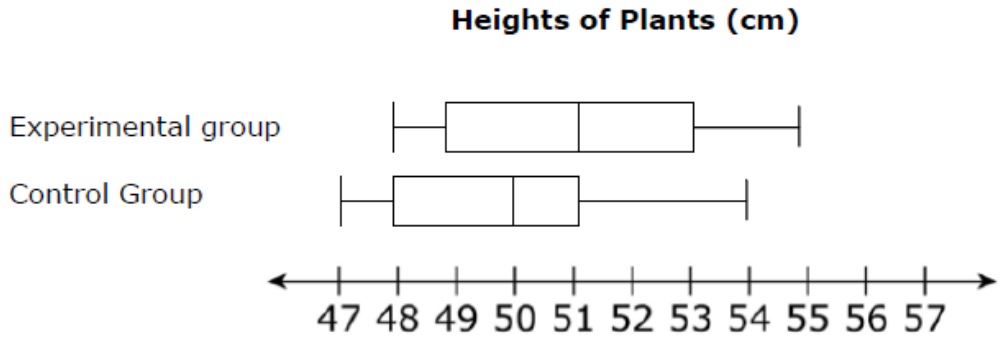
Example 2
The box plot represents the daily high temperatures at a beach in April



What was the median daily high temperature?
Example 3



Audio Guidelines
Read the box plot title. Allow for all words and numbers on the box plot to be available to be read on demand.

Text and Graphics
Start by reading the title of the plot and reference that it is a box plot. Read the box titles or any other words on the plot if applicable.

Read the information along the bottom of the graph from left to right.

If the item measures knowledge of the box plot or if the description violates the construct being measured, then describe the box plot without using specific terminology (e.g., whiskers, quartiles, or median). In this case, tactile representation is required to make this item accessible to blind students and some low-vision students.

If a line or point being described falls between two marked values, then do not estimate or approximate number. Instead use more general language such as “a little less than,” “a little more than,” and “midway between.”

If c is not applicable, then describe the graph elements using specific box plot terminology, including whiskers, quartiles, box, and median.

Application of Text and Graphics Guidelines
Example 1
The title of the box plot is Daily High Temperatures (in degrees Fahrenheit). The number line ranges from

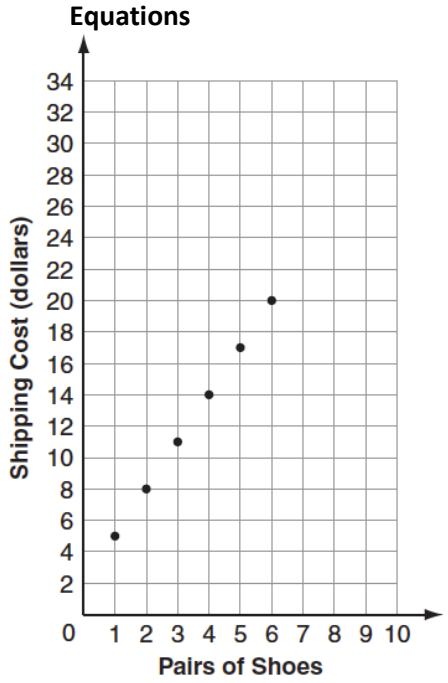
thirty to one hundred degrees Fahrenheit. The whiskers range from thirty-eight degrees to ninety-six degrees and the box ranges from fifty-four to eighty-one degrees with a median of seventy-two degrees.

Example 2
The title of the box plot is Daily High Temperatures. From left to right the number line shows sixty degrees Fahrenheit to one hundred degrees Fahrenheit with markers every ten degrees. The whiskers range from sixty-two degrees to eighty-four degrees and the box ranges from sixty-eight degrees to seventy-eight degrees with an interior vertical line segment at seventy-two degrees.

Example 3
The title of the box plot is Heights of Plants (centimeters). The number line ranges from 47 to 57 with markers every whole number. For the experimental group, the whiskers range from 48 centimeters to 55 centimeters and the box ranges from 49 centimeters to 53 centimeters with a median of 51 centimeters. For the control group, the whiskers range from 47 centimeters to 54 centimeters and the box ranges from 48 centimeters to 51 centimeters with a median of 50 centimeters.

Scatter Plots

Example 1



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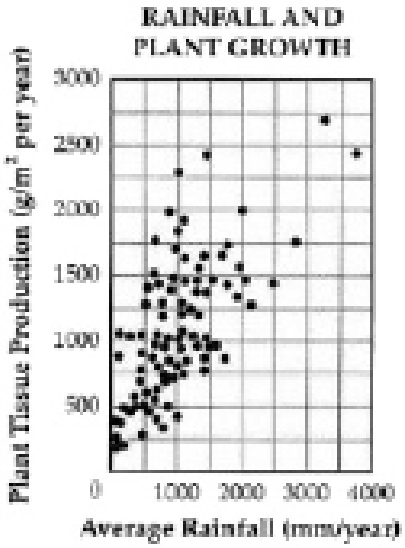
Example 2



Audio Guidelines

Text Only

Read the title of the scatter plot. Allow for all words and numbers on the scatter plot to be available to be read on demand.

Text and Graphics

For scatter plots, start by reading the title and x-axis and y-axis labels. Include the x- and y-axes ranges if necessary to access the item.

For a scatter plot with fewer than ten data points, reference each data point. Include units of measure while describing data points only if deemed relevant.

If a line or point being described falls between two marked x- or y-axes values do not estimate or approximate numbers. Instead use more general language such as “a little less than,” “a little more than,” and “midway between.”

If a scatter plot has more than ten data points, then focus on the change of concentration. When possible, read at least a couple of data points (first and last preferably) to put the plot into context.

For some items with scatter plots, tactile representation is required to make the item accessible to blind students and some low-vision students.

Application of Text and Graphics Guidelines

Example 1

The scatter plot shows Pairs of Shoes on the x-axis ranging from zero to ten in increments of one and Shipping Cost (dollars) on the y-axis ranging from zero to thirty-four in increments of two. The scatter plot has points at one, midway between four and six; two, eight; three, midway between ten and eleven, four, fourteen; five, midway between sixteen and eighteen; and six, twenty.

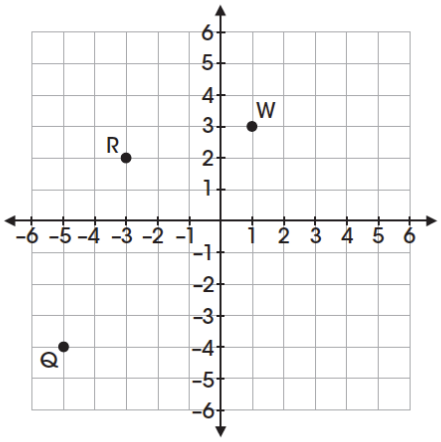
Example 2

The graph is a scatter plot titled Rainfall and Plant Growth. The *x*-axis is labeled Average Rainfall and ranges from zero to four thousand, in units of millimeters per year, in increments of one thousand. The *y*-axis is labeled Plan Tissue Production in units of grams per meter squared per year, ranging from zero to three thousand, in increments of five hundred. The graph has approximately eighty-five points scattered in a pattern beginning in the lower-left corner where Plant Tissue Production and Average Rainfall are the lowest. The pattern extends toward the upper-right corner where Plant Tissue Production and Average Rainfall are the highest. The majority of points is concentrated in the lower-left corner and diminishes in concentration as the pattern extends toward the upper-right corner.

Coordinate Grids

Example 1

23. Points *Q*, *R*, and *W* are plotted on the coordinate grid.



Where should point *Z* be plotted so that parallelogram QRWZ is formed?

A. (−2, −6)

B. (−1, −3)

C. (3, −2)

D. (2, −1)

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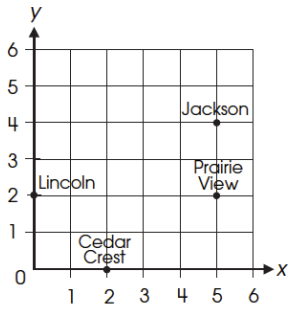
Example 2

18. Mr. Yang is driving to the school located at (2, 0) on the coordinate grid.

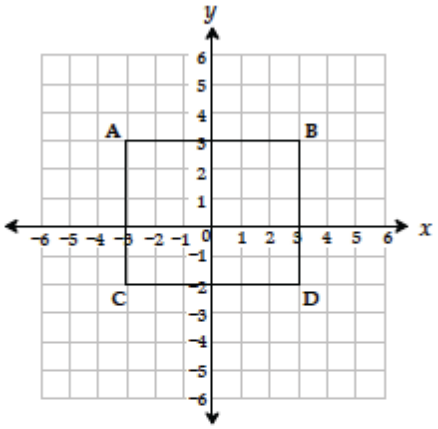


Which school is located at (2, 0)?

- A. Cedar Crest
- B. Jackson
- C. Lincoln
- D. Prairie View

Example 3

Use the diagram below to answer question 7.



7. Which ordered pair identifies the location of vertex C?

A	(−3, −2) *	
B	(−3, 3)	*vertex A*
C	(3, −2)	*vertex D*
D	(−2, −3)	*vertex C reversed*

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Audio Guidelines

Text Only

Start by reading the title of the coordinate grid. Allow for all words and numbers on the coordinate grid to be available to be read on demand.

Text and Graphics

Read the title of the coordinate grid first.

Read the range of each axis.

Read the points or words on the grid in a logical manner (clockwise, following the listing of a shape, etc.) referencing their location on the grid.

If a line or point being described falls between two marked *x*- or *y*-axes values, then do not estimate or approximate numbers. Instead, use more general language such as “a little less than,” “a little more than,” and “midway between.”

If reading the location of the points violates the construct being measured, do not read the point, but reference that they are on the grid. In this case, tactile representation is required to make the item accessible to blind students and some low-vision students.

If there is a shape on the grid, then read the type of shape or name of it first, and then reference the axis points of all sides, if relevant. If referencing the axis points violates the construct being measured, then provide a description of the shape without these points.

If an empty grid is presented in an item as part of the prompt, question. Or answer, then read the title and the *x*- and *y*-axes scale.

Application of Text and Graphic Guidelines

Example 1

A coordinate grid with *x*- and *y*-axes ranging from negative six to six; point Q, negative five, negative four; point R, negative three, two; and point W, one, three.

Example 2

A coordinate grid with *x*- and *y*-axes ranging from zero to six. The grid shows the location of the four schools: Jackson, Prairie View, Cedar Crest, and Lincoln.

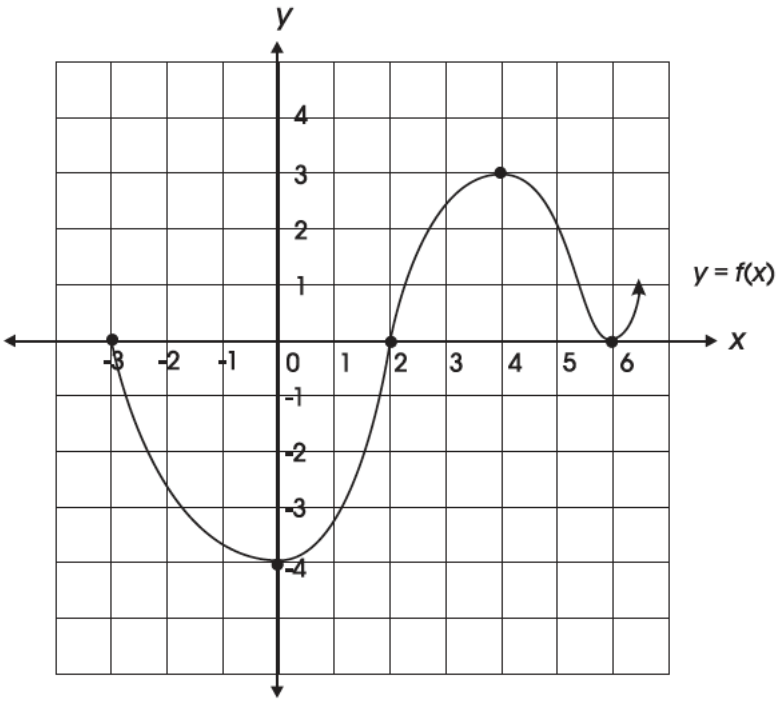
Example 3

A coordinate grid with *x*- and *y*-axes ranging from negative six to six. Rectangle ABCD is shown on the grid.

Exponential/Linear Function Graphs

Example 1

31. The graph of the function $f(x)$ is shown below.



Which of the following is NOT a zero of $f(x)$?

A. −4

B. −3

C. 2

D. 6

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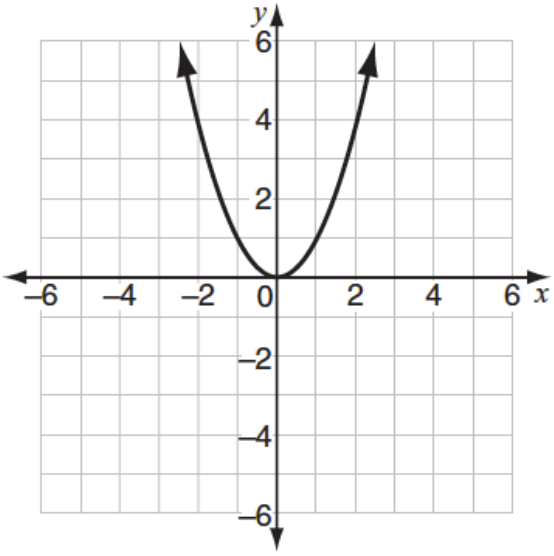
Example 2

10 Look at this graph of $y = x^2$.



If $y = x - 2$ is graphed on the same coordinate plane, at how many points would the two graphs intersect?

A. 0

B. 1

C. 2

D. 3

Audio Guidelines

Text Only

Start by reading the title of the graph. Allow for all words and numbers on the graph to be available to be read on demand.

Text and Graphics

Read the title of the graph first.

Read the range of each axes and any words or symbols that are on the graph.

Describe the shape of the graph. Use relevant points including starting and ending points or *x* or *y* intersection points to aid the description.

If a line or point being described falls between two marked *x*- or *y*-axes values, then do not estimate or approximate numbers. Instead use more general language such as “a little less than,” “a little more than,” and “midway between.”

If reading the location of any points violates the construct being measured, then do not read these points. If describing the shape or direction of the graph violates the construct, then do not read the details of the shape of the graph. In this case, tactile representation is required to make the item accessible to blind students and some low-vision students.

Application of Text and Graphics Guidelines

Example 1

A graph showing the function *y* equals f of *x*. The *x*-axis ranges from negative three to six, and the *y*-axis ranges from negative four to four. The graph is in the shape of a wave. The graph starts at negative three zero, goes through zero negative four, then two zero, then four three, then six zero, and ends with an arrow signaling up.

Example 2

A graph showing y equals x squared. The *x*- and *y*-axes ranges from negative six to six. The graph is a parabola that starts with an arrow at midway between negative two and three six, and then the line moves down through zero zero and ends with an arrow at midway between two and three six.

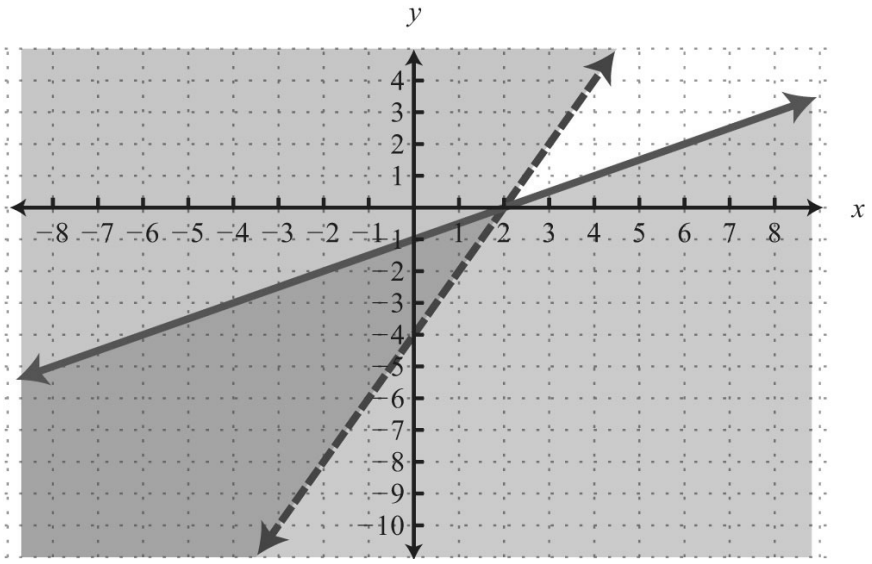
System of inequalities

Example

Which graph represents the solution to this system of inequalities?

$y > 2x - 4$

$3x - 6y \geq 6$



Application of Audio Guidelines

Text and Graphics

Which graph represents the solution to this system of inequalities, top row, Y is greater than 2 X minus 4; bottom row, 3 X minus 6 Y is greater than or equal to 6. A. A graph showing two lines and shaded regions. The X axis ranges from negative 9 to 9. The y axis ranges from negative 11 to 5. The purple line is solid and

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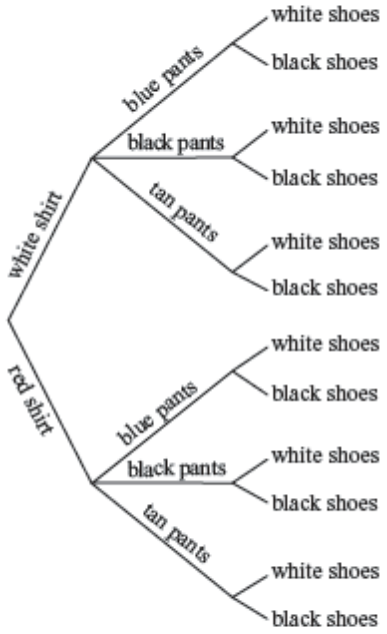
starts at negative 9, a little less than negative 5; rises to zero, negative 1; then 2, zero; and ends at 9, a little more than 3. The area below the solid line is shaded purple. The blue line is dashed and starts at a little less than negative 3, negative 11; rises to zero, negative 4; then 2, zero; and ends at a little more than 4, 5. The area to the left of the dashed line is shaded blue. The area in between the solid purple line and the dashed blue line is shaded light gray.

Diagrams/Figures/Keys

Tree Diagram

Example 1

11 The tree diagram below shows all of the outfits Jay can choose to wear today. An outfit has one color of shirt, one color of pants, and one color of shoes.



What is the total number of possible outfits with a white shirt?

A. 9
B. 6
C. 3
D. 1

Audio Guidelines

Text Only

Read the tree diagram title. Allow for all words and numbers on the tree diagram to be available to be read on demand.

Appendix J

Text and Graphics
Read the tree diagram title and brief description along with stating the direction of the tree diagram.

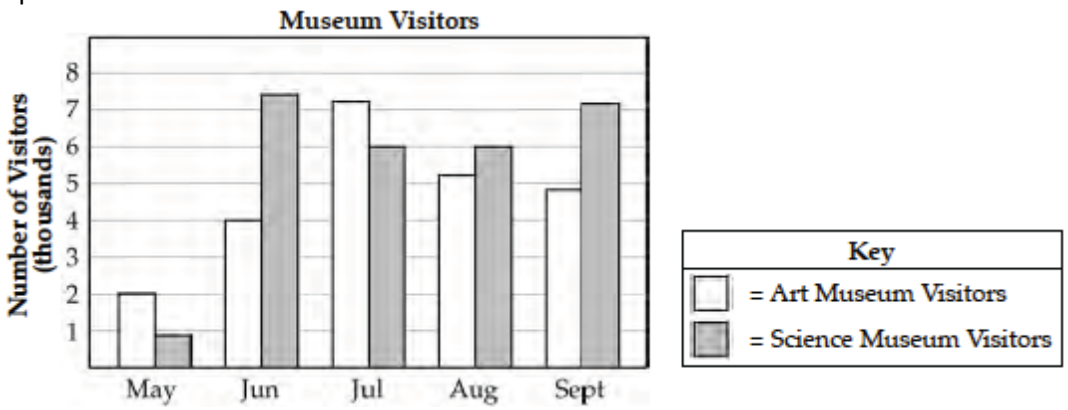
Start with the innermost parts of the tree and describe the different limbs in an order that is easy to follow.

Describe all of the elements of the tree diagram with standardized language.

Application of Text and Graphics Guidelines
A tree diagram showing outfit combinations of shirts, pants, and shoes. The diagram displays information from left to right starting with shirts on the leftward branches. On the top half of the tree, white shirt branches to blue pants, black pants, and tan pants. Each of these pants branches stem to the outermost branches of white shoes and black shoes. On the bottom half of the tree, red shirt branches to blue pants, black pants, and tan pants. Each of these pants branches stem to the outermost branches of white shoes and black shoes.

Keys

Example



Audio Guidelines
Text Only
Read the word Key after reading the graph/diagram title. Allow for all words and numbers in the key to be available to be read on demand.

Text and Graphics Guidelines
Read the graph/diagram title and then the key.

Describe the key in detail, including shapes, shades, and so on. Use “represents” to associate icon with text. (e.g., –10 miles. Dashed line represents ten miles.)

Read the graph/diagram using the key symbols. (e.g., May, white bar, two; May, gray bar, a little less than one)

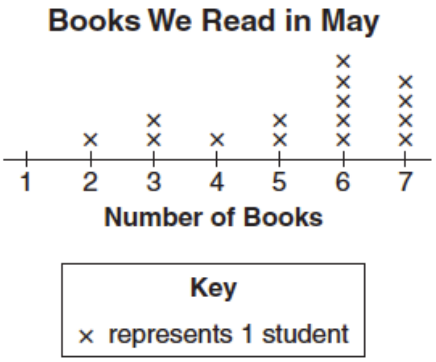
Application of Text and Graphics Guidelines
Example

The bar graph title is Museum Visitors. In the Key, the white bar represents Art Museum Visitors, while the gray bar represents Science Museum Visitors. The *x*-axis shows five months; the *y*-axis is labeled Number of Visitors (thousands); the May white bar, two; the May gray bar, a little less than one; the June white bar, four; the June gray bar, midway between seven and eight; the July white bar, a little more than seven; the July gray bar, six; the August white bar, a little more than five; the August gray bar, six; the September white bar, a little less than five; and the September gray bar, a little more than seven.

Line Plots

Example

16 Look at this line plot.



Audio Guideline

Text Only

Read the line plot title. Allow for all words and numbers on the line plot and on the key to be available to be read on demand.

Text and Graphics

Read the title of the line plot, the key, and then the *x*-axis title (refer to this as the number line plot title if the term "axes" has not been taught in the grade being assessed).

Use the key symbol to describe the line plot instead of interpreting the symbol.

If there are no x's or symbols above a number, then read this as zero instead of skipping it.

Be careful not to violate the construct being measured. Read the range of numbers on the x-axis without reading the data, if necessary. In this case, tactile representation is required to make the item accessible to blind students and some low-vision students.

Application of Text and Graphics Guidelines

Example

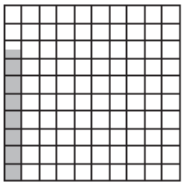
The title of the line plot is Books We Read in May. The key shows that an x represents one student. The number line title is Number of Books and ranges from one to seven in increments of one; at line plot one, zero x's are shown; at line plot two, one x is shown; at line plot three, two x's are shown; at line plot four, one x is shown; at line plot five, two x's are shown; at line plot six, five x's are shown; and at line plot seven, four x's are shown.

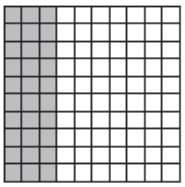
Shaded Figures (Grids, Bars, and Shapes)

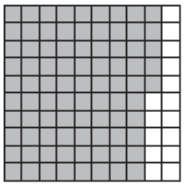
Example

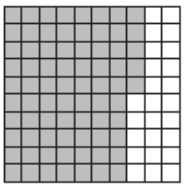
1. A fraction of the fish shown below are shaded gray.

Which grid is shaded gray to represent a fraction with the same value?

A. 

B. 

C. 

D. 

Audio Guidelines

Text Only

Read the title of the shaded figure. Allow for all words and numbers in the figure to be available to be read on demand.

Text and Graphics

Read the title if there is one, and then describe the dimensions of the figure first. If possible, read the dimensions of the figure (ten by ten) instead of just the number of boxes.

Explain how many boxes are shaded, but do not use the terminology “x of y” boxes are shaded. This creates the fraction for the student and will often violate the construct being measured.

Do not state the total number of boxes shaded when information can be provided that students should use to determine the number of boxes shaded. (e.g., seven columns of ten boxes shaded, instead of seventy boxes)

Application of Text and Graphics Guidelines
Example
A fraction of the fish shown below is shaded gray. The graphic shows four fish. Three of them are shaded gray.

Which grid below is shaded gray to represent a fraction with the same value?
A: ten by ten box grid with seven boxes shaded
B: ten by ten box grid with three columns of ten boxes shaded
C: ten by ten box grid with eight columns of ten boxes shaded and five additional boxes shaded
D: ten by ten box grid with seven columns of ten boxes shaded and five additional boxes shaded

Pictographs

Example

Dogs at the Park

Type of Dog	Number of Dogs
Beagle	
Collie	
Poodle	
Dalmatian	

Key
represents 1 dog

Audio Guidelines
Text Only
Read the title of the pictograph. Allow for all words and numbers in the pictograph or key to be available to be read on demand.

Text and Graphics
Start by reading the title of the pictograph and then the key.

If the pictograph is in a table format, then refer to the table guidelines.

If the pictograph is in a graph format, then refer to the graph guidelines.

Reference the picture being used in general terms without describing it in detail. Use the key to read the pictograph without interpreting it. When the pictograph, reference “picture of x,” since the scale may not be one to one.

In some cases, tactile representation is required to make the item accessible to blind students and some low-vision students.

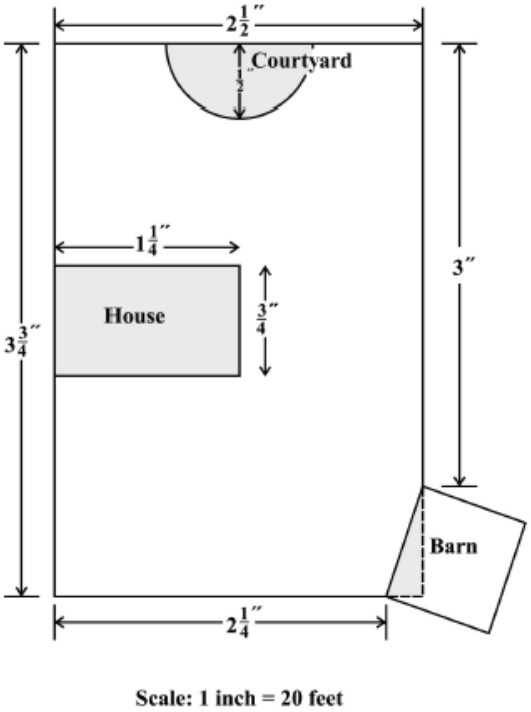
Application of Text and Graphics Guidelines

Example

The pictograph title is Dogs at the Park. The Key shows a picture of a dog represents one dog. The table has two columns and four rows; column heading one is Type of Dog; column heading two is Number of Dogs; row one, Beagle, picture of two dogs; row two, Collie, picture of three dogs; row three, Poodle, picture of one dog; and row four, Dalmatian, picture of four dogs.

Figures/Illustrations

Example 1



Use the scale to find the actual dimensions, in feet, of the house. Show or explain how you found your answer.

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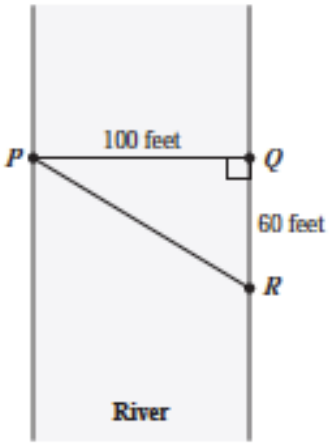
Example 2

40 Triangle PQR in the diagram below represents Pam's trip across a river.



In the diagram, $\overline{PQ}$ represents her planned trip across the river, and $\overline{PR}$ represents her actual trip across the river.

Based on the dimensions in the diagram, which of the following is closest to the length of $\overline{PR}$?

A. 104 feet
B. 117 feet
C. 120 feet
D. 160 feet

Audio Guidelines

Text Only

Read the title of the figure/illustration or any caption that is being used in the title format. Allow for all words and numbers in the pictograph or key to be available to be read on demand.

Text and Graphics

Read the title of the figure or illustration. Include the caption in the description if it is not included in the surrounding text.

Read any scale before describing parts of the figure.

Separate the information into pieces using sentences, bullet points, or lists.

Use similar language to describe all parts of the diagram or illustration. Standardized language will help ensure comprehension.

Appendix J

Remember that the goal is to help the student understand the pertinent information in the diagram. Try to include descriptions of all shapes and figures, but try not to overload the student with descriptions that are overly wordy or not needed to answer the question.

In some cases, tactile representation is required to make the item accessible to blind students and some low-vision students.

Application of Text and Graphics Guideline

Example 1

A drawing showing a rectangular plot of land is illustrated. The scale shows that one inch equals twenty feet. The left and right sides of the plot are three and three-fourths inches, and the top and bottom sides of the plot are two and a half inches. The rectangular house has side lengths of one and one-fourth inches and three-fourths of an inch. The barn is a square, mostly outside the plot, with a shaded right triangle inside the plot. The hypotenuse of the right triangle and the side of the square inside the plot are the same line segment. One corner of the triangle is at the two and one-fourth inch line at the bottom of the plot and another corner is at the three inch line on the side of the plot. The courtyard is a semicircle with a radius of one-half inch.

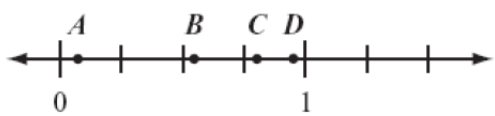
Example 2

A diagram showing a rectangular section of a river is illustrated. Triangle PQR shows Pam's trip across the river with all three points of the triangle touching a side of the river. Point P is on the left side of the river, and points Q and R are on the right side of the river. Point Q is the vertex of a right angle. The distance from P to Q is one hundred feet. The distance from Q to R is sixty feet.

Number Lines

Example 1

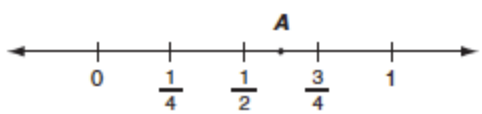
Which point on the number line below best represents 0.8?



A. point *A*
B. point *B*
C. point *C*
D. point *D*

Example 2

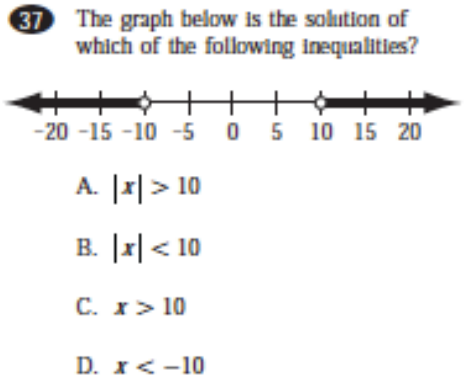
Look at this number line.



Point *A* is halfway between $\frac{1}{2}$ and $\frac{3}{4}$. What fraction does point *A* represent? Show your work or explain how you know.

Appendix J

Example 3



Audio Guidelines

Text Only

Read the title of the number line only or any caption that is being used in the title format. Allow all letters, words, and number on the number line to be available on demand.

Text and Graphics

Start by reading the title of the number line.

Read the range on the bottom along with the increments displayed.

Read the letters or words on the number line along with their location. Be careful not to violate the construct being measured in doing so. In some cases, tactile representation is required to make the item accessible to blind students and some low-vision students.

If a line or point being described falls between two marked values, then do not estimate or approximate numbers. Instead, use more general language such as “is located a little after,” “is located a little before,” “is closer to,” and “is midway between.”

For bolded number lines, describe which parts are bolded.

Application of Text and Graphics Guidelines

Example 1

A number line is shown with points A, B, C, and D and three equally spaced tick marks between the values of zero and one. Point A is located between zero and the first tick mark, and is closer to zero; point B is located between the second and third tick marks, and is much closer to the second tick mark; while point C and point D are closer to the value one.

Example 2

A number line shows zero and one with three tick marks in between: one-fourth, one-half, and three-fourths. Point A is marked midway between one-half and three-fourths.

Example 3

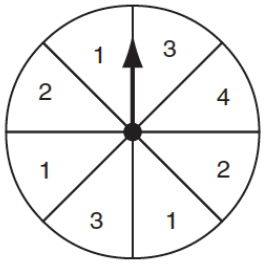
A number line shows from negative twenty to positive twenty in increments of five. The areas from

negative twenty to negative ten and positive ten to positive twenty are bolded with open circles at negative ten and positive ten. There are bolded arrows to the left of negative twenty and to the right of positive twenty.

Spinners

Example

10 Look at this spinner.



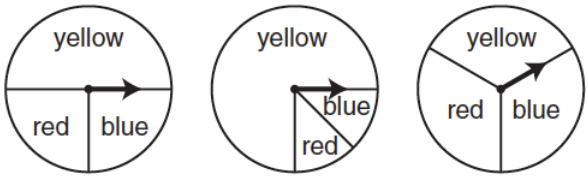
On what number is the arrow **least** likely to land?

- A. 1
- B. 2
- C. 3
- D. 4

Appendix J

Example 2

15 Look at these spinners.



Spinner A **Spinner B** **Spinner C**

Julie, Greg, and Lori each used a different spinner to record the results of 40 spins.

a. This table shows Julie's results.

Julie's Spinner Results

Color	Frequency
yellow	12
blue	14
red	14

Which spinner did Julie **most likely** use? Show your work or explain how you know.

b. This table shows Greg's results.

Greg's Spinner Results

Color	Frequency
yellow	30
blue	5
red	5

Which spinner did Greg **most likely** use? Show your work or explain how you know.

c. Lori used the remaining spinner. Make a table to show the **most likely** results of Lori's 40 spins. Explain your reasoning.

Appendix J

Audio Guidelines

Text Only

Read the title of the spinner only. Allow for all letters, words, and numbers on the spinner to be available on demand.

Text and Graphics

Read the title of the spinner and reference it as a spinner.

Read any words, symbols, or numbers in the spinner, starting at the top and moving clockwise.

If necessary, describe the sizes of each section. Be sure not to violate the construct being measured in doing so. In some cases, tactile representation is required to make the item accessible to blind students and some low-vision students.

When describing the size of sections, do not estimate or approximate specific size if it is not labeled. Instead, use more general language such as “less than,” “more than,” and “half of.” Exceptions are for one-fourth, one-third, one-half, two-thirds, and three-fourths that are immediately apparent.

Application of Text and Graphics Guidelines

Example 1

Grades 7 and lower: A spinner is divided into eight sections of the same size with one number in each section is shown. From the top moving clockwise the sections read three, four, two, one, three, one, two, and one.

Grades 8 and higher: A spinner divided into eight congruent sections with one number in each section is shown. From the top moving clockwise the sections read three, four, two, one, three, one, two, and one.

Example 2

There are three spinners shown labeled Spinner A, Spinner B, and Spinner C. Each spinner is divided into three sections. In Spinner A, one-half of the spinner is labeled yellow, one-fourth of the spinner is labeled blue, and one-fourth of the spinner is labeled red. In Spinner B, three-fourths of the spinner is labeled yellow, and the other part is divided evenly and labeled blue and red. In Spinner C, about one-third of the spinner is labeled yellow, about one-third of the spinner is labeled red, and about one-third of the spinner is labeled blue.

Coins and Dollars

Example

5 Cindy had $1.00. Then she bought a pencil for $0.37. How much money does she have now?

○ A.

○ B.

○ C.

○ D.

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Audio Guidelines
Text and Graphics
Describe the money using standard language (penny, dime, quarter, or dollar).

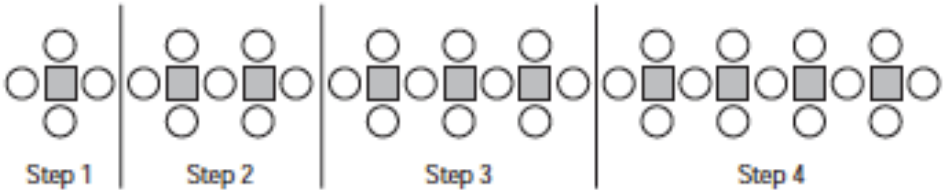
Be sure to read each currency symbol as a symbol and not to interpret the value. (e.g., two quarters instead of fifty cents, or three dimes instead of thirty cents).

If reading the currency symbols violates the construct being measured, tactile representation is required to make the item accessible to blind students and some low-vision students.

Application of Audio Guidelines
Example
A shows two quarters, one dime, and three pennies.
B shows two quarters, two dimes, and three pennies.
C shows three quarters and two pennies.
D shows one dollar bill, one quarter, one dime, and two pennies.

Numbered/Step Diagrams
Example

9 Don made a pattern using circles and squares. The first four steps of his pattern are shown below.



If Don continues his pattern, what is the total number of circles he will need to make Step 10?

A. 30
B. 31
C. 38
D. 40

Audio Guideline
Text Only
Read the title of the diagram only. Allow for all letters, words, and numbers on the diagram to be available to be read on demand.

Text and Graphics
Read the title of the diagram and a brief orientation of what the diagram shows.

In logical order (left to right or top to bottom), read the steps or diagram numbers along with a description of the figures in each step.

Describe the figures with enough detail to understand the item. Unless necessary, do not detail the specific characteristics of the figures being used (e.g., color, size, location, shape, etc.).

If the description violates the construct being measured (e.g., if the question asked "How many circles are in step 1?"), then adjust the description to be vague. In this case, tactile representation is required to make the item accessible to blind students and some low-vision students.

Application of Audio Guidelines

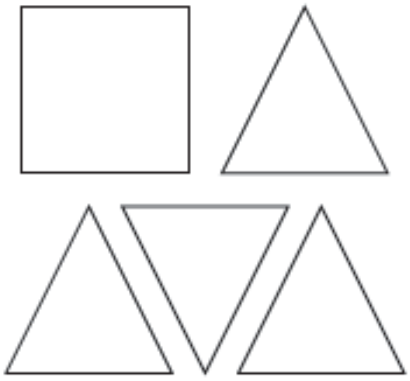
Example

A diagram shows four steps of a pattern using circles and squares. Step one shows a square and four circles, step two shows two squares and seven circles, step three shows three squares and ten circles, and step four shows four squares and thirteen circles.

Geometric Figures

Example 1

These shapes are the 5 faces of a three-dimensional figure.



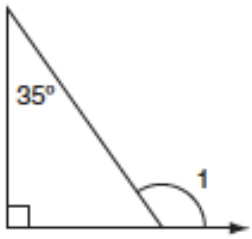
What is the three-dimensional figure?

A. cube
B. cone
C. prism
D. pyramid

Appendix J

Example 2

Look at this diagram.



What is the measure of ∠1?

A. 55°
B. 115°
C. 125°
D. 135°

Example 3

Look at these figures.

Figure P

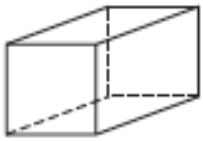


Figure Q

Figure R

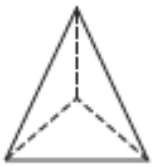


Figure S

Which two figures have the same number of faces?

A. Figure P and Figure Q
B. Figure S and Figure R
C. Figure P and Figure R
D. Figure S and Figure Q

Appendix J

Audio Guidelines

Text Only

Read the title of the shape(s) only. Allow for all labels of sides or angles to be available on demand.

Text and Graphics

Simple shapes (any 2D shape with eight sides or fewer): Reference simple shapes as is, unless the item is measuring identification of a shape. If the item contains a simple shape, reference it without description. If there are unique attributes to the shape, describe what type of shape it is in as few words as possible. Be sure to reference labels of sides, angles, and so on.

3D shapes/figures: Reference the type of figure. If relevant and does not violate the construct being measured, describe the figure including the number of sides. In some cases, if a certain description would violate the construct, tactile representation is required to make the item accessible to blind students and some low-vision students.

Be sure to reference labels of sides, angles, and so on.

Refer to the coordinate grid section for reading shapes on coordinate grids.

Application of Text and Graphics Guidelines

Example 1

A square and four equally sized triangles are shown.

Example 2

A diagram shows a right triangle. The triangle shows a right angle in the left corner, a thirty-five degree angle at the top, with no angle reference in the bottom-right corner. Outside the bottom-right corner of the triangle there is a symbol for angle one, which arcs from the unknown angle in the triangle to touch the ray.

Example 3

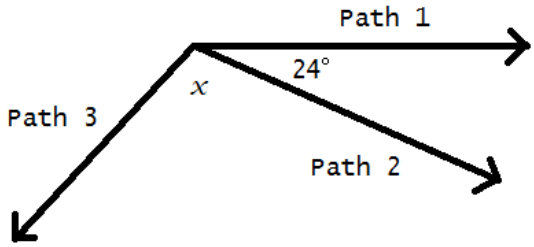
Four figures are shown. Figure P is a pentagonal pyramid, Figure Q is a rectangular prism, Figure R is a triangular prism, and Figure S is a triangular pyramid.

For geometric figures with multiple lines

Diagrams with internal angles should generally be described clockwise, beginning at the 12:00 position or a logical point of origin in the diagram.

Example

Bicyclists at National Park can choose one of three bike paths from the visitors' center, as shown in this diagram.



A diagram shows three rays, each originating at the same point. The first ray, drawn horizontally to the right, is labeled Path 1. The second ray, labeled Path 2, is drawn downward and toward the right. The angle that includes Path 1 and Path 2 is labeled 24 degrees. The third ray, labeled Path 3, is drawn downward and to the left. The angle that includes Path 2 and Path 3 is labeled *x*.

Acknowledgements

PARCC's Audio Guidelines were adapted from: Georgia Department of Education (GADOE), Guidelines for Accessible Assessment Project (GAAP), Maryland Department of Education (MSDE), Smarter Balance Assessment Consortium, and Virginia Department of Education (VDOE).

Appendix K: Legal Background

Federal Legislation

The Elementary and Secondary Education Act

ESEA explicitly calls for the participation in high-quality, yearly student academic assessments of all students [20 USC § 6311(b)(3)(C)(i)]. It also requires that these assessments provide for the reasonable adaptations and accommodations for students with disabilities – as defined in IDEA [20 USC § 1401(3)]– necessary to measure the academic achievement of such students relative to state academic content and state student academic achievement standards [20 USC § 6311(b)(3)(C)(ii)].

Federal provisions for inclusion and accommodation of English learners in state assessment and accountability systems are included in ESEA, which requires the participation of all students, including English learners and English learners with disabilities, in standards-based instruction and assessment initiatives (No Child Left Behind Act of 2001).

Through the ESEA federal legislation, in addition to other state and local district initiatives, assessments aimed at increasing accountability provide important information with regard to:

- How successful schools are including all students in standards-based education;
- How well students are achieving standards; and
- What needs to be improved upon for specific groups of students.

There are several elements in the ESEA that hold schools accountable for educational results:

- Academic content standards (what students should learn) and academic achievement standards (how well students should learn the content) form the basis of state accountability systems. State assessments are the primary (though not necessarily exclusive) tool for determining whether schools have been successful in having students attain the knowledge and skills defined by the content standards. States must include at least 95 percent of students in these assessments, with the following two exceptions:
    - English learners in their first year in a U.S. school are not required to participate in the state's English language arts Title 1 assessment, and are not counted in the state's accountability system for ELA and Mathematics; and
    - Up to one percent of the total number of students participating in statewide assessments, and who take alternate assessments based on alternate achievement standards, are not required to take the state's standard Title 1 assessments and may be counted as proficient on the alternate assessments in the state's accountability system.
- States must provide assessments in reading/language arts and mathematics for all students, including in grades 3-8 and once in high school; science at least once in elementary, middle, and high school; and English language proficiency for students designated as English learners.

- PARCC summative assessments include annual ELA/Literacy and Mathematics End-of-Year and Performance-Based Assessments in grades 3–11.)

- The accountability system is intended to measure the improvement of schools, districts, and states in achieving standards for all students and designated subgroups each year.

- Schools, districts, and states are held accountable for improvements on an annual basis through public reporting and ultimately through consequences if accountability goals are not achieved.

Students with Disabilities

Individuals with Disabilities Education Improvement Act of 2004
IDEA requires the participation of students with disabilities in state and district-wide assessments. Specific IDEA requirements include that:

> Children with disabilities are included in general state and district-wide assessment programs, with appropriate accommodations, where necessary [14 USC § 1412(a)(16)(A)]. The term 'individualized education program' or 'IEP' means a written statement for each child with a disability that is developed, reviewed, and revised in accordance with this section and that includes … a statement of any individual modifications in the administration of state or district-wide assessments of student achievement that are needed in order for the child to participate in such assessment; and if the IEP team determines that the child will not participate in a particular state or district-wide assessment of student achievement (or part of such an assessment), a statement of why that assessment is not appropriate for the child; and how the child will be assessed [14 USC § 1412(d)(1)(A)(v) and (vi)].

For more information, see http://www.ed.gov/policy.

Section 504 of the Rehabilitation Act of 1973
Section 504 prohibits discrimination against individuals with disabilities who seek access to programs and activities provided by entities that receive financial assistance from the federal government, including organizations that receive U.S. Department of Education funding. In the public school setting, students with disabilities protected by Section 504 have the right to the aids and services required to meet their educational needs to the same extent as other students. The Act states that:

> No otherwise qualified individual with a disability in the United States, as defined in 20 USC § 794(a) of this title, shall, solely by reason of her or his disability, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance or under and program or activity conducted by any Executive agency.

In school settings, Section 504 legislation guarantees and protects the rights of students with disabilities who may not have an IEP, but are still considered individuals with disabilities. The definition of a student with a disability is much broader under Section 504 than it is under the IDEA. Under Section 504, in order for a student to have a qualifying disability, a student must have a physical, sensory, or mental impairment that substantially limits one or more major life activities. The determination of a substantial limitation is

made on a case-by-case basis by a group of knowledgeable persons who draw upon a variety of information in making the determination [34 C.F.R. § 104.35 (c)].

For more information on Section 504, see: http://ed.gov/policy/rights/reg/ocr/edlite-34cfr104.html and http://www2.ed.gov/about/offices/list/ocr/504faq.html.

Students Who Are English Learners

The terms English learner (EL), English language learner (ELL), and Limited English Proficient (LEP) are used interchangeably. Although federal law and regulations use the term LEP, PARCC uses the term "English learner" throughout this document in an effort not to label learners in terms of their deficiencies or limitations.

Definition of "English Learner"[42]

The *Elementary and Secondary Education Act* (ESEA) provides an explicit definition of what constitutes a "Limited English Proficient" student, as follows:

> "…an individual — (A) who is aged 3 through 21; (B) who is enrolled or preparing to enroll in an elementary school or secondary school; (C)(i) who was not born in the United States or whose native language is a language other than English; (ii)(I) who is a Native American or Alaska Native, or a native resident of the outlying areas; and (II) who comes from an environment where a language other than English has had a significant impact on the individual's level of English language proficiency; or (iii) who is migratory, whose native language is a language other than English, and who comes from an environment where a language other than English is dominant; and (D) whose difficulties in speaking, reading, writing, or understanding the English language may be sufficient to deny the individual — (i) the ability to meet the State's proficient level of achievement on State assessments described in section 1111(b)(3); (ii) the ability to successfully achieve in classrooms where the language of instruction is English; or (iii) the opportunity to participate fully in society."

Federal Legislation, Policies and Court Cases Ensuring Equal Access for English Learners

Title VI of the Civil Rights Act of 1964

42 U.S.C. Section 2000d[43] states that:

> No person in the United States shall, on the basis of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

Equal Educational Opportunities Act of 1974 (EEOA)[44]

EEOA of 1974 requires states and school districts to provide an equal educational opportunity to students learning English. States and districts must take "appropriate action" to "overcome language barriers," which usually means teaching academic content in the language students understand, while also teaching them English. It prohibits discrimination against faculty, staff, and students, including racial segregation of

[42] Assessment consortia are currently collaborating to develop a comprehensive definition of "English learner," based on the work (in process) of H. Gary Cook and Robert Linquanti.

[43] Retrieved from the Internet at http://www2.ed.gov/about/offices/list/ocr/eeolep/index.html.

[44] Retrieved from the Internet at http://www.educationjustice.org/federal/eeoa.html

students, and requires school districts to take action to overcome barriers to students' equal participation.

Office of Civil Rights 1970 Memorandum[45]

This memorandum:

- Requires school districts to take affirmative steps to rectify language deficiencies in order to open its instructional program to national origin minority group students, where inability to speak and understand English excludes the students from effective participation in the district's educational program.
- Prohibits school districts from assigning English learner students to special education classes on the basis of criteria which essentially measure or evaluate English language skills.
- Forbids specialized programs for English learner students to operate as an educational dead-end or permanent track.
- Requires school districts to adequately notify language-minority parents of school activities that are called to the attention of other parents. Such notice in order to be adequate may have to be provided in a language other than English.

Lau v. Nichols (1974)

The Office of Civil Rights established a policy for the provision of equal educational opportunities for ELs based on Title VI of the Civil Rights Act of 1964. This policy was described in a memorandum in 1970:

> *Where the inability to speak and understand the English language excludes national origin minority group children from effective participation in the educational program offered by a school district, the district must take affirmative steps to rectify the language deficiency in order to open its instructional program to these students.*

This memorandum does not inform districts of the steps they must take to ensure equal opportunities for English learners. However, it does state that Title VI of the Civil Rights Act of 1964 is violated if:

- students are excluded from effective participation in school because of their inability to speak and understand the language of instruction;
- students are inappropriately assigned to special education classes because of their lack of English skills;
- programs for students whose English is less than proficient are not designed to teach them English as soon as possible, or if these programs operate as a dead end track; or
- parents whose English is limited do not receive school notices or other information in a language they can understand.

This policy was tested in the Supreme Court Case, Lau v. Nichols. In 1974, the Supreme Court upheld this law, supporting the premise that if students cannot understand the language of instruction, they do not have access to an equal opportunity education. The Supreme Court said the following:

> *There is no equality of treatment merely by providing students with the same facilities, textbooks, teachers, and curriculum; for students who do not understand English are effectively foreclosed from any meaningful education.*

[45] Retrieved from the Internet at http://www.k12.wa.us/migrantbilingual/k20/ensuringequaleducationalopportunitiesell.pdf

Therefore, equal education is only possible when students are able to understand the language of instruction.

Castañeda v. Pickard (1981)

This case established the Castañeda standards, a three-prong set of evaluation criteria for the adequacy of a district's program for English learner students:

1. Is the program based on an educational theory recognized as sound by some experts in the field or considered by experts as a legitimate experimental strategy?
2. Are the programs and practices, including resources and personnel, sufficient to implement the district's chosen program effectively?
3. Does the school district evaluate its programs and make adjustments where needed to ensure language barriers are actually being overcome?

Recently-Arrived Students Who Are English Learners

Federal 2007 non-regulatory guidance on the *Assessment and Accountability of Recently Arrived and Former Limited English Proficient (LEP)* Students clarifies the definition of a recently-arrived English learner student:

> The regulations define a recently arrived LEP student as a LEP student who has attended schools in the United States for less than 12 months … During the period within which an LEP student may be a recent arrival to the United States (during his/her first 12 months attending schools in the U.S.) a State may exempt such a student from one administration of the State's reading/language arts assessment. (p. 4)

Recently arrived ELs are required to participate in Mathematics assessments, but states may exclude their results from accountability determinations for their first year in a U.S. school. Therefore, districts should make reasonable efforts to determine the date of enrollment of an English learner in a U.S. school (both inside and outside of their state) and whether the student has been given this exemption previously. The policy allowing first-year EL exemption from the PARCC ELA/Literacy assessment does not apply to the state-required English language proficiency (ELP) assessment; all English learners in grades K-12 must take the state-required ELP assessment, regardless of time in a U.S. school.

Appendix L: Human Signer Guidelines

Test Administration Protocol for the Human Signer Accommodation for English Language Arts/ Literacy Assessments, and the Human Signer Accessibility Feature for Mathematics Assessments

In cases where a student requires a sign language accommodation on the PARCC English language arts/literacy assessments and/or a sign language accessibility feature on the PARCC mathematics assessments, and for whom the American Sign Language (ASL) video accommodation is not appropriate, a **human signer** must be provided. Human signers for PARCC assessments must follow these procedures during testing to ensure the standardization of the signed presentation to the students.

Procedures for Human Signers Providing the Human Signer Accommodation for the ELA/Literacy Assessments or the Human Signer Accessibility Feature for the Mathematics Assessments

1. Signers must be trained on test administration policies by local test coordinators, as indicated in the PARCC Test Administration Manual (TAM). Signers must sign the Security Agreement in the PARCC TAM.

2. Signers should use signs that are conceptually accurate (except for SEE2 users), with or without simultaneous voicing, translating only the content that is printed in the test book or on the computer screen without changing, emphasizing, or adding information. Signers may not clarify (except for test directions), provide additional information, assist, or influence the student's selection of a response in any way. Signers must do their best to use the same signs if the student requests a portion repeated.

3. Signers must sign (or sign and speak when using Sim-Com [Simultaneous Communication]) in a clear and consistent manner throughout test administration, using correct production, and without inflections that may provide clues to, or mislead, a student. Signers should be provided a copy of the test and the administrative directions prior to the start of testing (check individual state policy for the amount of time allowed), in order to become familiar with the words, terms, symbols, signs, and/or graphics that will be read aloud to the student.

4. Signers should emphasize only the words printed in boldface, italics, or capital letters and inform the student that the words are printed that way. No other emphasis or inflection is permitted.

5. Signers may repeat passages, test items, and response options, as requested, according to the needs of the student. Signers should not rush through the test and should ask the student if they are ready to move to the next item.

6. Signers may not attempt to solve mathematics problems, or determine the correct answer to a test item while signing, as this may result in pauses or changes in inflection which may mislead the student.

7. Signers must use facial expressions consistent with sign language delivery and must not use expressions which may be interpreted by the student as approval or disapproval of the student's answers.

8. Test administrators must be familiar with the student's Individualized Education Plan (IEP) or 504 plan, and should know in advance which accommodations are required by the student, and for which test (ELA/Literacy and/or Mathematics) the student is designated to receive a human signer. Test administrators must be aware of whether a student requires additional tools, devices, or adaptive equipment that has been approved for use during the test, such as a magnifier, closed circuit television (CCTV), abacus, brailler, slate, stylus, etc., and if use of these tools impacts the translation of the test, the signer should be made aware of this.

9. Upon review of the test, if a human signer is unsure how to sign and/or pronounce an unfamiliar word, the signer should collaborate with an ASL-fluent content expert (if available) which sign is most appropriate to use. If the signer is unable to obtain this information before the test, the signer should advise the student of the uncertainty and spell the word.

10. When using an ASL sign that can represent more than one concept or English word, the signer must adequately contextualize the word, in order to reduce ambiguity. The signer may also spell the word after signing it, if there is any doubt about which word is intended.

11. Signers must spell any words requested by the student during the test administration.

12. When test items refer to a particular line, or lines, of a passage, resign the lines before signing the question and answer choices. For example, the signer should sign, "Question X refers to the following lines…," then sign the lines to the student, followed by question X and the response options.

13. When signing selected response items, signers must be careful to give equal emphasis to each response option and to sign options before waiting for the student's response.

14. When response choices will be scribed, the signer should inform the student at the beginning of the test that if the student designates a response choice by letter only ("D", for example), the signer will ask the student if he/she would like the response to be signed again before the answer is recorded in the answer booklet or the computer-based test.

15. If the student chooses an answer before the signer has signed all the answer choices, the human signer must ask if the student wants the other response options to be signed.

16. After the signer finishes signing a test item and all response options, the signer must allow the student to pause before responding. If the pause has been lengthy, ask: "Do you want me to sign the question or any part of it again?" When signing questions again, signers must avoid emphasis on words not bolded, italicized, or capitalized.

17. Signers should refer to the PARCC ASL Glossary for technical vocabulary (signs used on the ASL video accommodation) for consistency in providing the accommodation.[46]

[46] The PARCC Mathematics Sign Language Glossary will be released in October of 2015.

Procedures for Providing the Human Signer Accommodation for ELA/Literacy Assessments or the Human Signer Accessibility Feature for the Mathematics Assessments to a Small Group of Students

Human signers may sign the test to a small group of students, rather than individually, provided that each student has the human signer accommodation/accessibility feature listed in an IEP, 504 plan, or Student Registration/Personal Needs Profile (in the case of mathematics only). See individual state policy for clarification.

The following procedures must be followed:

- **Check individual state policies on the maximum allowable number of students in a human signer small group.**

- Students with the human signer accessibility feature for mathematics or human signer accommodation for ELA/literacy that will be grouped together must be administered the **same test form**, since test questions will differ on each form of the test.

- Students not receiving the human accessibility feature for mathematics or human signer accommodation for ELA/literacy may not be tested in the same location as students who are receiving the human signer accessibility feature for mathematics or human signer accommodation for ELA/literacy.

Sign-System-Specific Procedures

Human signers must deliver the accommodation in the language or communication mode used by the student according to the student's IEP or 504 plan.

American Sign Language (ASL)

Human signers delivering the accommodation via ASL must use appropriate ASL features (including signs, sentence structure, non-manual markers, classifiers, etc.) while protecting the construct being measured by the assessment. Although it is necessary for a human signer to use appropriate non-manual markers to ensure proper delivery of test content in ASL, the human signer must be careful not to cue students while doing so.

English-Based Sign Systems (SEE2, CASE, Sim-Com, etc.)

Human signers delivering the accommodation via an English-based signing system must use the features of the communication mode used by the student. Human signers delivering the test in Signing Exact English (SEE2) should use the rules of that signing system (e.g. specific signed vocabulary, prefixes, suffixes, etc.). Human Signers delivering the test in other English-based signing systems (CASE, Sim-Com, etc.) should use the rules of those signing systems (conceptually accurate signs, English word order, etc.), with or without simultaneous voicing.

PARCC Mathematics Sign Language Glossary

Human signers should refer to the online PARCC Mathematics Sign Language Glossary for guidance on how to deliver mathematics symbols and terms. The guidance provided in the glossary is the same as what has been used in development of the ASL video accommodated PARCC assessments and provides a standardized approach for students who use sign language accommodations. The glossary provides signs that can be used for both ASL and English-Based Sign Systems.[47]

[47] The PARCC Mathematics Sign Language Glossary will be released in October of 2015.

Appendix M: PARCC Assessments for Students with Visual Impairment, Including Blindness

PARCC Assessments and Students with Visual Impairment, Including Blindness

January 28, 2015

I. Purpose of this Guidance

The Partnership for Assessment of Readiness for College and Career (PARCC) Assessments are provided online, in regular print, large print and braille. This document is for test coordinators, test administrators, test transcribers and teachers to clarify issues and potential questions for students with visual impairments, including blindness. Given the innovative approach to the PARCC assessments, students with visual impairments who receive instructional and assessment accommodations, and those professionals that work with them, will need to plan ahead for testing to ensure that students have all necessary tools and materials available to complete assessment tasks. All accommodations must be documented in the student's Individualized Education Program (IEP) or 504 plan.

II. Frequently Asked Questions (FAQ)

1. Who is an Eligible Test Administrator?

   In general, the following individuals may serve as a Test Administrator:

   - Individuals employed by the Local Education Agency (LEA) as teachers
   - LEA and school-level administrators
   - Other certified educational professionals

   Refer to Appendix C: State Policy Addendum in the *Test Coordinator Manual* for Test Administrator qualifications for your state. Eligible Test Administrators and proctors must attend training and follow test procedures and protocol.

2. What is included in the braille/large print versions of the tests? What additional materials do I need?

   Large print and braille versions of the tests are used by students who have this presentation format identified in their IEPs or 504 plans for instruction and assessment. Charts in Section III of the PARCC Test Administrator Manual identify the materials packaged with each large print and braille test and additional needed materials. Additional materials needed must be documented in the student's IEP or 504 plan, except for the following items:

   - Test Administrator Manual
   - No. 2 pencils with erasers
   - Blank scratch paper
     - Blank scratch paper may include: abacus, slate, stylus, Braille Math Window or Brannan Cubarithm.
   - Highlighter
   - Graph paper
   - Calculator

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- Use of a grade-level appropriate calculator is available to all students during designated portions of the Mathematics Assessment.
- Students who have calculators identified as a needed accommodation in an IEP or 504 plan may use the calculator on all portions of the Mathematics Assessment.
- The calculator currently available in TestNav is not accessible with screen readers. Students who use a screen reader should use calculators they use during instructional activities as long as it meets PARCC's calculator policy.
- Refer to the PARCC Calculator Policy for specific information on grade-level appropriate calculators.

3. What special issues exist regarding the use of optical or electronic magnification of the test?

Electronic magnification systems enlarge print materials in black/white or color combinations. Magnification for viewing text and graphics can be increased up to 800% with option for changing font colors, background colors, using a line marker, etc. They come in a variety of models – desktop or handheld, near or distance, stand alone or connected to a computer. Electronic magnification systems provide students with access to all printed materials, and the size of the print can be customized for the task. Students who require magnification by using an electronic magnification system can use a regular Paper-based test book.

- If the electronic magnification system used by the student has the ability to capture images, these images must be deleted at the end of the test session.
- Graphics enlarged on an electronic magnification system may be problematic for some students with low vision. When an image is magnified, the student may not be able to see the whole graphic at once. If the student has difficulty with graphics, a large print test should be ordered. Large print is the regular print book enlarged to 150% which is equivalent to 18 point font size.

4. What special issues should be considered regarding students with a visual impairment, including blindness who may take the online test?

For any student taking the online test, it will be delivered using TestNav 8.

Screen readers

PARCC and Pearson have gone to great lengths to ensure that the TestNav system is accessible to all students. While the testing experience may work with a variety of access technology, at this time it has been tested and optimized to work with **Windows 7**, the **Firefox** web browser and **JAWS 15**. Students who take the PARCC assessments online using a screen reader must be able to independently navigate the online testing environment. Professionals who work with students who are screen reader users are encouraged to work with students during instructional activities to ensure that they have independent computer-access skills. The skills used to navigate the PARCC Assessments are the same needed to access a variety of internet resources, including the ability to navigate by regions and headings and the ability to use keyboard shortcuts and lists, such

as link lists. Please see a more comprehensive list of prerequisite skills in Section IV of this document.

Additionally, at this time only the English Language Arts/Literacy PARCC Assessments will be fully accessible with screen readers and braille displays. Work is underway to make the Mathematics assessments accessible, but current assistive technology limitations prohibit the translation of math into Nemeth code for display on refreshable braille devices. Students who rely on the use of Nemeth code for math should take the Paper Based Assessment braille version of the math assessment.

As with all students taking a PARCC Assessment, students with a visual impairment, including blindness are encouraged to use the PARCC practice tests which include screen reader, large print or access to Braille Ready Files (.brf) to download a braille practice test. Practice Tests and Sample Items are currently posted on the PARCC web site.

For more information about prerequisite skills, please refer to the Technology Skills Checklist below.

Refreshable Braille Display

Students who use a screen reader can also access the English Language Arts/Literacy PARCC Assessments using a refreshable braille display. Students who choose to take advantage of refreshable braille during the PARCC assessment should be comfortable and independent with using a refreshable braille display in instructional activities prior to using one in an assessment environment. As stated above, students and professionals are encouraged to use the Practice Tests in order to become familiar and comfortable with the PARCC Computer Based Assessments.

For more information about prerequisite skills, please refer to the Technology Skills Checklist below.

Screen enlargement

The online PARCC Assessments come with a built-in magnifier that can be used by all students at any time during the assessment period. This magnifier is intended to enlarge small areas of the screen so that a student can get a closer look at a visual image such as a picture or graphic. The built-in magnifier cannot be increased or decreased and students will not be able to select answers or interact with the text that is magnified with the built-in tool. For students with a visual impairment that require screen enlargement for access, it is recommended that they use third-party access technology, such as ZoomText or MAGic or other third-party access technology that conforms with UAAG (User Agent Accessibility Guidelines), and supports content that is coded to comply with the Web Content Accessibility Guidelines (WCAG) and the Accessible Rich Internet Applications (ARIA) recommendations from the World Wide Web Consortium (W3C). Again, any third-party access technology used during the assessment should be familiar to the student and used during instruction.

Students may also use screen enlargement capabilities that are built into web browsers. Please note, that some graphical information may become “pixelated” at very high magnification. Students and teachers should explore the Practice Items with enlargement

in order to determine the efficacy of using the browser-based enlargement in a testing environment.

For students who will use screen enlargement software with a human reader, refer to the PARCC Accessibility Features and Accommodations Manual, Appendix B: Test Administrator Protocol for the Human Reader Accommodation for English Language Arts/Literacy Assessments, and the Human Reader Accessibility Feature for Mathematics Assessments.

For more information about prerequisite skills, please refer to the Technology Skills Checklist below.

Color contrast

The TestNav system provides a built-in method for changing the color contrast settings and is available to all students. Currently, the available choices are Black on Cream, Black on Light Blue, Black on Light Magenta, White on Black, Light Blue on Dark Blue or Gray on Green. Color contrast settings can also be adjusted through a screen enlargement program, such as ZoomText or MAGic.

Braillers and Braille Note-takers

Students who are accustomed to using a brailler, slate and stylus or a braille note-taker to produce work during instructional activities will be able to do so with the online test. In these cases, the student will produce their answers and transcribe them into TestNav or have them transcribed into the TestNav.

5. Who can transcribe the tests?

Only an Eligible Test Administrator who is a certified Teacher of Students with Visual Impairment, including Blindness or someone working under the direct supervision of an Eligible Test Administrator who is a certified Teacher of Students with Visual Impairment, including Blindness may transcribe the student's responses into the test booklet, answer document or online form of the PARCC Assessments.

Answers written on braille paper must be transcribed onto the standard-size paper form of the PARCC Assessment or into TestNav. If responses are written on an electronic braille note-taker, they should be printed and transcribed into a standard-size paper test booklet, answer document or into TestNav. The file in the electronic braille note-taker must be deleted following successful transcription of the student's responses. Please note: A student response can be embossed for their reviews, after which copies must be securely shred after transcription.

III. Testing Materials

English Language Arts/Literacy			
Materials	**Large Print**	**Braille**	**Online**
Included with the Test	• Instructions for Large Print Administration, including Test Administrator scripts • Large Print Test Booklet • Standard Print Test Booklet	• Instructions for Braille Administration, including Test Administrator scripts • Braille Test Booklet or answer document with embedded tactile graphics (certain forms) • Picture descriptions • Standard Print Test Booklet	• Tactile graphics – must be ordered separately as an Additional Order
Additional Materials Needed	• Test Administrator Manual • No. 2 pencils with erasers • Blank scratch paper • Highlighter • Other materials included in the student's IEP or 504 plan	• Test Administrator Manual • No. 2 pencils with erasers • Other materials included in student's IEP or 504 plan, such as braille writing devices	• Test Administrator Manual • No. 2 pencils with erasers • Other materials included in student's IEP or 504 plan, such as braille writing devices • Student's preferred access technology

Mathematics			
Materials	**Large Print English or Large Print Spanish**	**Braille**	**Online**
Included with the Test	• Instructions for Large Print Administration, including Test Administrator scripts • Large Print Test Booklet • Standard Print Test Booklet • Large Print Mathematics Reference Sheet	• Instructions for Braille Administration, including Test Administrator scripts • Braille Test Booklet or answer document with embedded tactile graphics • Standard Print Test Booklet or answer document • Braille Mathematics Reference Sheet	• Tactile graphics – must be ordered separately (when the Computer-based test becomes accessible to screen reader and refreshable braille display users)

Mathematics			
Additional Materials Needed	• Test Administrator Manual • No. 2 pencils with erasers • Blank scratch paper • Highlighter • Regular classroom compass[48] • Grade-level appropriate large print ruler – measures in US customary and metric • Grade-level appropriate large print protractor • Grade-level appropriate calculator – four-function, scientific or graphing • Other materials included in the student's IEP or 504 plan	• Test Administrator Manual • No. 2 pencils with erasers • Braille writing devices, such as a Perkins Brailler or an electronic braille note-taker • Grade-level appropriate braille ruler – measures in US customary and metric • Grade-level appropriate braille protractor • Grade-level appropriate tactile compass • Grade-level appropriate calculator – four-function, scientific or graphing • Braille materials that can be used as scratch paper • Cranmer Abacus • Braille Math Window • Brannan Cubarithm	• Test Administrator Manual • No. 2 pencils with erasers • Blank scratch paper or braille materials that can be used as scratch paper • Cranmer Abacus • Braille Math Window • Brannan Cubarithm • Grade-level appropriate tactile compass • Grade-level appropriate braille ruler – measures in US customary and metric • Grade-level appropriate braille protractor • Grade-level appropriate calculator – four-function, scientific or graphing • Other materials included in the student's IEP or 504 plan • Student's preferred access technology

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[48] A compass is an allowable material for the grade 8 Mathematics, Geometry, Integrated Mathematics I, Integrated Mathematics II, and Integrated Mathematics III assessments. The compass is not a required tools but can be made available to students if they use the tools regularly during instruction. Geometry tools are not allowed for grades 3–7, Algebra I, and Algebra II.

Personal Needs Profile and Ordering Braille, Large Print and Tactile Graphics

The Personal Needs and Preferences (PNP) Profile is used to gather information regarding a student's testing condition, materials, or accessibility features and accommodations that are needed to take a PARCC assessment. Any paper based accessibility feature or accommodation which requires materials to be shipped will need to be requested in the Student Registration File import. (e.g., Large Print, Braille with Tactile Graphics, Human Reader or Human Signer for ELA/L Kits, Paper Test for Online Students, and Spanish Paper Mathematics Assessments). All students who require braille (tactile graphics are included with the braille test booklet or answer document) and large print test must ordered through the student registration file import process. All students who are taking the online assessments and use screen readers for ELA/L or mathematics must have tactile graphics populated in their PNP and an additional order must be placed within PearsonAccess[next].

IV. Technology Skills Checklist

Accessibility of testing materials for all students is an important part of the PARCC Assessments. For a student with visual impairment, including blindness to take the online test, he or she will need to have a minimum level of skills with computer technology and the assistive technology he or she uses to access instructional materials. The following is a list of skills a student should be using regularly during instructional activities and be proficient with on the day of testing in order to independently access the PARCC Assessment online. Students should, at a minimum, be able to complete these tasks independently and should be given multiple opportunities to practice using the PARCC Practice Tests available here http://parcc.pearson.com/practice-tests, and the PARCC Sample Items here: http://parcc.pearson.com/sample-items.

Screen Reader

- Use arrow keys to navigate
- Navigate by headings
- Access and use the Headings List
- Access and use the Links List
- Activate Links using keyboard commands
- Activate Buttons
- Adjust voice settings
- Select text using keyboard commands
- Copy text to clipboard
- Paste text from clipboard
- Access edit fields
- Use check boxes
- Use radio buttons
- Enter and exit forms mode
- Navigate, locate and read text on a webpage
- Navigate and understand a table

Refreshable Braille Display

- Complete all of the functions listed under Screen Reader
- Use corresponding commands to run a screen reader with a supported refreshable braille display

Screen Magnification

- Adjust color and contrast settings
- Adjust magnification settings
- Use text-to-speech when needed
- Use find features to efficiently find information