

Computer-Based Released Items

Grade 3 MCAS Mathematics

Spring 2025

The spring 2025 grade 3 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.

The Department of Elementary and Secondary 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 mcas.onlinehelp.cognia.org/released-items.
- Released items from the **paper-based test** are available in PDF format on the Department's website at www.doe.mass.edu/mcas/release.html.

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. Sample responses and scoring guidelines for constructed-response items will be posted at www.doe.mass.edu/mcas/student/.

A Note about Testing Mode

Most of the operational items on the grade 3 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 3 Mathematics
Spring 2025 Computer-Based Released Operational Items

CBT Item No.	Reporting Category	Standard	Item Type*	Item Description	Correct Answer (SR)**
1	<i>Operations and Algebraic Thinking</i>	3.OA.A.1	SR	Determine which real-world word problem can be represented by a given multiplication expression.	A
2	<i>Number and Operations in Base Ten</i>	3.NBT.A.1	SR	Identify the expression that gives the best estimate for the solution to a word problem by rounding whole numbers to the nearest 10.	B
3	<i>Operations and Algebraic Thinking</i>	3.OA.B.6	SR	Select a multiplication equation that can be used to solve a given division equation.	D
4	<i>Measurement and Data</i>	3.MD.D.8	CR	Determine the area and perimeter of a rectangle with given dimensions and identify the dimensions of a different rectangle that has the same perimeter but a different area as the given rectangle.	
5	<i>Measurement and Data</i>	3.MD.A.2	SR	Determine mass by interpreting a scale and solve a one-step word problem with addition.	see page 5
6	<i>Number and Operations in Base Ten</i>	3.NBT.A.1	SR	In a real-world problem, identify two numbers that, when rounded to the nearest hundred, will equal a given number.	A,D
7	<i>Number and Operations-Fractions</i>	3.NF.A.2	CR	Plot a point to show the location of a fraction on a given partitioned number line, write the fraction that represents a point on a partitioned number line, and use a number line to explain if a fraction greater than 1 is greater than a given whole number.	
8	<i>Geometry</i>	3.G.A.2	SA	Given a drawing of a figure divided into equal parts, determine what fraction of the area of the whole figure is one part.	see page 5
9	<i>Number and Operations-Fractions</i>	3.NF.A.3	SA	Given a set of numbers for the numerator and denominator, create a fraction that is equivalent to a given whole number.	see page 5
10	<i>Measurement and Data</i>	3.MD.B.3	SR	Solve a one-step “how many less” problem using a given picture graph.	C
11	<i>Operations and Algebraic Thinking</i>	3.OA.C.7	SR	Fluently divide a two-digit number by a one-digit number.	B
12	<i>Number and Operations-Fractions</i>	3.NF.A.1	SR	Determine which fraction model represents a given fraction.	D
13	<i>Measurement and Data</i>	3.MD.A.1	SR	Find end times given start times and elapsed times.	see page 6
14	<i>Geometry</i>	3.G.A.1	SA	Determine how many shapes in a group of given shapes have a right angle.	3
15	<i>Operations and Algebraic Thinking</i>	3.OA.A.4	SR	Determine which whole numbers can be used to make given division and multiplication equations true.	see page 6

CBT Item No.	Reporting Category	Standard	Item Type*	Item Description	Correct Answer (SR)**
16	<i>Operations and Algebraic Thinking</i>	3.OA.D.9	SR	Given a characteristic of the first number in a pattern and the rule for the pattern, determine which list of numbers could be the numbers in the pattern.	D
17	<i>Number and Operations in Base Ten</i>	3.NBT.A.3	SA	Solve a word problem by multiplying a single-digit whole number by a multiple of 10.	80
18	<i>Measurement and Data</i>	3.MD.C.7	SR	Determine the expression that can be used to find the area of a rectangle using the distributive property.	C
19	<i>Geometry</i>	3.G.A.1	SR	Identify which shapes have the same number of sides as a given shape.	C,D
20	<i>Operations and Algebraic Thinking</i>	3.OA.D.8	SR	Determine which equations can be used to solve a given 2-step word problem.	B

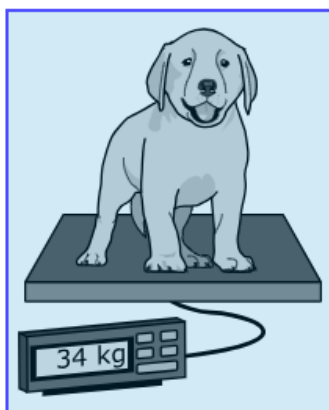
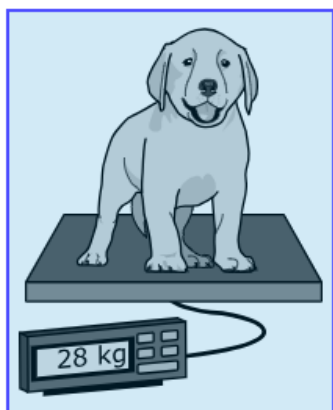
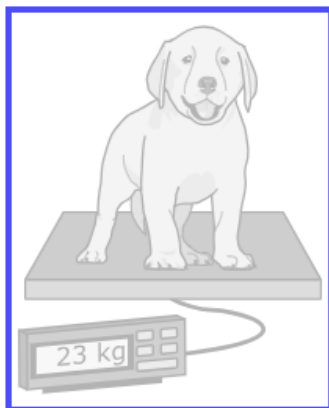
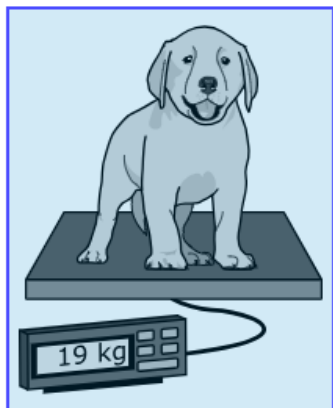
*Mathematics item types are selected-response (SR), short-answer (SA), and constructed-response (CR).

**Answers are provided here for selected-response and short-answer items only. Pages 5–6 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.

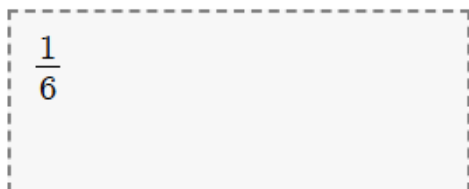
Grade 3 Mathematics
Spring 2025 Computer-Based Unreleased Operational Items

CBT Item No.	Reporting Category	Standard	Item Type*	Item Description
21	<i>Number and Operations–Fractions</i>	3.NF.A.1	SR	Determine the fraction that is represented by a given fraction model.
22	<i>Operations and Algebraic Thinking</i>	3.OA.D.9	SR	Determine the rule and find the next number in a given pattern.
23	<i>Number and Operations–Fractions</i>	3.NF.A.3	SR	Compare fractions with the same numerator by reasoning about their size.
24	<i>Geometry</i>	3.G.A.1	SR	Identify the mathematical names of shapes that share two given attributes.
25	<i>Operations and Algebraic Thinking</i>	3.OA.A.2	SR	Determine which equation can be used to solve a given word problem.
26	<i>Measurement and Data</i>	3.MD.C.6	SR	Determine the area of a given rectangle by counting the unit squares and partial unit squares.
27	<i>Operations and Algebraic Thinking</i>	3.OA.A.1	SR	Determine the expression that can be used to solve a multiplication word problem.
28	<i>Operations and Algebraic Thinking</i>	3.OA.C.7	SA	Find the product of three one-digit whole numbers.
29	<i>Measurement and Data</i>	3.MD.C.7	SR	Identify the multiplication and addition expressions that can be used to find the area of a rectangle, given a tiled diagram of the rectangle.
30	<i>Measurement and Data</i>	3.MD.A.1	SR	Tell time on an analog clock and solve a word problem by adding minutes.
31	<i>Operations and Algebraic Thinking</i>	3.OA.A.2	SR	Determine the equation that can be used to solve a given division word problem.
32	<i>Number and Operations in Base Ten</i>	3.NBT.A.1	SR	Round three-digit whole numbers to the nearest ten.
33	<i>Number and Operations in Base Ten</i>	3.NBT.A.3	SA	Determine the product of a one-digit number and a multiple of 10.
34	<i>Measurement and Data</i>	3.MD.C.7	SR	Identify rectangles with given lengths and widths that have a specified area.
35	<i>Number and Operations in Base Ten</i>	3.NBT.A.2	CR	Solve word problems involving addition and subtraction with three-digit whole numbers.
36	<i>Number and Operations–Fractions</i>	3.NF.A.3	SR	Determine which fraction is equivalent to a given fraction represented by a fraction model.
37	<i>Operations and Algebraic Thinking</i>	3.OA.A.3	CR	Solve a word problem with multiplication and determine different numbers of equal groups for a given product.
38	<i>Measurement and Data</i>	3.MD.B.4	SR	Identify the line plot that represents a set of data with measurements given in both fractions and mixed numbers.
39	<i>Number and Operations–Fractions</i>	3.NF.A.3	SR	Plot a point on a labeled number line to show the location of a fraction that is equivalent to a given fraction.
40	<i>Operations and Algebraic Thinking</i>	3.OA.B.5	SA	Use the distributive property to complete a multiplication equation.

Correct Answer for CBT Item #5: Technology-Enhanced Item



Correct Answer for CBT Item #8: Technology-Enhanced Item



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

$$\frac{\boxed{2}}{\boxed{1}} = 2 \quad \text{OR} \quad \frac{\boxed{4}}{\boxed{2}} = 2$$

Correct Answer for CBT Item #13: Technology-Enhanced Item

Train Rides

Start Time	End Time
7:15	7:55
8:30	9:10

Correct Answer for CBT Item #15: Technology-Enhanced Item

$$64 = 8 \times \text{8}$$

$$7 = 63 \div \text{9}$$

$$35 \div 7 = \text{5}$$