Grade 3 Mathematics Computer-Based Released Items

The spring 2017 grade 3 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 3 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	*Geometry*	3.G.1.01	SR	Determine which statement is true about a given shape's attributes.	C
2	*Number & Operations in Base Ten*	3.NBT.1.01	CR	Solve problems by rounding three-digit numbers to the nearest 10 and 100, with explanation and justification.	
3	*Measurement & Data*	3.MD.2.03	SA	Determine the solution to a real-world problem presented in a bar graph.	6 birds
4	*Operations & Algebraic Thinking*	3.OA.2.05	SR	Determine which expression shows another way to solve a given expression that includes multiplication and addition.	C
5	*Number & Operations-Fractions*	3.NF.1.03	SR	Determine the greatest fraction for a real-world situation.	A

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

Item No.	Reporting Category	Standard	Item Type*	Description
6	*Measurement & Data*	3.MD.3.06	SR	Determine the area of a given figure by counting the unit squares.
7	*Number & Operations-Fractions*	3.NF.1.03.a	SR	Determine which fraction on a number line is equivalent to a given fraction.
8	*Measurement & Data*	3.MD.2.04	SA	Determine the length of a given object by measuring with a ruler.
9	*Operations & Algebraic Thinking*	3.OA.1.03	SR	Solve a word problem involving multiplication.
10	*Geometry*	3.G.1.02	SR	Determine which fraction represents a given real-world problem.
11	*Operations & Algebraic Thinking*	3.OA.1.04	SR	Determine which whole number will make a given division equation true.
12	*Measurement & Data*	3.MD.1.01	SA	Identify the point on a number line that represents the solution to a word problem involving subtraction of a given time interval.
13	*Operations & Algebraic Thinking*	3.OA.1.03	CR	Create two equivalent multiplication expressions based on a real-world problem and justify why they are equivalent.
14	*Number & Operations in Base Ten*	3.NBT.1.02	SR	Determine which numbers complete a given subtraction problem.

Item No.	Reporting Category	Standard	Item Type*	Description
15	*Measurement & Data*	3.MD.1.02	SR	Solve a word problem involving addition of volumes that are given in the same units.
16	*Operations & Algebraic Thinking*	3.OA.3.07	SR	Determine which multiplication or division equation is true.
17	*Measurement & Data*	3.MD.4.08	SR	Given a shape and its dimensions, determine which shape with different given dimensions has the same area but different perimeter.
18	*Number & Operations in Base Ten*	3.NBT.1.01	SR	Determine which number would result when a given whole number is rounded to the nearest hundred.
19	*Number & Operations-Fractions*	3.NF.1.03	CR	Solve problems by comparing fractions and by reasoning about equal fraction amounts of different size wholes.
20	*Operations & Algebraic Thinking*	3.OA.1.01	SR	Determine which real-world situation can be represented by a given multiplication expression.
21	*Measurement & Data*	3.MD.4.08	SA	Determine the length of a side of a triangle given the perimeter and the lengths of the other two sides.
22	*Number & Operations-Fractions*	3.NF.1.03.b	SR	Identify two equations that show different equivalent fractions.
23	*Number & Operations-Fractions*	3.NF.1.02.b	SR	Determine which number line shows a point representing the location of a given fraction.
24	*Geometry*	3.G.1.01	SR	Determine which shape has the same number of angles as a given shape.
25	*Operations & Algebraic Thinking*	3.OA.1.04	SA	Find the value of an unknown variable in a division equation.
26	*Number & Operations-Fractions*	3.NF.1.01	SR	Determine which shaded figure shows a given fraction in a real-world context.
27	*Number & Operations in Base Ten*	3.NBT.1.02	SR	Find the solution to a subtraction problem with 2 three-digit numbers.
28	*Measurement & Data*	3.MD.3.07	CR	Solve a problem by finding the area of a rectangle and justify why another student's solution is not correct.
29	*Operations & Algebraic Thinking*	3.OA.3.07	SR	Determine which division expressions have a given quotient.
30	*Operations & Algebraic Thinking*	3.OA.4.08	SA	Solve real-world problems involving addition, subtraction and multiplication.
31	*Operations & Algebraic Thinking*	3.OA.1.01	SR	Determine which real-world situation can be represented by a given multiplication expression.
32	*Geometry*	3.G.1.02	SR	Determine which fraction represents one part of a circle that is divided into a given number of equal parts.
33	*Operations & Algebraic Thinking*	3.OA.3.07	SR	Identify whether multiplication and division equations are true or false.
34	*Number & Operations in Base Ten*	3.NBT.1.03	SR	Find the product to a given multiplication problem with a one-digit whole number and a multiple of 10.
35	*Operations & Algebraic Thinking*	3.OA.4.09	SA	Determine the next number of a given pattern in a multiplication table.
36	*Measurement & Data*	3.MD.1.02	SA	Determine the mass by interpreting a scale and solve a one-step word problem with subtraction.
37	*Number & Operations in Base Ten*	3.NBT.1.03	SA	Given a real-world situation, determine the product of a one-digit number and a multiple of 10.
38	*Number & Operations-Fractions*	3.NF.1.03.a	SR	Determine which figure with a fractional amount shaded is equivalent to the amount shaded in a given shaded figure.
39	*Geometry*	3.G.1.01	SR	Determine which pair of polygons have the same number of vertices.
40	*Operations & Algebraic Thinking*	3.OA.1.02	SR	Determine which expression can be used to solve a division problem with a real-world context.

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