# Computer-Based Released Items
# Grade 7 RICAS Mathematics
# Spring 2025

The spring 2025 grade 7 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.

The Department of Education is releasing items from both versions of the test to provide information about the knowledge and skills that students are expected to demonstrate.

- Released items from the **computer-based test** are available online at ricas.onlinehelp.cognia.org/released-items.
- Released items from the **paper-based test** are available in PDF format on the Department's website at www.ride.ri.gov/InstructionAssessment/Assessment/ReleasedItemsPracticeTests.aspx.

This document provides information about each released item from the *computer-based test*, including the following: reporting category, standard covered, item type, item description, and correct answer (for selected-response and short-answer items only). This information is also provided for unreleased operational items.

**A Note about Testing Mode**
Most of the operational items on the grade 7 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 or multiple-select items that tested the same Mathematics content and assessed the same standard as the technology-enhanced item.

# Grade 7 Mathematics
# Spring 2025 Computer-Based Released Operational Items

| CBT Item No. | Reporting Category | Standard | Item Type* | Item Description | Correct Answer (SR)** |
|---|---|---|---|---|---|
| 1 | *Geometry* | 7.G.B.4 | SR | Determine the distance between the center of a circle and a point drawn on the circle, given its radius. | D |
| 2 | *Ratios and Proportional Relationships* | 7.RP.A.2 | SR | Determine which table represents a proportional relationship between two quantities. | D |
| 3 | *The Number System* | 7.NS.A.2 | SR | Determine which expression is equivalent to a given expression. | D |
| 4 | *Expressions and Equations* | 7.EE.B.4 | SR | Extend a simple pattern when given a rule. | B |
| 5 | *Statistics and Probability* | 7.SP.C.8 | CR | Find the probability of a compound event using a tree diagram and simulation, and make an organized list based on the simulation. | |
| 6 | *The Number System* | 7.NS.A.1 | SA | Determine the solution of an equation involving subtraction of two rational numbers and plot the solution on a number line. | *see page 6* |
| 7 | *Expressions and Equations* | 7.EE.B.3 | SA | Solve a multi-step, real-world problem involving fractions, decimals, and percentages. | *see page 6* |
| 8 | *Ratios and Proportional Relationships* | 7.RP.A.1 | SR | Determine the unit rate associated with a given ratio of fractions in a real-world context. | D |
| 9 | *Ratios and Proportional Relationships* | 7.RP.A.1 | SR | Determine the unit rates associated with ratios of fractions in a real-world context. | *see page 7* |
| 10 | *The Number System* | 7.NS.A.2 | SR | Determine which expressions are equivalent to a given expression. | B,C,F |
| 11 | *Ratios and Proportional Relationships* | 7.RP.A.2 | SR | Interpret the proportional relationship shown in a graph. | C |
| 12 | *Expressions and Equations* | 7.EE.A.2 | SR | Determine which expression represents a given real-world context. | B |
| 13 | *Statistics and Probability* | 7.SP.A.1 | SR | Determine which sampling strategy will produce a sample that is valid to represent a specific population. | A |
| 14 | *Expressions and Equations* | 7.EE.A.1 | SR | Determine which expression is equivalent to a given expression. | *see page 7* |
| 15 | *The Number System* | 7.NS.A.3 | SR | Solve a multi-step, real-world problem by converting units. | B |
| 16 | *Expressions and Equations* | 7.EE.B.4 | SR | Determine which inequality in the form px plus q less than or equal to r can be used to represent a problem. | C |
| 17 | *Geometry* | 7.G.A.1 | CR | Identify and apply a scale to determine the dimensions and areas of rectangles given in a real-world context. | |
| 18 | *Statistics and Probability* | 7.SP.A.2 | SR | Given a random sample from a population, predict the distribution of the responses in a different sample. | C |

| CBT Item No. | Reporting Category | Standard | Item Type* | Item Description | Correct Answer (SR)** |
|---|---|---|---|---|---|
| 19 | *The Number System* | 7.NS.A.3 | SA | Solve a real-world problem involving the four operations. | *see page 7* |
| 20 | *Ratios and Proportional Relationships* | 7.RP.A.3 | SR | Solve a multi-step, real-world problem involving percent increase. | *see page 7* |

* Mathematics item types are selected-response (SR), short-answer (SA), and constructed-response (CR).
** Answers are provided here for selected-response and short-answer items only. Pages 6–7 of this document provide correct answers for technology-enhanced (TE) items. Sample responses and scoring guidelines for constructed-response items will be posted at www.doe.mass.edu/mcas/student/default.html.

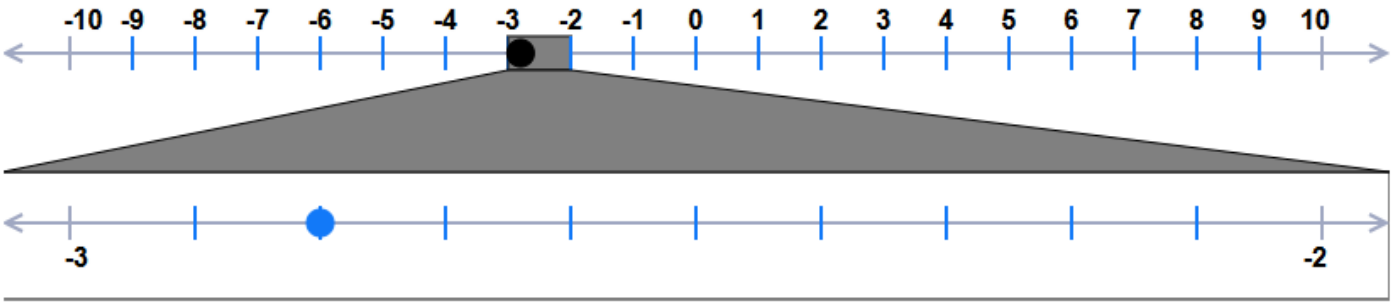
## Grade 7 Mathematics
## Spring 2025 Computer-Based Unreleased Operational Items

| CBT Item No. | Reporting Category | Standard | Item Type* | Item Description |
|---|---|---|---|---|
| 21 | *The Number System* | 7.NS.A.2 | SR | Determine whether the products of positive and negative rational numbers have positive or negative values. |
| 22 | *Expressions and Equations* | 7.EE.A.1 | SR | Determine which expression is equivalent to a given expression. |
| 23 | *The Number System* | 7.NS.A.1 | CR | Apply properties of operations to add and subtract rational numbers in a mathematical context. |
| 24 | *Ratios and Proportional Relationships* | 7.RP.A.2 | SR | Determine the constant of proportionality given a table of values. |
| 25 | *Expressions and Equations* | 7.EE.A.2 | SR | Determine which equivalent expression can be used to represent a real- world problem. |
| 26 | *Ratios and Proportional Relationships* | 7.RP.A.1 | SR | Determine the unit rate associated with ratios of fractions and use the unit rate to solve a real-world problem. |
| 27 | *Ratios and Proportional Relationships* | 7.RP.A.3 | SR | Use proportional and ratio reasoning to solve a problem using distance as a context. |
| 28 | *Statistics and Probability* | 7.SP.B.3 | SR | Express the difference between two means in terms of the mean absolute deviation. |
| 29 | *Expressions and Equations* | 7.EE.A.2 | SR | Determine which expressions could represent a given real-world context. |
| 30 | *The Number System* | 7.NS.A.3 | SR | Determine which expression is equivalent to a given expression. |
| 31 | *Statistics and Probability* | 7.SP.C.5 | SR | Determine how likely an event is to occur given the probability of the event. |
| 32 | *Statistics and Probability* | 7.SP.C.6 | SR | Determine the probability of a chance event and predict the approximate relative frequency of that event given the probability. |
| 33 | *Expressions and Equations* | 7.EE.B.3 | CR | Solve multi-step, real-life problems posed with rational numbers including fractions, percents, and integers. |
| 34 | *Geometry* | 7.G.B.5 | SR | Determine which equations represent a multi-step problem by using facts about supplementary and complementary angles. |
| 35 | *Statistics and Probability* | 7.SP.B.4 | SR | Given two numerical data sets in a double box plot, compare the medians and the interquartile ranges of the data sets. |
| 36 | *Ratios and Proportional Relationships* | 7.RP.A.2 | SR | Interpret the proportional relationship shown in a graph, use it to create an equation, and solve a problem. |
| 37 | *Geometry* | 7.G.A.3 | SR | Determine which two-dimensional shape will result from slicing a right rectangular pyramid, given the direction of the slice. |

| CBT Item No. | Reporting Category | Standard | Item Type* | Item Description |
|---|---|---|---|---|
| 38 | *Geometry* | 7.G.A.2 | SR | Determine whether each given set of angle measurements could be the angle measures of a triangle. |
| 39 | *Statistics and Probability* | 7.SP.C.7 | SR | Determine the probability of events using a uniform probability model. |
| 40 | *Ratios and Proportional Relationships* | 7.RP.A.3 | SR | Solve a multi-step, real-world problem involving percent increase. |

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

**Correct Answer for CBT Item #6: Technology-Enhanced Item**




**Correct Answer for CBT Item #7: Technology-Enhanced Item**

Part A

$1\frac{1}{8}$

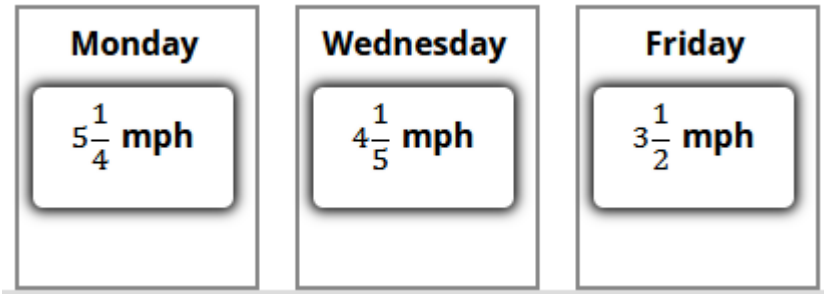
**OR**

1.125

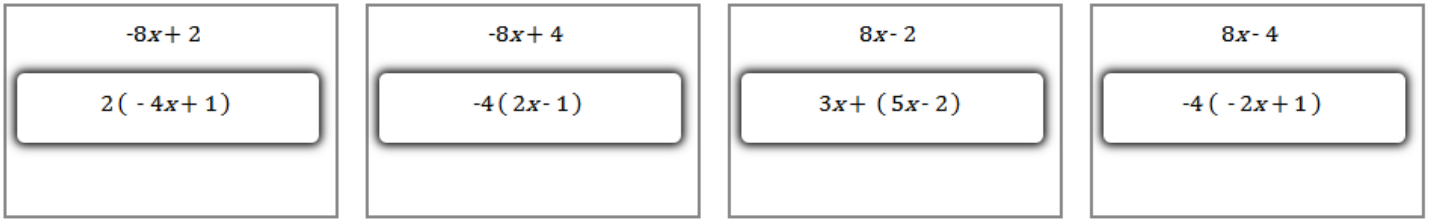
Part B

| Amount | Correct | Incorrect |
|---|---|---|
| $1\frac{1}{2}$ cups raisins | ◉ | ○ |
| 1 cup almonds | ◉ | ○ |
| $\frac{2}{3}$ cup chocolate chips | ○ | ◉ |

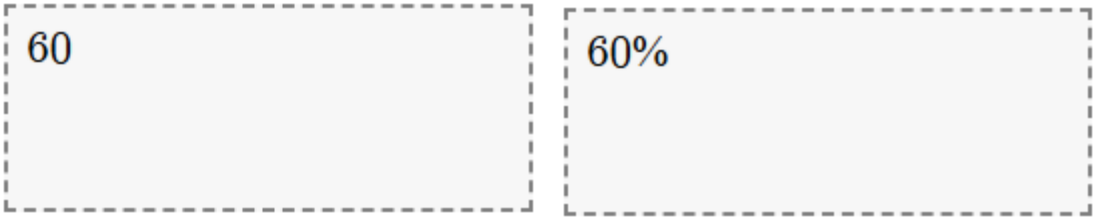
**Correct Answer for CBT Item #9: Technology-Enhanced Item**




**Correct Answer for CBT Item #14: Technology-Enhanced Item**




**Correct Answer for CBT Item #19: Technology-Enhanced Item**




**Correct Answer for CBT Item #20: Technology-Enhanced Item**

It cost Lucas $22 to make the dress, so he will sell the dress for $30.80 .

Lucas will sell the jacket for $44.80, because it cost him $32.00 to make the jacket.