MASSACHUSETTS
Department of Elementary
and Secondary Education

Release of Spring 2026 MCAS Test Items from the Grade 4 Mathematics Paper-Based Test

Spring 2026
Massachusetts Department of Elementary and Secondary Education

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Department of Elementary
and Secondary Education

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Overview of Grade 4 Mathematics Test

The spring 2026 grade 4 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 4 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.

This document displays released items from the paper-based test. Released items from the computer-based test are available on the MCAS Resource Center website at mcas.onlinehelp.cognia.org/released-items.

Test Sessions and Content Overview

The grade 4 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 4 Mathematics test was based on standards in the five domains for grade 4 in the *Massachusetts Curriculum Framework for Mathematics* (2017). The five domains are listed below.

- Operations and Algebraic Thinking
- Number and Operations in Base Ten
- Number and Operations—Fractions
- Measurement and Data
- Geometry

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 released and unreleased operational item: reporting category, standard(s) covered, item type, and item description. The correct answers for released selected-response and short-answer questions are also displayed in the released item table.

Reference Materials and Tools

Each student taking the grade 4 Mathematics test was provided with a ruler.

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.

Grade 4 Mathematics

SESSION 1

This session contains 9 questions.

*You may **not** use a calculator during this session.*

Directions

Read each question carefully and then answer it as well as you can. You must record all answers in this Test & Answer Booklet.

For some questions, you will mark your answers by filling in the circles in your Test & Answer Booklet. Make sure you darken the circles completely. Do not make any marks outside of the circles. If you need to change an answer, be sure to erase your first answer completely.

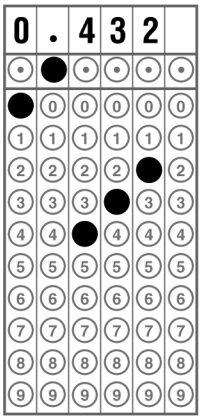
For other questions, you will need to fill in an answer grid. Directions for completing questions with answer grids are provided on the next page.

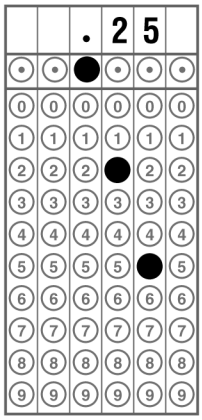
If a question asks you to show or explain your work, you must do so to receive full credit. Write your response in the space provided. Only responses written within the provided space will be scored.

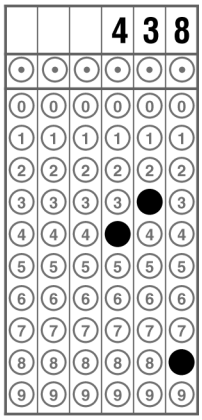
Directions for Completing Questions with Answer Grids

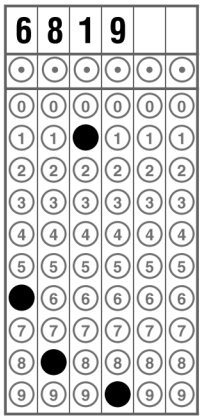
1. Work the question and find an answer.
2. Enter your answer in the answer boxes at the top of the answer grid.
3. Print only one number or symbol in each box. Do not leave a blank box in the middle of an answer.
4. Under each answer box, fill in the circle that matches the number or symbol you wrote above. Make a solid mark that completely fills the circle.
5. Do not fill in a circle under an unused answer box.
6. If you need to change an answer, be sure to erase your first answer completely.
7. See below for examples of how to correctly complete an answer grid.

Examples









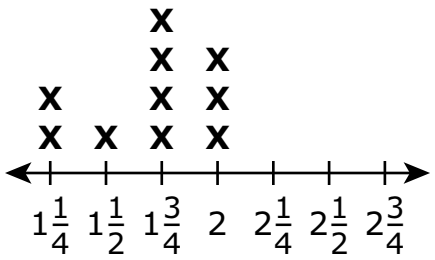
1 A mail carrier is sorting some packages. This table shows the different weights, in pounds, of the packages and the number of packages of each weight.

Packages

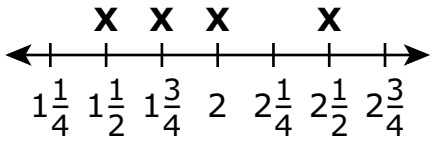
Weight (pounds)	Number of Packages
$1\frac{1}{2}$	2
$1\frac{3}{4}$	1
2	4
$2\frac{1}{2}$	3

Which of these line plots correctly shows the information in the table?

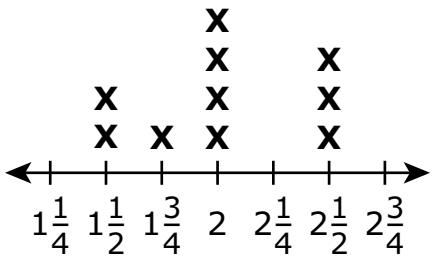
Ⓐ **Weight of Packages (pounds)**



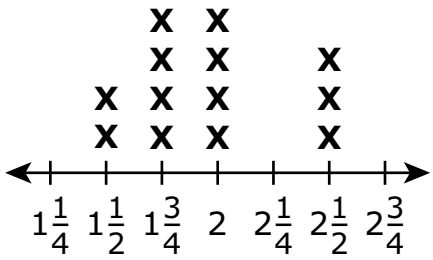
Ⓑ **Weight of Packages (pounds)**



Ⓒ **Weight of Packages (pounds)**



Ⓓ **Weight of Packages (pounds)**



2 A shape has **no** right angles **and** only one pair of parallel sides.

Which word could describe this shape?

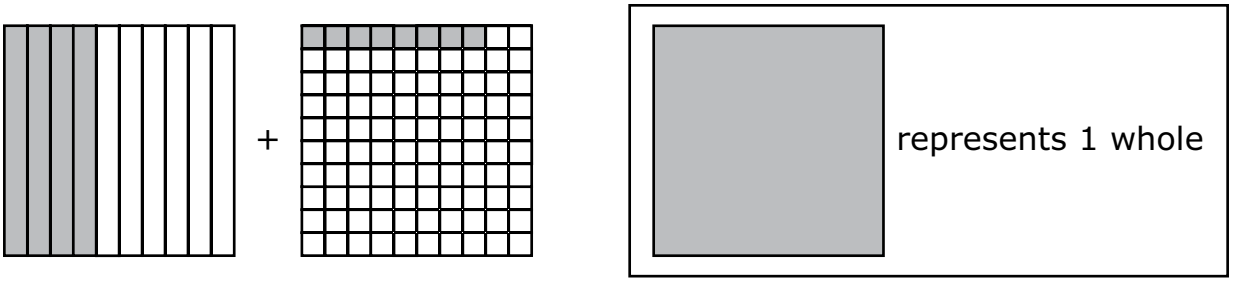
Ⓐ rectangle

Ⓑ rhombus

Ⓒ square

Ⓓ trapezoid

3 Two models are shown. The shaded portion of each model represents a fraction.



Which expression is equivalent to the sum of the two models?

Ⓐ $\frac{4}{100} + \frac{80}{100}$

Ⓑ $\frac{4}{100} + \frac{8}{100}$

Ⓒ $\frac{40}{100} + \frac{8}{100}$

Ⓓ $\frac{40}{100} + \frac{80}{100}$

4 Which **two** expressions each have a value of $1\frac{7}{8}$?

Select the **two** correct answers.

Ⓐ $1 + \frac{3}{8} + \frac{3}{8}$

Ⓑ $1 + \frac{4}{8} + \frac{3}{8}$

Ⓒ $1 + \frac{8}{8} + \frac{3}{8}$

Ⓓ $\frac{1}{8} + \frac{6}{8} + \frac{1}{8}$

Ⓔ $\frac{2}{8} + \frac{6}{8} + \frac{1}{8}$

Ⓕ $\frac{8}{8} + \frac{6}{8} + \frac{1}{8}$

This question has four parts. Be sure to label each part of your response.

5 The Astros, Barons, Lions, and Wildcats are basketball teams that play each other.

A. Last year, the Barons won 3 games. The Astros won 7 times as many games as the Barons won.

Which of these equations can be used to find g, the number of games the Astros won last year?

Mark your answer by filling in the correct circle on the next page.

A $7 \times g = 3$ **B** $7 + g = 3$

C $7 \times 3 = g$ **D** $7 + 3 = g$

B. How many games did the Astros win last year?

C. When the Lions played the Wildcats,

- the Lions scored 4 points, and
- the Wildcats scored 36 points.

The number of points the Wildcats scored was how many times the number of points the Lions scored? Show or explain how you got your answer.

D. The Lions scored 11 points when they played the Astros. The Astros scored 5 times as many points as the Lions scored.

What was the number of points the **Astros** scored when they played the Lions? Show or explain how you got your answer.

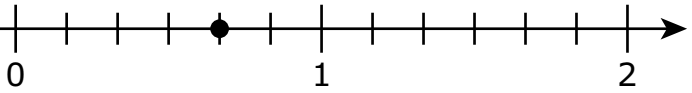
Write your answers on the next page.

5 A. Ⓐ $7 \times g = 3$ Ⓑ $7 + g = 3$

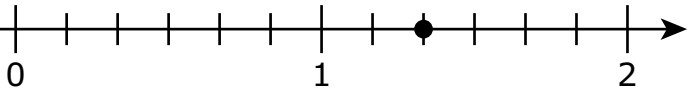
Ⓒ $7 \times 3 = g$ Ⓓ $7 + 3 = g$

6 Which of these number lines shows a point that represents the location of $\frac{5}{3}$?

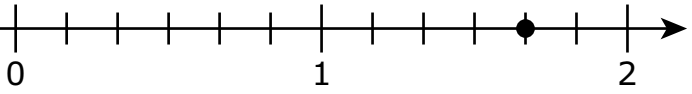
Ⓐ



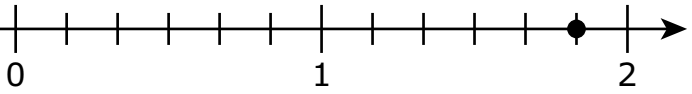
Ⓑ



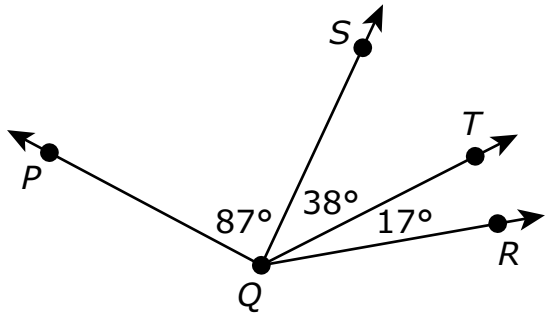
Ⓒ



Ⓓ

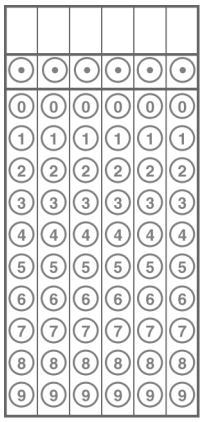


7 This diagram shows the measures, in degrees, of angle *PQS*, angle *SQT*, and angle *TQR*.



What is the measure, in degrees, of angle *PQR*?

Enter your answer in the answer boxes at the top of the answer grid **and** completely fill the matching circles.



8 A teacher wrote this expression.

$$9 \times \frac{5}{12}$$

Which of these expressions are equivalent to the teacher's expression?

Select the **two** correct answers.

Ⓐ $5 \times \frac{1}{12}$

Ⓑ $5 \times \frac{9}{12}$

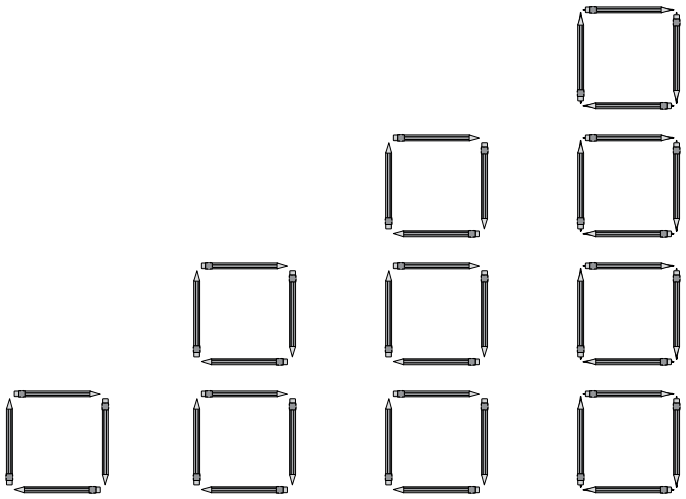
Ⓒ $9 \times \frac{1}{12}$

Ⓓ $45 \times \frac{1}{12}$

Ⓔ $45 \times \frac{5}{12}$

This question has two parts.

9 A student made a pattern using pencils. The first four steps in the student's pattern are shown.



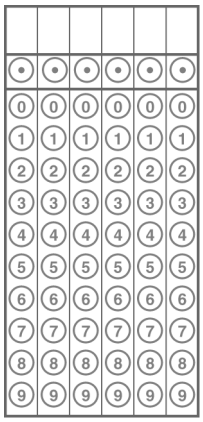
Step 1 Step 2 Step 3 Step 4

The pattern continues.

Part A

What is the total number of pencils needed to create step 5 in the student's pattern?

Enter your answer in the answer boxes at the top of the answer grid **and** completely fill the matching circles.



Part B

Which expression can be used to find the total number of pencils needed to create step 9 in the student's pattern?

Ⓐ $1 + 9$

Ⓑ 4×5

Ⓒ $5 + 4$

Ⓓ 4×9

Grade 4 Mathematics
SESSION 2

This session contains 11 questions.

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Directions

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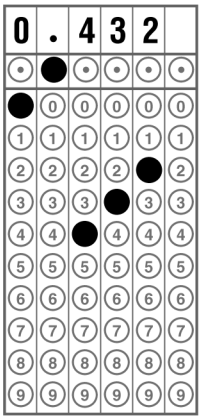
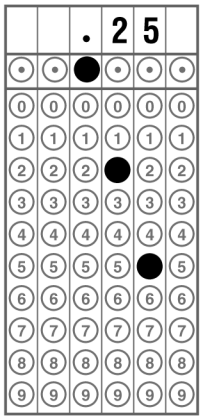
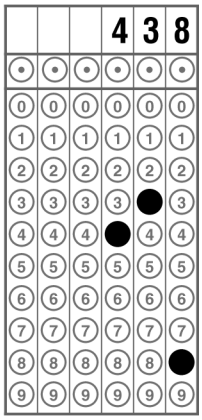
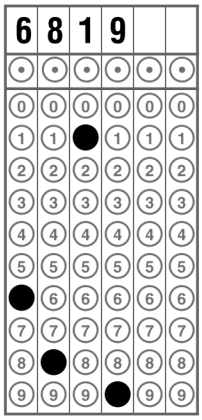
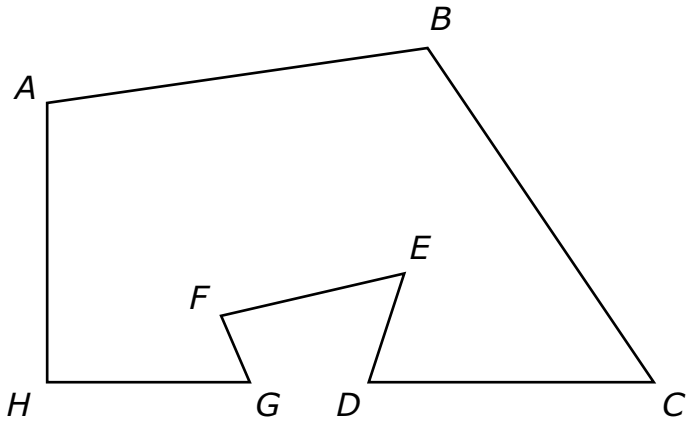








10 A figure is shown.



Which angle in the figure appears to be a right angle?

Ⓐ angle *BAH*

Ⓑ angle *ABC*

Ⓒ angle *BCD*

Ⓓ angle *AHG*

11 Which of these comparisons are true?

Select the **two** correct answers.

Ⓐ $1.32 > 1.23$

Ⓑ $2.33 = 2.3$

Ⓒ $4.03 > 4.03$

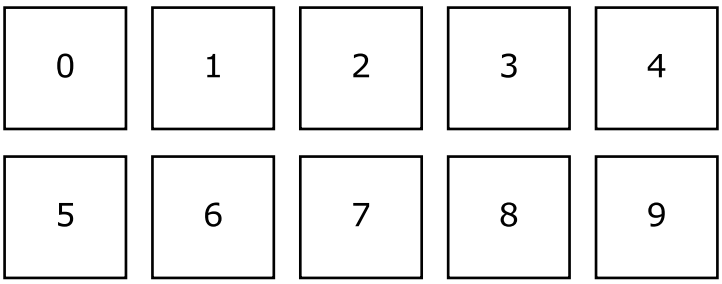
Ⓓ $5.89 < 5.99$

Ⓔ $7.92 > 7.98$

Ⓕ $8.9 < 8.09$

This question has four parts. Be sure to label each part of your response.

12 Francisco, Larry, and Sophia are using these number cards to play a rounding game.



During each turn, a player picks four number cards and uses all four cards to make a four-digit number.

A. Francisco picks the number cards 2, 8, 4, and 0.

What four-digit number can Francisco make that rounds to 4,000 when rounding to the **nearest thousand**?

B. Larry picks the number cards 9, 3, 8, and 5.

What is the **greatest** four-digit number Larry can make that rounds to 4,000 when rounding to the **nearest thousand**?

C. Sophia picks the number cards 5, 9, 3, and 4.

What is the **least** four-digit number Sophia can make that rounds to 3,500 when rounding to the **nearest hundred**? Explain how you know your answer is correct.

D. Using any four of the number cards, make a four-digit number that rounds to 9,700 when rounding to the **nearest hundred**. Explain how you know your answer is correct.

Write your answers on the next page.

12

13 Some measurements are shown.

7 meters	7 kilometers	7 millimeters	7 centimeters

Which list shows the correct order of the measurements from **least to greatest** length?

Ⓐ

7 centimeters	7 millimeters	7 meters	7 kilometers

Ⓑ

7 centimeters	7 millimeters	7 kilometers	7 meters

Ⓒ

7 millimeters	7 centimeters	7 meters	7 kilometers

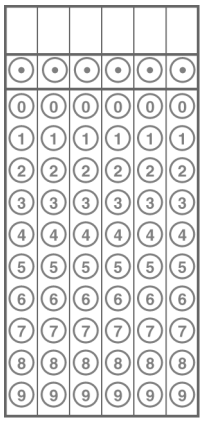
Ⓓ

7 millimeters	7 centimeters	7 kilometers	7 meters

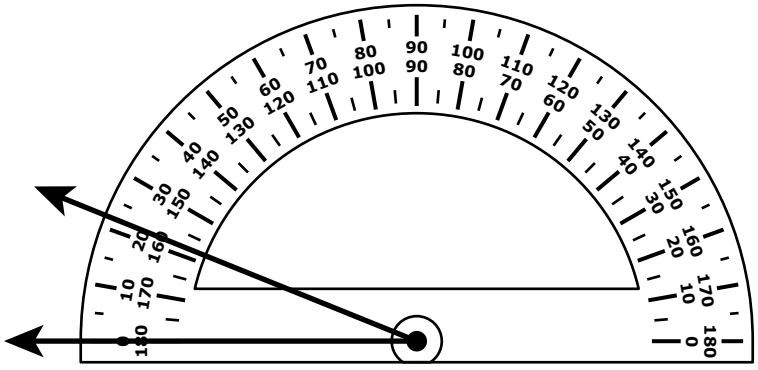
14 Compute:

68,713 + 4,529

Enter your answer in the answer boxes at the top of the answer grid **and** completely fill the matching circles.



15 A protractor is used to measure an angle, as shown.



What is the measure, in degrees, of the angle?

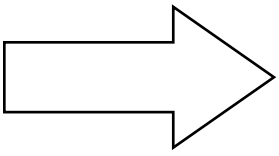
Ⓐ 18 degrees

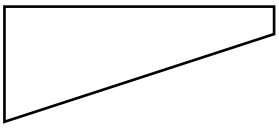
Ⓑ 22 degrees

Ⓒ 158 degrees

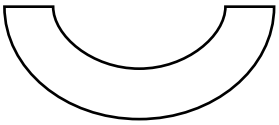
Ⓓ 162 degrees

16 Which figure has **exactly** 2 lines of symmetry?

Ⓐ 

Ⓑ 

Ⓒ 

Ⓓ 

17 An expression is shown.

$$1{,}327 \div 3$$

What is the quotient of the expression?

Ⓐ The quotient of the expression is 314 with a remainder of 1.

Ⓑ The quotient of the expression is 314 with a remainder of 2.

Ⓒ The quotient of the expression is 404 with a remainder of 2.

Ⓓ The quotient of the expression is 442 with a remainder of 1.

18 An expression is shown.

$$8\frac{2}{4} - 2\frac{3}{4}$$

Which of these is the difference of the expression?

Ⓐ $5\frac{1}{4}$

Ⓑ $5\frac{3}{4}$

Ⓒ $6\frac{1}{4}$

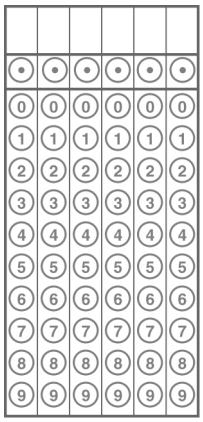
Ⓓ $6\frac{3}{4}$

19 An equation is shown.

$$\frac{19}{100} + \frac{k}{10} = \frac{39}{100}$$

What value of k makes the equation true?

Enter your answer in the answer boxes at the top of the answer grid **and** completely fill the matching circles.



20 A shopper buys 4 bags of pretzels. Each bag has a weight of $\frac{2}{3}$ pound.

What is the total weight, in pounds, of all 4 bags of pretzels the shopper buys?

Ⓐ $\frac{6}{3}$

Ⓑ $\frac{8}{3}$

Ⓒ $\frac{2}{12}$

Ⓓ $\frac{8}{12}$

Grade 4 Mathematics
Spring 2026 Released Operational Items

PBT Item No.	Page No.	Reporting Category	Standard	Item Type*	Item Description	Correct Answer**
1	5	*Measurement and Data*	4.MD.B.4	SR	Determine the line plot that represents a given data set with whole numbers and mixed numbers.	C
2	6	*Geometry*	4.G.A.2	SR	Identify the mathematical name of a 2-dimensional figure based on given attributes.	D
3	6	*Number and Operations-Fractions*	4.NF.C.5	SR	Interpret two given fraction models, one in tenths and one in hundredths, and identify the equivalent addition expression using fractions with denominators of 100.	C
4	7	*Number and Operations-Fractions*	4.NF.B.3	SR	Identify expressions which have a value equivalent to a given mixed number.	B,F
5	8–9	*Operations and Algebraic Thinking*	4.OA.A.2	CR	Solve word problems by identifying and solving equations and interpreting multiplicative comparisons.	
6	10	*Number and Operations-Fractions*	4.NF.A.1	SR	Identify the plotted point on a number line that represents the location of a fraction that is greater than one and is equivalent to a given fraction.	C
7	11	*Measurement and Data*	4.MD.C.7	SA	Determine the angle measure of a larger angle given the measures of the individual angles that make up the larger angle.	142
8	12	*Number and Operations-Fractions*	4.NF.B.4	SR	Determine which expressions are equivalent to the product of a whole number and a fraction.	B,D
9	13–14	*Operations and Algebraic Thinking*	4.OA.C.5	SA	Determine additional terms of a given shape pattern and identify an expression that represents the rule of the pattern.	20;D
10	17	*Geometry*	4.G.A.1	SR	Identify the right angle in a given figure.	D
11	17	*Number and Operations-Fractions*	4.NF.C.7	SR	Determine which number sentences with the symbols <, >, or = correctly compare decimal numbers given in tenths and hundredths.	A,D
12	18–19	*Number and Operations in Base Ten*	4.NBT.A.3	CR	Determine 4-digit numbers that will round to a given number and what might be the greatest and least numbers that will round to given numbers when rounding to the nearest hundreds and thousands.	
13	20	*Measurement and Data*	4.MD.A.1	SR	Order metric units of length from least to greatest.	C
14	20	*Number and Operations in Base Ten*	4.NBT.B.4	SA	Determine the sum of a five-digit number and a four-digit number.	73,242
15	21	*Measurement and Data*	4.MD.C.6	SR	Determine the measure of an angle shown on a drawing of a protractor.	B
16	21	*Geometry*	4.G.A.3	SR	Determine which figures have a given number of lines of symmetry.	C

PBT Item No.	Page No.	Reporting Category	Standard	Item Type*	Item Description	Correct Answer**
17	22	*Number and Operations in Base Ten*	4.NBT.B.6	SR	Find a whole number quotient, with a remainder, of a four-digit dividend and a one-digit divisor.	D
18	22	*Number and Operations-Fractions*	4.NF.B.3	SR	Find the difference of two mixed numbers with like denominators.	B
19	23	*Number and Operations-Fractions*	4.NF.C.5	SA	Determine the numerator of a fraction that will make an equation true when adding fractions with denominators of 10 and 100.	2
20	23	*Number and Operations-Fractions*	4.NF.B.4	SR	Solve a word problem by multiplying a fraction by a whole number.	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. 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 2026 Unreleased Operational Items

PBT Item No.	Reporting Category	Standard	Item Type*	Item Description
21	*Measurement and Data*	4.MD.A.3	SR	Given the length and width, determine the area and the units used to measure the area of a rectangle.
22	*Measurement and Data*	4.MD.C.5	SA	Determine the measure of an angle that turns through a given number of one-degree angles.
23	*Number and Operations in Base Ten*	4.NBT.A.1	SR	Determine which number has a digit with a value that is 10 times the value of a digit in a given number.
24	*Number and Operations-Fractions*	4.NF.A.2	CR	Write fractions to represent given fraction models, compare fractions with different denominators using symbols, and reason about the size of fractions.
25	*Operations and Algebraic Thinking*	4.OA.A.3	SR	Solve multi-step, real-world problems using subtraction and division and interpret a remainder.
26	*Geometry*	4.G.A.1	SR	Identify shapes that have a pair of parallel sides and a pair of perpendicular sides.
27	*Number and Operations in Base Ten*	4.NBT.B.4	SR	Determine the difference of a six-digit whole number and a four-digit whole number.
28	*Geometry*	4.G.A.3	SR	Determine which given figure has a line of symmetry.
29	*Number and Operations in Base Ten*	4.NBT.A.2	SR	Put four six-digit numbers in order from least to greatest.
30	*Number and Operations in Base Ten*	4.NBT.B.6	SA	Solve a word problem by dividing a 3-digit dividend by a 1-digit divisor.
31	*Number and Operations in Base Ten*	4.NBT.B.5	SR	Determine the expression that is equivalent to the product of a four-digit number and a one-digit number.
32	*Operations and Algebraic Thinking*	4.OA.A.3	SA	Solve a multi-step word problem using multiplication and addition of whole numbers.
33	*Operations and Algebraic Thinking*	4.OA.C.5	SR	Identify a feature of the terms of a pattern given a starting number and rule for the pattern.
34	*Number and Operations-Fractions*	4.NF.A.1	SR	Identify a fraction model that represents a fraction that is equivalent to a given fraction.
35	*Measurement and Data*	4.MD.A.2	CR	Use a ruler to measure given objects to the nearest centimeter and solve word problems involving multiplication and addition of measurements and the conversion of meters to centimeters.
36	*Number and Operations-Fractions*	4.NF.C.6	SR	Identify the plotted point on a number line that represents the location of a decimal less than one.
37	*Operations and Algebraic Thinking*	4.OA.B.4	SR	Identify prime numbers.
38	*Number and Operations-Fractions*	4.NF.B.3	SR	Solve word problems involving addition and subtraction of mixed numbers with like denominators.
39	*Geometry*	4.G.A.2	SR	Identify the two-dimensional figure with only obtuse angles.
40	*Operations and Algebraic Thinking*	4.OA.A.1	SR	Determine which verbal statement of multiplicative comparison represents a given equation in a word problem.

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