RIDE Rhode Island Department of Education

Release of Spring 2024 RICAS Test Information—Spanish

from the

Grade 6 Mathematics Test

June 2024
Rhode Island Department of Education

This document was prepared by the
Rhode Island Department of Elementary and Secondary Education
Angélica M. Infante-Green
Commissioner

Rhode Island Department of Elementary and Secondary Education
255 Westminster Street, Providence, RI 02903
Phone 401-222-4600
www.ride.ri.gov

Overview of Grade 6 Mathematics Test

The spring 2024 grade 6 Mathematics test 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.

Most of the operational items on the grade 6 Mathematics test were the same, regardless of whether a student took the computer-based version or the paper-based version. 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.

The Department is not releasing items from the spring 2024 RICAS grades 3–8 tests. Released items from previous years' computer-based tests are available on the RICAS Resource Center website at ricas.pearsonsupport.com/released-items.

Test Sessions and Content Overview

The grade 6 Mathematics test 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 grade 6 Mathematics test was based on standards in the five domains for grade 6 in the *Massachusetts Curriculum Framework for Mathematics* (2017). The five domains are listed below.

- Ratios and Proportional Relationships
- The Number System
- Expressions and Equations
- Geometry
- Statistics and Probability

The *Massachusetts Curriculum Framework for Mathematics* is available on the Department website at www.doe.mass.edu/frameworks/current.html.

Mathematics test results are reported under five MCAS reporting categories, which are identical to the five framework domains listed above.

The tables at the conclusion of this document provide the following information about each operational item: reporting category, standard(s) covered, item type, and item description.

Reference Materials and Tools

Each student taking the grade 6 Mathematics test was provided with a ruler and a grade 6 Mathematics Reference Sheet. A copy of the reference sheet can be found on the next page of this document.

During both Mathematics test sessions, the use of authorized bilingual word-to-word dictionaries and glossaries was allowed for students who are currently or were ever reported as English learners. No calculators, other reference tools, or materials were allowed.

Rhode Island Comprehensive Assessment System
Grado 6 Hoja de referencia para matemáticas

CONVERSIONES

1 taza = 8 onzas líquidas
1 pinta = 2 tazas
1 cuarto de galón = 2 pintas
1 galón = 4 cuartos de galón
1 galón ≈ 3.785 litros
1 litro ≈ 0.264 galón
1 litro = 1000 centímetros cúbicos

1 pulgada = 2.54 centímetros
1 metro ≈ 39.37 pulgadas
1 milla = 5280 pies
1 milla = 1760 yardas
1 milla ≈ 1.609 kilómetros
1 kilómetro ≈ 0.62 milla

1 libra = 16 onzas
1 libra ≈ 0.454 kilogramos
1 kilogramo ≈ 2.2 libras
1 tonelada = 2000 libras

FÓRMULAS DE ÁREA (*A*)

cuadrado . . . . . $A = s^2$

rectángulo . . . . . $A = bh$

o

$A = lw$

paralelogramo . . . . . $A = bh$

triángulo . . . . . $A = \frac{1}{2}bh$

(b = longitud de la base; h = altura)

FÓRMULAS DE VOLUMEN (*V*)

Prisma rectangular recto . . . . . $V = lwh$

(l = longitud; w = ancho; h = altura)

o

$V = Bh$

(B = área de la base; h = altura)

Grade 6 Mathematics
Spring 2024 Computer-Based Operational Items

CBT Item No.	Reporting Category	Standard	Item Type*	Item Description
1	*Geometry*	6.G.A.3	SR	Identify a missing coordinate given a description of a polygon graphed on the coordinate plane.
2	*The Number System*	6.NS.B.3	SR	Determine the product of two multi-digit decimals.
3	*Ratios and Proportional Relationships*	6.RP.A.3	SR	Determine the volume of a liquid by using rate and ratio reasoning within a real-world context.
4	*Expressions and Equations*	6.EE.B.8	SA	On a number line, graph the solution set that represents a constraint in a given real-world context.
5	*Geometry*	6.G.A.4	SA	Use the net of a cube to find its surface area.
6	*Ratios and Proportional Relationships*	6.RP.A.2	SA	Determine the unit rate from a given real-world situation.
7	*Expressions and Equations*	6.EE.B.7	CR	Write and solve equations that model a real-world problem.
8	*Ratios and Proportional Relationships*	6.RP.A.1	SR	Determine which part/part or part/whole ratios represent a given real-world situation.
9	*Expressions and Equations*	6.EE.A.3	SR	Use the properties of operations to factor an expression into an equivalent expression.
10	*Statistics and Probability*	6.SP.A.2	SR	Analyze a dot plot to find the median and range of the data.
11	*Expressions and Equations*	6.EE.C.9	SR	Choose a two-variable equation that best represents a given real-world context shown in a graph.
12	*The Number System*	6.NS.A.1	CR	Solve real-world problems by interpreting and using quotients of fractions, using geometry as a context.
13	*Ratios and Proportional Relationships*	6.RP.A.2	SR	Determine the unit cost in a real-world situation.
14	*The Number System*	6.NS.C.7	SR	Order rational numbers, including those with absolute value notation, from least to greatest on a number line.
15	*Expressions and Equations*	6.EE.A.4	SR	Determine which expressions are equivalent or not equivalent to a given expression.
16	*The Number System*	6.NS.B.4	SA	Determine the least common multiple of two numbers.
17	*Expressions and Equations*	6.EE.A.1	SA	Determine which numerical multi-step expression with exponents represents a verbal description, then simplify another expression with exponents.
18	*Geometry*	6.G.A.3	SA	Graph a triangle on a coordinate plane, given the coordinates of the vertices.
19	*Expressions and Equations*	6.EE.A.2	SR	Choose which mathematical expression represents a verbal description.
20	*Ratios and Proportional Relationships*	6.RP.A.3	SR	Solve a real-world problem to find the whole, given a part and the percent.
21	*Ratios and Proportional Relationships*	6.RP.A.1	SR	Determine which part/part ratio represents a given real-world situation.
22	*Geometry*	6.G.A.3	SA	Plot a rectangle on a coordinate plane, given the coordinates of its vertices.
23	*The Number System*	6.NS.C.5	SR	Solve a real-world problem involving positive and negative numbers.
24	*Statistics and Probability*	6.SP.B.5	CR	Determine and compare measures of center and variability given a data set and a real-world situation.
25	*Ratios and Proportional Relationships*	6.RP.A.3	SR	Solve a ratio problem using conversion of units within a measurement system.
26	*The Number System*	6.NS.B.2	SR	Determine whether given division equations are true or false.

CBT Item No.	Reporting Category	Standard	Item Type*	Item Description
27	*Statistics and Probability*	6.SP.B.4	SR	Identify the box plot that represents a set of data.
28	*Geometry*	6.G.A.2	CR	Solve real-world problems involving volumes of right rectangular prisms built using cubes.
29	*Expressions and Equations*	6.EE.A.2	SR	Identify the parts of a mathematical expression and evaluate the expression for a specific value.
30	*Ratios and Proportional Relationships*	6.RP.A.3	SA	Use a given rate to determine an equivalent rate in a real-world context.
31	*Expressions and Equations*	6.EE.B.5	SR	Determine which values of a variable will make an inequality true.
32	*The Number System*	6.NS.C.8	SR	Use the coordinate plane to determine the distance between two graphed points that have the same x-value.
33	*Expressions and Equations*	6.EE.A.3	SR	Apply the Distributive Property to identify an equivalent expression.
34	*Ratios and Proportional Relationships*	6.RP.A.3	SA	Find a unit price and use another unit price to solve a problem in a real-world context.
35	*Statistics and Probability*	6.SP.B.4	SA	Interpret a circle graph to solve a real-world problem.
36	*Expressions and Equations*	6.EE.A.1	SA	Given an expression with repeated multiplication, write an equivalent numerical expression with whole number exponents.
37	*Ratios and Proportional Relationships*	6.RP.A.1	SR	Given descriptions of real-world situations, determine whether the situations can be represented by part/part or part/whole ratios.
38	*The Number System*	6.NS.C.6	SR	Identify an ordered pair that represents the location of a point after a reflection over an axis of the coordinate plane.
39	*Statistics and Probability*	6.SP.A.1	SR	Determine which questions are statistical questions.
40	*Expressions and Equations*	6.EE.B.6	SR	Determine which expression can be used to represent a real-world situation.

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

Grade 6 Mathematics
Spring 2024 Paper-Based Operational Items

PBT Item No.	Reporting Category	Standard	Item Type*	Item Description
1	*Geometry*	6.G.A.3	SR	Identify a missing coordinate given a description of a polygon graphed on the coordinate plane.
2	*The Number System*	6.NS.B.3	SR	Determine the product of two multi-digit decimals.
3	*Ratios and Proportional Relationships*	6.RP.A.3	SR	Determine the volume of a liquid by using rate and ratio reasoning within a real-world context.
4	*Expressions and Equations*	6.EE.B.8	SR	Determine which number line shows the graph of the solution set that represents a constraint in a given real-world context.
5	*Geometry*	6.G.A.4	SA	Use the net of a cube to find its surface area.
6	*Ratios and Proportional Relationships*	6.RP.A.2	SA	Determine the unit rate from a given real-world situation.
7	*Expressions and Equations*	6.EE.B.7	CR	Write and solve equations that model a real-world problem.
8	*Ratios and Proportional Relationships*	6.RP.A.1	SR	Determine which part/part or part/whole ratios are true given a real-world situation.
9	*Expressions and Equations*	6.EE.A.3	SR	Use the properties of operations to factor an expression into an equivalent expression.
10	*Statistics and Probability*	6.SP.A.2	SR	Analyze a dot plot to find the median and range of the data.
11	*Expressions and Equations*	6.EE.C.9	SR	Choose a two-variable equation that best represents a given real-world context shown in a graph.
12	*The Number System*	6.NS.A.1	CR	Solve real-world problems by interpreting and using quotients of fractions, using geometry as a context.
13	*Ratios and Proportional Relationships*	6.RP.A.2	SR	Determine the unit cost in a real-world situation.
14	*The Number System*	6.NS.C.7	SR	Determine which number line shows rational numbers, including those with absolute value notation, ordered from least to greatest.
15	*Expressions and Equations*	6.EE.A.4	SR	Determine which expression is equivalent to a given expression.
16	*The Number System*	6.NS.B.4	SA	Determine the least common multiple of two numbers.
17	*Expressions and Equations*	6.EE.A.1	SA	Determine which numerical multi-step expression with exponents represents a verbal description, then simplify another expression with exponents.
18	*Geometry*	6.G.A.3	SR	Determine which graph shows a triangle on a coordinate plane, given the coordinates of the vertices.
19	*Expressions and Equations*	6.EE.A.2	SR	Choose which mathematical expression represents a verbal description.
20	*Ratios and Proportional Relationships*	6.RP.A.3	SR	Solve a real-world problem to find the whole, given a part and the percent.
21	*Ratios and Proportional Relationships*	6.RP.A.1	SR	Determine which part/part ratio represents a given real-world situation.
22	*Geometry*	6.G.A.3	SR	Determine which graph shows a rectangle on the coordinate plane, given the coordinates of its vertices.
23	*The Number System*	6.NS.C.5	SR	Solve a real-world problem involving positive and negative numbers.
24	*Statistics and Probability*	6.SP.B.5	CR	Determine and compare measures of center and variability given a data set and a real-world situation.
25	*Ratios and Proportional Relationships*	6.RP.A.3	SR	Solve a ratio problem using conversion of units within a measurement system.
26	*The Number System*	6.NS.B.2	SR	Determine which division equation is not true.

PBT Item No.	Reporting Category	Standard	Item Type*	Item Description
27	*Statistics and Probability*	6.SP.B.4	SR	Identify the box plot that represents a set of data.
28	*Geometry*	6.G.A.2	CR	Solve real-world problems involving volumes of right rectangular prisms built using cubes.
29	*Expressions and Equations*	6.EE.A.2	SR	Identify the parts of a mathematical expression and evaluate the expression for a specific value.
30	*Ratios and Proportional Relationships*	6.RP.A.3	SA	Use a given rate to determine an equivalent rate in a real-world context.
31	*Expressions and Equations*	6.EE.B.5	SR	Determine which value of a variable will not make an inequality true.
32	*The Number System*	6.NS.C.8	SR	Use the coordinate plane to determine the distance between two graphed points that have the same *x*-value.
33	*Expressions and Equations*	6.EE.A.3	SR	Apply the Distributive Property to identify an equivalent expression.
34	*Ratios and Proportional Relationships*	6.RP.A.3	SA	Find a unit price and use another unit price to solve a problem in a real-world context.
35	*Statistics and Probability*	6.SP.B.4	SA	Interpret a circle graph to solve a real-world problem.
36	*Expressions and Equations*	6.EE.A.1	SR	Given an expression with repeated multiplication, determine which numerical expression is equivalent.
37	*Ratios and Proportional Relationships*	6.RP.A.1	SR	Given descriptions of real-world situations, determine which situation can be represented by a part/part ratio.
38	*The Number System*	6.NS.C.6	SR	Identify an ordered pair that represents the location of a point after a reflection over an axis of the coordinate plane.
39	*Statistics and Probability*	6.SP.A.1	SR	Determine which questions are statistical questions.
40	*Expressions and Equations*	6.EE.B.6	SR	Determine which expression can be used to represent a real-world situation.

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