MASSACHUSETTS
Department of Elementary
and Secondary Education

Release of November 2023 MCAS Test Information from the High School ELA and Math Retests

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Massachusetts Department of Elementary and Secondary Education

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and Secondary Education

This document was prepared by the
Massachusetts Department of Elementary and Secondary Education
Jeffrey C. Riley
Commissioner

Massachusetts Department of Elementary and Secondary Education
135 Santilli Highway, Everett, MA 02149-1950
Phone 781-338-3000 TTY: N.E.T. Relay 800-439-2370
www.doe.mass.edu

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I. Document Purpose and Structure

Document Purpose and Structure

Purpose

The purpose of this document is to share with educators and the public information regarding the November 2023 MCAS English Language Arts (ELA) and Mathematics retests, including the reporting category and standard associated with each item. The Department does not currently release items from the November retests. All items continue to be released for the spring grade 10 tests.

Structure

Chapters II and III of this document contain, respectively, information for the November 2023 ELA and Mathematics retests. Each of these chapters has two sections.

The first section provides a brief overview of the retest, including test format and item types. The Mathematics Reference Sheet used by students during MCAS Mathematics test sessions appears at the end of the first section of the Mathematics chapter.

The second section of each chapter are tables that cross-reference each item on the computer-based test and the paper-based test with its MCAS reporting category and with the *Framework* standard it assesses. The tables show how the items on the test assess standards in the 2017 frameworks.

II. English Language Arts Retest

English Language Arts Retest

The November 2023 English Language Arts (ELA) retest was administered in two formats: a computer-based version and a paper-based version. Most students took the computer-based test. The paper-based test was offered as an accommodation for eligible students who were unable to use a computer. More information can be found on the MCAS Test Administration Resources page at www.doe.mass.edu/mcas/admin.html.

The tables at the end of this chapter provide information about each item from both the computer-based and paper-based tests, including reporting category, standard(s) covered, item type, and item description.

A Note about Testing Mode

Most of the operational items on the computer-based and paper-based versions of the ELA retest were the same. In places where a technology-enhanced item was used on the computer-based test, an adapted version of the item was created for use on the paper test. These adapted paper items were multiple-choice or multiple-select items that tested the same ELA content and assessed the same standard as the technology-enhanced item.

Test Sessions and Content Overview

The ELA retest was made up of two separate test sessions. Each session included reading passages, followed by selected-response and essay questions. On the paper-based test, the selected-response questions were multiple-choice items and multiple-select items, in which students select the correct answer(s) from among several answer options.

Standards and Reporting Categories

The ELA retest was based on grades 6–12 learning standards in three content strands of the *Massachusetts Curriculum Framework for English Language Arts and Literacy* (2017), listed below.

- Reading
- Writing
- Language

The Massachusetts Curriculum Framework for English Language Arts and Literacy is available on the Department website at www.doe.mass.edu/frameworks/current.html.

ELA test results are reported under three MCAS reporting categories, which are identical to the three framework content strands listed above.

Reference Materials

During both ELA test sessions, the use of bilingual word-to-word dictionaries was allowed for current and former English learner students only. No other reference materials were allowed during any ELA test session.

November 2023 English Language Arts Retest
Computer-Based Operational Items

CBT Item No.	Reporting Category	Standard	Item Type*	Item Description
1	*Reading*	RL.9-10.1	SR	Make an inference based on details in an excerpt.
2	*Reading*	RL.9-10.4	SR	Analyze the effect on characterization of figurative language in an excerpt.
3	*Reading*	RL.9-10.4	SR	Determine the shift in a character's attitude based on details in specific paragraphs of an excerpt.
4	*Language*	L.9-10.4	SR	Determine the meaning of an unknown word based on context in an excerpt.
5	*Reading*	RL.9-10.3	SR	Determine what specific details from an excerpt emphasize about a character.
6	*Reading*	RL.9-10.3	SR	Determine what specific details from an excerpt reveal about a character.
7	*Reading*	RL.9-10.3	SR	Analyze characterization in an excerpt and identify details that support that characterization.
8	*Reading*	RL.9-10.1	SR	Make an inference based on details in an excerpt and identify details that support the inference.
9	*Language, Writing*	L.9-10.1, L.9-10.2, L.9-10.3, W.9-10.2, W.9-10.4	ES	Write an essay that describes a character's traits in an excerpt and explains how they are revealed; use details from the excerpt for support.
10	*Language*	L.9-10.3	SR	Identify the effect of using first-person pronouns in a poem.
11	*Reading*	RL.9-10.2	SR	Determine how the thematic idea developed by details in a specific section of an excerpt compares to a similar idea developed by imagery in a poem.
12	*Reading*	RL.9-10.4	SR	Determine the tone created by quotations from an excerpt and a poem on similar topics.
13	*Reading*	RL.9-10.1	SR	Make an inference based on details in an excerpt and select a detail from a poem on a similar topic that suggests a similar idea.
14	*Language*	L.9-10.4	SR	Determine the meaning of an unfamiliar word in an article based on the definition of its root word.
15	*Reading*	RI.9-10.5	SR	Determine the purpose of specific paragraphs in an article.
16	*Reading*	RI.9-10.1	SR	Determine the author's intended audience in an article.
17	*Language*	L.9-10.4	SR	Determine the meaning of an unfamiliar word in an article.
18	*Reading*	RI.9-10.3	SR	Compare the focuses of two different sections of an article.
19	*Reading*	RI.9-10.5	SR	Compare the use of headings in two articles on similar topics.
20	*Reading*	RI.9-10.3	SR	Determine which quotations from two articles on similar topics demonstrate characteristics of a key idea.
21	*Reading*	RI.9-10.5	SR	Compare the authors' uses of details to support and develop claims in two articles on similar topics.
22	*Language, Writing*	L.9-10.1, L.9-10.2, L.9-10.3, W.9-10.1, W.9-10.4	ES	Write an essay making an argument based on evidence from two articles on similar topics; use evidence from both articles for support.
23	*Language*	L.9-10.4	SR	Identify the best context clue to help understand an unfamiliar word in an excerpt.
24	*Reading*	RI.9-10.3	SR	Determine the perspective of the author based on a specific section of an excerpt.
25	*Language*	L.9-10.1	SR	Determine the effect of a specific stylistic choice in an excerpt.

CBT Item No.	Reporting Category	Standard	Item Type*	Item Description
26	*Language*	L.9-10.2	SR	Identify the purpose of a dash in a sentence of an excerpt.
27	*Reading*	RI.9-10.2	SR	Determine how specific details in a paragraph help develop the central idea of an excerpt.
28	*Reading*	RI.9-10.6	SR	Compare the points of view of authors of two excerpts on similar topics.
29	*Reading*	RI.9-10.2	SR	Determine the central idea developed by specific sentences in an excerpt and select evidence from two other excerpts on similar topics that develops the same idea.
30	*Reading*	RI.9-10.3	SR	Determine the meaning of a specific sentence in an excerpt and select evidence from another excerpt on a similar topic that suggests a similar idea.

*ELA item types are selected-response (SR) and essay (ES).

November 2023 English Language Arts Retest
Paper-Based Operational Items

PBT Item No.	Reporting Category	Standard	Item Type*	Item Description
1	*Reading*	RL.9-10.1	SR	Make an inference based on details in an excerpt.
2	*Reading*	RL.9-10.4	SR	Analyze the effect on characterization of figurative language in an excerpt.
3	*Reading*	RL.9-10.4	SR	Determine the shift in a character's attitude based on details in specific paragraphs of an excerpt.
4	*Language*	L.9-10.4	SR	Determine the meaning of an unknown word based on context in an excerpt.
5	*Reading*	RL.9-10.3	SR	Determine what specific details from an excerpt emphasize about a character.
6	*Reading*	RL.9-10.3	SR	Determine what specific details from an excerpt reveal about a character.
7	*Reading*	RL.9-10.3	SR	Analyze characterization in an excerpt and identify details that support that characterization.
8	*Reading*	RL.9-10.1	SR	Make an inference based on details in an excerpt and identify details that support the inference.
9	*Language, Writing*	L.9-10.1, L.9-10.2, L.9-10.3, W.9-10.2, W.9-10.4	ES	Write an essay that describes a character's traits in an excerpt and explains how they are revealed; use details from the excerpt for support.
10	*Language*	L.9-10.3	SR	Identify the effect of using first-person pronouns in a poem.
11	*Reading*	RL.9-10.2	SR	Determine how the thematic idea developed by details in a specific section of an excerpt compares to a similar idea developed by imagery in a poem.
12	*Reading*	RL.9-10.4	SR	Determine the tone created by quotations from an excerpt and a poem on similar topics.
13	*Reading*	RL.9-10.1	SR	Make an inference based on details in an excerpt and select a detail from a poem on a similar topic that suggests a similar idea.
14	*Language*	L.9-10.4	SR	Determine the meaning of an unfamiliar word in an article based on the definition of its root word.
15	*Reading*	RI.9-10.5	SR	Determine the purpose of specific paragraphs in an article.
16	*Reading*	RI.9-10.1	SR	Determine the author's intended audience in an article.
17	*Language*	L.9-10.4	SR	Determine the meaning of an unfamiliar word in an article.
18	*Reading*	RI.9-10.3	SR	Compare the focuses of two different sections of an article.
19	*Reading*	RI.9-10.5	SR	Compare the use of headings in two articles on similar topics.
20	*Reading*	RI.9-10.3	SR	Determine which quotations from two articles on similar topics demonstrate characteristics of a key idea.
21	*Reading*	RI.9-10.5	SR	Compare the authors' uses of details to support and develop claims in two articles on similar topics.
22	*Language, Writing*	L.9-10.1, L.9-10.2, L.9-10.3, W.9-10.1, W.9-10.4	ES	Write an essay making an argument based on evidence from two articles on similar topics; use evidence from both articles for support.
23	*Language*	L.9-10.4	SR	Identify the best context clue to help understand an unfamiliar word in an excerpt.
24	*Reading*	RI.9-10.3	SR	Determine the perspective of the author based on a specific section of an excerpt.
25	*Language*	L.9-10.1	SR	Determine the effect of a specific stylistic choice in an excerpt.

PBT Item No.	Reporting Category	Standard	Item Type*	Item Description
26	*Language*	L.9-10.2	SR	Identify the purpose of a dash in a sentence of an excerpt.
27	*Reading*	RI.9-10.2	SR	Determine how specific details in a paragraph help develop the central idea of an excerpt.
28	*Reading*	RI.9-10.6	SR	Compare the points of view of authors of two excerpts on similar topics.
29	*Reading*	RI.9-10.2	SR	Determine the central idea developed by specific sentences in an excerpt and select evidence from two other excerpts on similar topics that develops the same idea.
30	*Reading*	RI.9-10.3	SR	Determine the meaning of a specific sentence in an excerpt and select evidence from another excerpt on a similar topic that suggests a similar idea.

*ELA item types are selected-response (SR) and essay (ES).

III. Mathematics Retest

Mathematics Retest

The November 2023 Mathematics retest was administered in two formats: a computer-based version and a paper-based version. Most students took the computer-based test. The paper-based test was offered as an accommodation for eligible students who were unable to use a computer. More information can be found on the MCAS Test Administration Resources page at www.doe.mass.edu/mcas/admin.html.

The tables at the end of this chapter provide information about each item from both the computer-based and paper-based tests, including reporting category, standard covered, item type, and item description.

A Note about Testing Mode

Most of the operational items on the computer-based and paper-based versions of the Mathematics retest were the same. In places where a technology-enhanced item was used on the computer-based test, an adapted version of the item was created for use on the paper test. These adapted paper items were multiple-choice, multiple-select, or short-answer items that tested the same Mathematics content and assessed the same standard as the technology-enhanced item.

Test Sessions and Content Overview

The Mathematics retest was made up of two separate test sessions. Each session included selected-response, short-answer, and constructed-response questions. On the paper-based test, the selected-response questions were multiple-choice items and multiple-select items, in which students select the correct answer(s) from among several answer options.

Standards and Reporting Categories

The Mathematics retest was based on high school standards in the *Massachusetts Curriculum Framework for Mathematics* (2017). The standards in the 2017 framework are organized under the five major conceptual categories listed below.

- Number and Quantity
- Algebra
- Functions
- Geometry
- Statistics and Probability

The Mathematics retest assessed standards that overlap between the Model Algebra I/Model Geometry and Model Mathematics I/Model Mathematics II courses. The *Massachusetts Curriculum Framework for Mathematics* is available on the Department website at www.doe.mass.edu/frameworks/current.html.

Mathematics test results for grade 10 are reported under four MCAS reporting categories, which are based on the five framework conceptual categories listed above.

Spanish-Language Edition

Since approximately 55% of English learner students in Massachusetts public schools are native Spanish speakers, a Spanish-language edition of the Mathematics retest was made available to eligible Spanish-speaking students. The computer-based version of the Spanish-language edition presented the Spanish translation above the English text for each item. The booklets for the paper-based version of the Spanish-language edition were issued in side-by-side English/Spanish format: pages on the left side of each booklet presented items in Spanish; pages on the right side presented the same items in English.

Reference Materials and Tools

Each student taking the Mathematics retest was provided with a grade 10 Mathematics Reference Sheet. A copy of the reference sheet can be found on the next page of this document.

During Session 2, each student had sole access to a calculator. Calculator use was not allowed during Session 1.

During both Mathematics test sessions, the use of bilingual word-to-word dictionaries was allowed for current and former English learner students only. No other reference tools or materials were allowed.

CONVERSIONS

1 cup = 8 fluid ounces
1 pint = 2 cups
1 quart = 2 pints
1 gallon = 4 quarts
1 gallon ≈ 3.785 liters
1 liter ≈ 0.264 gallon
1 liter = 1000 cubic centimeters

1 inch = 2.54 centimeters
1 meter ≈ 39.37 inches
1 mile = 5280 feet
1 mile = 1760 yards
1 mile ≈ 1.609 kilometers
1 kilometer ≈ 0.62 mile

1 pound = 16 ounces
1 pound ≈ 0.454 kilogram
1 kilogram ≈ 2.2 pounds
1 ton = 2000 pounds

AREA (*A*) FORMULAS

square . . . . . $A = s^2$
rectangle . . . . . $A = lw$
parallelogram . . . . . $A = bh$
triangle . . . . . $A = \frac{1}{2}bh$
trapezoid . . . . . $A = \frac{1}{2}h(b_1 + b_2)$
circle . . . . . $A = \pi r^2$

TOTAL SURFACE AREA (*SA*) FORMULAS

cube . . . . . $SA = 6s^2$
right square pyramid . . . . $SA = s^2 + 2s\ell$
(ℓ = slant height)
right rectangular prism . . $SA = 2(lw) + 2(hw) + 2(lh)$

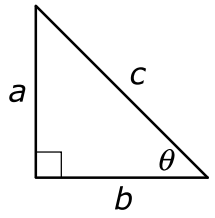
VOLUME (*V*) FORMULAS

cube . . . . . $V = s^3$
(s = length of an edge)
prism . . . . . $V = Bh$
cylinder . . . . . $V = \pi r^2 h$
cone . . . . . $V = \frac{1}{3}\pi r^2 h$
pyramid . . . . . $V = \frac{1}{3}Bh$
sphere . . . . . $V = \frac{4}{3}\pi r^3$

CIRCLE FORMULAS

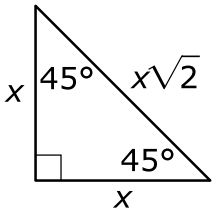
pi . . . . . $\pi \approx 3.14$
circumference . . . . $C = 2\pi r$ OR $C = \pi d$
area . . . . . $A = \pi r^2$

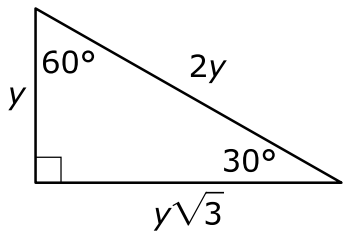
RIGHT TRIANGLES



Pythagorean Theorem
$a^2 + b^2 = c^2$
Trigonometric Ratios
$\sin\theta = \frac{a}{c}$
$\cos\theta = \frac{b}{c}$
$\tan\theta = \frac{a}{b}$

SPECIAL RIGHT TRIANGLES





November 2023 Mathematics Retest
Computer-Based Operational Items

CBT Item No.	Reporting Category	Standard	Item Type*	Item Description
1	*Geometry*	G-GMD.A.3	SR	Given its radius and height, calculate the volume of a cylinder in terms of pi.
2	*Algebra and Functions*	F-LE.A.3	SR	Compare the values of a linear function and an exponential function as the value of the independent variable increases.
3	*Geometry*	G-SRT.A.3	SR	Identify conditions necessary to prove two triangles similar.
4	*Number and Quantity*	N-RN.A.2	SR	Given an exponential expression, use properties of exponents to choose an equivalent expression.
5	*Geometry*	G-CO.A.1	SR	Identify a description that best defines an angle.
6	*Algebra and Functions*	A-REI.B.4	CR	Solve different quadratic equations in one variable, and create a different quadratic equation that has given solutions.
7	*Statistics and Probability*	S-ID.B.6	SR	Given a scatter plot, identify the data point with the greatest residual.
8	*Geometry*	G-CO.C.10	SA	Calculate the measure of an angle in a triangle, given the other two angle measures.
9	*Algebra and Functions*	F-IF.A.1	SR	Choose an input value that represents a possible element of the domain of a function graphed on a coordinate plane.
10	*Algebra and Functions*	A-REI.D.12	SR	Identify a linear inequality in two variables from a graph of its solution set.
11	*Statistics and Probability*	S-ID.A.3	SR	Identify a box plot given its quartiles, and determine the statistical measures which will be affected by the removal of an outlier.
12	*Number and Quantity*	N-RN.B.3	SR	Determine equivalent values for the product of two irrational numbers.
13	*Geometry*	G-CO.A.4	CR	Identify a translation of a figure on a coordinate plane, and analyze the effects of different transformations on the figure.
14	*Algebra and Functions*	A-CED.A.3	SA	Identify viable solutions of a linear inequality and graph the solution set of a different inequality, based on a context.
15	*Algebra and Functions*	A-REI.A.1	SR	Determine which step in the solution of an equation contains an error.
16	*Number and Quantity*	N-Q.A.2	SR	Determine units appropriate for a graphical model based on a context.
17	*Statistics and Probability*	S-CP.A.4	SR	Calculate the conditional probability of an event from a two-way frequency table.
18	*Algebra and Functions*	A-REI.C.7	SA	Determine both solutions of a system consisting of the equations of a line and a parabola, given the equations and a graph.
19	*Algebra and Functions*	A-APR.A.1	SR	Combine like terms in an expression to identify an equivalent expression.
20	*Geometry*	G-CO.D.12	SR	Analyze the construction of a perpendicular bisector.
21	*Algebra and Functions*	F-IF.C.8	SR	Identify the vertex of a quadratic function presented in vertex form.
22	*Algebra and Functions*	F-IF.A.3	SR	Identify the sixth term in an arithmetic sequence, given its first and fifth terms.

CBT Item No.	Reporting Category	Standard	Item Type*	Item Description
23	*Geometry*	G-SRT.C.6	SR	Determine the length of the hypotenuse in a special right triangle, given the length of one of its legs.
24	*Algebra and Functions*	F-LE.B.5	SR	Interpret the initial value and the decay rate of an exponential function that represents a real-world situation.
25	*Geometry*	G-SRT.A.2	SR	Given pairs of triangles and some of their measurements, determine which pair is not a similar pair.
26	*Geometry*	G-C.B.5	SR	Calculate the area of a sector of a circle, given its radius and the measure of its central angle.
27	*Number and Quantity*	N-Q.A.1	CR	Use dimensional analysis to calculate between different unit systems in a real-world situation.
28	*Geometry*	G-GPE.B.4	SR	Use coordinates to classify a triangle by the lengths of its sides.
29	*Algebra and Functions*	A-CED.A.1	SR	Create and solve a linear equation in one variable based on a real-world problem.
30	*Geometry*	G-CO.C.9	SR	Identify equations that correctly relate angle measures in a diagram with parallel lines and a transversal.
31	*Algebra and Functions*	A-SSE.A.1	SR	Interpret the parts of a linear expression based on a context.
32	*Geometry*	G-CO.B.6	SA	Locate a trapezoid on a coordinate plane after a translation, and determine whether performing other transformations on the trapezoid will result in congruent figures.
33	*Geometry*	G-C.A.2	SA	Use the properties of angles of a triangle inscribed in a circle to determine an unknown angle measure.
34	*Statistics and Probability*	S-ID.B.5	CR	Use a two-way frequency table to calculate joint, marginal, and conditional relative frequencies in a real-world situation.
35	*Number and Quantity*	N-Q.A.2	SA	Use units and estimation strategies to solve related real-world problems.
36	*Algebra and Functions*	F-IF.A.2	SR	Evaluate an exponential function for a given input value.
37	*Geometry*	G-CO.B.8	SR	Identify a pair of congruent triangles based on congruence markings shown in diagrams.
38	*Algebra and Functions*	F-BF.A.1	SR	Create a linear function that models a real-world situation.
39	*Geometry*	G-GPE.B.6	SA	Given the coordinates of the endpoints of a line segment, determine the coordinates of its midpoint and a point which divides the segment in a given ratio.
40	*Algebra and Functions*	F-LE.A.1	SR	Identify situations that can be modeled by a linear function.
41	*Statistics and Probability*	S-ID.C.8	SR	Identify a scatter plot that represents the description of a relationship of variables.
42	*Geometry*	G-CO.A.3	SR	Identify a transformation that maps a parallelogram onto itself.

*Mathematics item types are selected-response (SR), short-answer (SA), and constructed-response (CR).

November 2023 Mathematics Retest
Paper-Based Operational Items

PBT Item No.	Reporting Category	Standard	Item Type*	Item Description
1	*Geometry*	G-GMD.A.3	SR	Given its radius and height, calculate the volume of a cylinder in terms of pi.
2	*Algebra and Functions*	F-LE.A.3	SR	Compare the values of a linear function and an exponential function as the value of the independent variable increases.
3	*Geometry*	G-SRT.A.3	SR	Identify conditions necessary to prove two triangles similar.
4	*Number and Quantity*	N-RN.A.2	SR	Given an exponential expression, use properties of exponents to choose an equivalent expression.
5	*Geometry*	G-CO.A.1	SR	Identify a description that best defines an angle.
6	*Algebra and Functions*	A-REI.B.4	CR	Solve different quadratic equations in one variable, and create a different quadratic equation that has given solutions.
7	*Statistics and Probability*	S-ID.B.6	SR	Given a scatter plot, identify the data point with the greatest residual.
8	*Geometry*	G-CO.C.10	SA	Calculate the measure of an angle in a triangle, given the other two angle measures.
9	*Algebra and Functions*	F-IF.A.1	SR	Choose an input value that represents a possible element of the domain of a function graphed on a coordinate plane.
10	*Algebra and Functions*	A-REI.D.12	SR	Identify a linear inequality in two variables from a graph of its solution set.
11	*Statistics and Probability*	S-ID.A.3	SR	Identify a box plot given its quartiles, and determine the statistical measures which will be affected by the removal of an outlier.
12	*Number and Quantity*	N-RN.B.3	SR	Determine equivalent values for the product of two irrational numbers.
13	*Geometry*	G-CO.A.4	CR	Identify a translation of a figure on a coordinate plane, and analyze the effects of different transformations on the figure.
14	*Algebra and Functions*	A-CED.A.3	SR	Identify viable solutions of a linear inequality, and identify the graph of the solution set of a different inequality, based on a context.
15	*Algebra and Functions*	A-REI.A.1	SR	Determine which step in the solution of an equation contains an error.
16	*Number and Quantity*	N-Q.A.2	SR	Determine units appropriate for a graphical model based on a context.
17	*Statistics and Probability*	S-CP.A.4	SR	Calculate the conditional probability of an event from a two-way frequency table.
18	*Algebra and Functions*	A-REI.C.7	SR	Determine both solutions of a system consisting of the equations of a line and a parabola, given the equations and a graph.
19	*Algebra and Functions*	A-APR.A.1	SR	Combine like terms in an expression to identify an equivalent expression.
20	*Geometry*	G-CO.D.12	SR	Analyze the construction of a perpendicular bisector.
21	*Algebra and Functions*	F-IF.C.8	SR	Identify the vertex of a quadratic function presented in vertex form.
22	*Algebra and Functions*	F-IF.A.3	SR	Identify the sixth term in an arithmetic sequence, given its first and fifth terms.
23	*Geometry*	G-SRT.C.6	SR	Determine the length of the hypotenuse in a special right triangle, given the length of one of its legs.

PBT Item No.	Reporting Category	Standard	Item Type*	Item Description
24	*Algebra and Functions*	F-LE.B.5	SR	Interpret the initial value and the decay rate of an exponential function that represents a real-world situation.
25	*Geometry*	G-SRT.A.2	SR	Given pairs of triangles and some of their measurements, determine which pair is not a similar pair.
26	*Geometry*	G-C.B.5	SR	Calculate the area of a sector of a circle, given its radius and the measure of its central angle.
27	*Number and Quantity*	N-Q.A.1	CR	Use dimensional analysis to calculate between different unit systems in a real-world situation.
28	*Geometry*	G-GPE.B.4	SR	Use coordinates to classify a triangle by the lengths of its sides.
29	*Algebra and Functions*	A-CED.A.1	SR	Create and solve a linear equation in one variable based on a real-world problem.
30	*Geometry*	G-CO.C.9	SR	Identify equations that correctly relate angle measures in a diagram with parallel lines and a transversal.
31	*Algebra and Functions*	A-SSE.A.1	SR	Interpret the parts of a linear expression based on a context.
32	*Geometry*	G-CO.B.6	SR	Identify the graph of a trapezoid on a coordinate plane after a translation, and determine whether performing other transformations on the trapezoid will result in congruent figures.
33	*Geometry*	G-C.A.2	SA	Use the properties of angles of a triangle inscribed in a circle to determine an unknown angle measure.
34	*Statistics and Probability*	S-ID.B.5	CR	Use a two-way frequency table to calculate joint, marginal, and conditional relative frequencies in a real-world situation.
35	*Number and Quantity*	N-Q.A.2	SA	Use units and estimation strategies to solve related real-world problems.
36	*Algebra and Functions*	F-IF.A.2	SR	Evaluate an exponential function for a given input value.
37	*Geometry*	G-CO.B.8	SR	Identify a pair of congruent triangles based on congruence markings shown in diagrams.
38	*Algebra and Functions*	F-BF.A.1	SR	Create a linear function that models a real-world situation.
39	*Geometry*	G-GPE.B.6	SR	Given the coordinates of the endpoints of a line segment, determine the coordinates of its midpoint and identify the point which divides the segment in a given ratio.
40	*Algebra and Functions*	F-LE.A.1	SR	Identify situations that can be modeled by a linear function.
41	*Statistics and Probability*	S-ID.C.8	SR	Identify a scatter plot that represents the description of a relationship of variables.
42	*Geometry*	G-CO.A.3	SR	Identify a transformation that maps a parallelogram onto itself.

*Mathematics item types are selected-response (SR), short-answer (SA), and constructed-response (CR).