

Grade 4 Mathematics Computer-Based Released Items

The spring 2017 grade 4 Mathematics test was administered in two formats: a computer-based version and a paper-based version.

Released items from the **computer-based version** of the test are available online at mcas.pearsonsupport.com/released-items. This document provides information about each released item from the computer-based test, including: reporting category, standard(s) covered, item type, item description, and correct answer (for selected-response and short-answer items only). Information about unreleased operational items is also presented here.

Released items from the **paper-based version** of the test are available on the Department's website at www.doe.mass.edu/mcas/testitems.html.

Grade 4 Mathematics
Spring 2017 Computer-Based Released Operational Items:
Reporting Categories, Standards, Item Descriptions, and Correct Answers

Item No.	Reporting Category	Standard	Item Type*	Description	Correct Answer**
1	<i>Measurement & Data</i>	4.MD.1.03	SA	Given the length and perimeter of a rectangle in a real-world context, determine the width of the rectangle.	9 feet
2	<i>Number & Operations-Fractions</i>	4.NF.3.07	SR	Given a decimal, determine a greater decimal in a real-world context.	B
3	<i>Geometry</i>	4.G.1.03	SR	Determine which two-dimensional figure shows all of its lines of symmetry.	A
4	<i>Geometry</i>	4.G.1.01	SR	Identify the lines in a figure that are perpendicular.	C
5	<i>Operations & Algebraic Thinking</i>	4.OA.2.04	CR	Determine multiples, factors, and whether numbers are prime or composite and justify the reasoning used to determine the answers.	

* 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. Sample responses and scoring guidelines for any constructed-response items will be posted to the Department's website later this year.

Grade 4 Mathematics
Spring 2017 Computer-Based Unreleased Operational Items:
Reporting Categories, Standards, and Item Descriptions

Item No.	Reporting Category	Standard	Item Type*	Description
6	<i>Geometry</i>	4.G.1.01	SR	Identify the number of right angles in a given two-dimensional figure.
7	<i>Operations & Algebraic Thinking</i>	4.OA.1.02	SR	Determine which equation using multiplicative comparison represents a given real-world context.
8	<i>Number & Operations-Fractions</i>	4.NF.2.03.b	SR	Determine which expression has a value that is equivalent to a given fraction.
9	<i>Number & Operations in Base Ten</i>	4.NBT.2.05	SR	Find the product of a four-digit number and a one-digit number.
10	<i>Geometry</i>	4.G.1.03	SA	Determine which figure has a given number of lines of symmetry.
11	<i>Operations & Algebraic Thinking</i>	4.OA.1.03	SA	Solve multi-step real-world problems using all four operations and interpret a remainder.
12	<i>Number & Operations in Base Ten</i>	4.NBT.1.02	SR	Complete a given number sentence to compare the difference in size between two four-digit numbers.

Item No.	Reporting Category	Standard	Item Type*	Description
13	<i>Measurement & Data</i>	4.MD.1.01	SR	Determine which list of metric units is arranged by size based on a given order.
14	<i>Number & Operations in Base Ten</i>	4.NBT.2.05	SA	Determine the product of a three-digit number and a one-digit number.
15	<i>Operations & Algebraic Thinking</i>	4.OA.1.03	CR	Solve multi-step real-world problems using multiplication and division, and interpret a remainder.
16	<i>Geometry</i>	4.G.1.01	SR	Determine which two-dimensional figure has the given number of acute angles.
17	<i>Number & Operations-Fractions</i>	4.NF.2.04.b	SR	Determine which expression is equivalent to the product of a whole number and a fraction.
18	<i>Number & Operations in Base Ten</i>	4.NBT.2.04	SA	Determine the sum of a five-digit number and a four-digit number.
19	<i>Measurement & Data</i>	4.MD.3.07	SA	Determine the measures of unknown angles given other angle measures and calculate the sum of all the angles.
20	<i>Number & Operations in Base Ten</i>	4.NBT.2.06	SA	Determine the remainder when a four-digit number is divided by a one-digit number.
21	<i>Measurement & Data</i>	4.MD.1.02	CR	Solve multi-step real-world problems involving money using addition, subtraction and multiplication.
22	<i>Number & Operations-Fractions</i>	4.NF.1.02	SR	Complete a number sentence comparing two fractions.
23	<i>Number & Operations-Fractions</i>	4.NF.2.03.d	SR	Determine which fraction equation represents a given real-world context.
24	<i>Number & Operations in Base Ten</i>	4.NBT.2.05	SA	Determine the product of a three-digit number and a one-digit number.
25	<i>Number & Operations-Fractions</i>	4.NF.2.04.c	SA	Determine the product of a fraction and a whole number in a real-world context.
26	<i>Operations & Algebraic Thinking</i>	4.OA.1.03	SR	Solve a multi-step real-world problem involving addition, multiplication and division with whole numbers.
27	<i>Number & Operations in Base Ten</i>	4.NBT.2.04	SR	Solve real-world problems including addition and subtraction with four-digit whole numbers.
28	<i>Number & Operations-Fractions</i>	4.NF.1.01	SR	Determine which set of fractions are equivalent to each other.
29	<i>Measurement & Data</i>	4.MD.3.06	SA	Determine the angle measure of an angle shown on a protractor.
30	<i>Number & Operations-Fractions</i>	4.NF.2.04.b	SR	Determine which expression is equivalent to the product of a whole number and a fraction.
31	<i>Number & Operations in Base Ten</i>	4.NBT.2.04	SR	Determine which addition problems with four-digit whole numbers have the given sum.
32	<i>Geometry</i>	4.G.1.02	SR	Identify which statement is true about the properties of a right triangle.
33	<i>Number & Operations in Base Ten</i>	4.NBT.2.06	SR	Find the quotient and remainder of a three-digit number divided by a one-digit number.
34	<i>Measurement & Data</i>	4.MD.3.07	SA	Determine the measures of unknown angles in a figure given some of the figure's angle measures.
35	<i>Operations & Algebraic Thinking</i>	4.OA.1.01	SR	Determine which statements represent a given multiplication equation.
36	<i>Number & Operations-Fractions</i>	4.NF.3.07	CR	Determine if the comparison of two decimals is accurate, and represent the two decimals as fractions to justify the answer.
37	<i>Number & Operations in Base Ten</i>	4.NBT.2.05	SA	Determine the product of 2 two-digit whole numbers.
38	<i>Number & Operations-Fractions</i>	4.NF.2.03.c	SR	Find the sum of two mixed numbers with like denominators.
39	<i>Operations & Algebraic Thinking</i>	4.OA.2.04	SR	Identify the number that is not a factor of a two-digit number.
40	<i>Geometry</i>	4.G.1.02	SR	Identify the two-dimensional figure with only obtuse angles.

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