

4

Massachusetts

MCAS

GRADE 4

MATH

PRACTICE TESTS



5 FULL-LENGTH
PRACTICE TESTS



Standards-Aligned Review with
Mixed Practice and Answer Key



STANDARDS-ALIGNED
REVIEW



MIXED PRACTICE
QUESTIONS



ANSWER KEY
INCLUDED



$$4 \times 7 = 28$$

$$36 \div 9 = 4$$

$$\begin{array}{r} 125 \\ + 87 \\ \hline 212 \end{array}$$



4 Massachusetts MCAS Grade 4 Math Practice Tests

Standards-Aligned Review with Mixed Practice and Answer Key



Four focused 30-question missions for Grade 4 math: number facts, fractions, measurement, data, area, shapes, answer keys, and clear explanations for every item.

Jay Daie and Reza Nazari



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Welcome, Massachusetts Math Explorer!

Four steady rounds on the Bay State math route

This book gives you four full Grade 4 practice tests for MCAS. Each round uses historic streets, harbor winds, and precise explanations to keep practice memorable while you read carefully, choose a strategy, show work, and check the answer.

Massachusetts Practice Promise

I will slow down for the question, circle what matters, solve one step at a time, and use mistakes as clues for getting stronger.

Read

Plan

Check

How to Use This Book

A ten-session routine for Massachusetts MCAS review

1. **Preview the skills.** Read the quick review pages before the first test.
2. **Take one test at a time.** Treat each round like a stop on the Bay State math route.
3. **Mark your confidence.** Put a small star beside problems you solved with a strong plan.
4. **Check, then retry.** For missed questions, try the problem again before reading the explanation.
5. **Track your next move.** Use the growth log to name one habit and one skill for the next test.

Good rhythm: Test one day, correct carefully the next day, then return for the next round when your corrections feel clear.



What Is Inside?

Four tests, 120 questions, and a full MCAS review path

Part	What You Will Practice
Tests 1–3	Warm-up rounds for reading carefully, choosing operations, and using models.
Tests 2–4	Skill-building rounds with fractions, measurement, area, data, and two-step problems.
Tests 2–4	Stamina rounds for mixed review, neat work, and flexible strategies.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Real test readiness means recognizing the skill even when the next question changes topic.

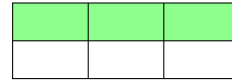
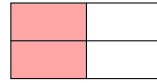
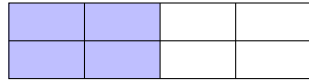


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& answers

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1) Look at the grids below. Which two fractions are equal?



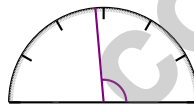
Grid 1: $\frac{4}{8}$

Grid 2: $\frac{2}{4}$

Grid 3: $\frac{3}{6}$

- A. Grid 1 and Grid 2 C. Grid 1 and Grid 3
 B. Grid 2 and Grid 3 D. All three are equal

2)



Measure the angle shown in degrees.

3) A ribbon is $\frac{9}{10}$ meter long. How many tenths is that?

- A. 1 tenth C. 10 tenths
 B. 9 tenths D. 19 tenths



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9) What decimal has 3 tenths and 7 hundredths?

- A. 0.73 C. 3.7
 B. 0.37 D. 0.307

10) Which shape does NOT have any pairs of parallel sides?

- A. Rectangle C. Triangle
 B. Parallelogram D. Trapezoid

11) The factors of 18 are shown in the table. Which number is missing?

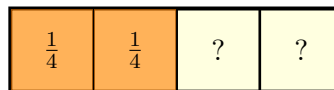
Factor Pair
$1 \times 18 = 18$
$2 \times 9 = 18$
$3 \times ? = 18$

- A. 5 C. 7
 B. 9 D. 6

12) Which is a correct way to decompose $\frac{10}{12}$?

- A. $\frac{5}{12} + \frac{4}{12}$ C. $\frac{3}{12} + \frac{3}{12} + \frac{3}{12}$
 B. $\frac{4}{12} + \frac{7}{12}$ D. $\frac{2}{12} + \frac{2}{12} + \frac{2}{12} + \frac{2}{12} + \frac{2}{12}$

13)



The bar shows $\frac{2}{4}$ shaded. If you have 4 such bars, what is the total shaded amount?

- A. $\frac{8}{4}$ (or 2) C. $\frac{4}{4}$
 B. $\frac{2}{16}$ D. $\frac{6}{4}$



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1) A number line shows unit-fraction jumps. If you start at 0 and make 9 jumps of $\frac{1}{10}$, where do you land?

- A. $\frac{1}{10}$
 B. $\frac{9}{10}$

- C. $\frac{1}{90}$
 D. $\frac{10}{9}$

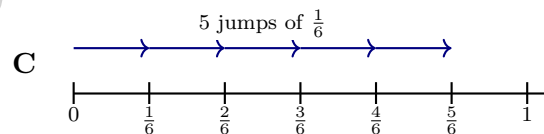
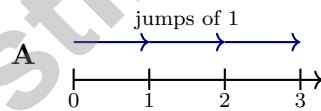
2) Which time conversion is correct?

- A. 2 hours = 100 minutes
 B. 3 minutes = 180 seconds

- C. 1 day = 1,200 minutes
 D. 4 hours = 250 minutes

3) In 78,401, what is the value of the digit 8?

4) Which number line shows $5 \times \frac{1}{6}$?



- A. Top number line
 B. Neither shows it

- C. Bottom number line
 D. Both show the same thing



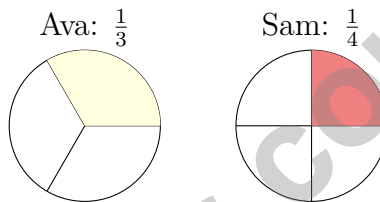
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5) In the number 1,111, which relationship is true?

Thousands	Hundreds	Tens	Ones
1	1	1	1

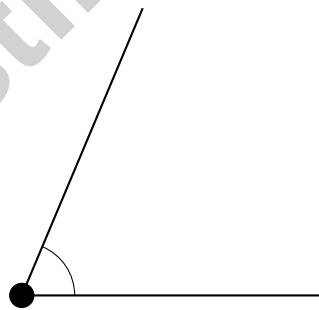
- A. The ones value is 10 times the tens value.
 C. The tens value is 100 times the ones value.
- B. The thousands value is 10 times the tens value.
 D. The hundreds value is 10 times the tens value.

6) Two pizzas are the same size. Ava ate $\frac{1}{3}$ of one pizza. Sam ate $\frac{1}{4}$ of another. Who ate more?



- A. Ava ate more
 C. They ate the same
- B. Sam ate more
 D. Cannot determine

7)



This angle is smaller than a right angle. What type of angle is it?

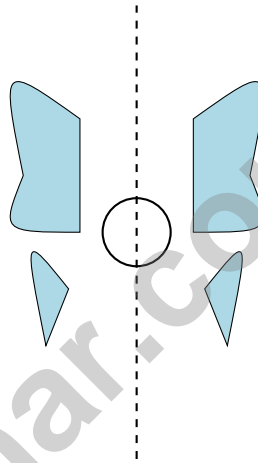
- A. Acute
 C. Right
- B. Obtuse
 D. A straight angle



1) Which number rounds to 70,000 when rounded to the nearest ten thousand?

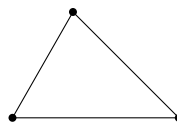
- A. 64,999 C. 75,001
 B. 74,500 D. 75,499

2) A butterfly wing is drawn below with a vertical dashed line down the middle. How many lines of symmetry does a butterfly have?



- A. 0 C. 2
 B. 1 D. Many

3) Look at the triangle. All three sides have different lengths. What type is it?



All sides have
different lengths
(no tick marks)

- A. Scalene triangle C. Equilateral triangle
 B. Isosceles triangle D. Acute triangle



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- 4) Ava measured the widths of leaves in fourths of an inch. Her data: $\frac{1}{4}$, $\frac{2}{4}$, $\frac{2}{4}$, $\frac{3}{4}$, $\frac{2}{4}$.
When plotted, how many X marks appear at $\frac{2}{4}$ inch?

- A. 1
 B. 2
 C. 3
 D. 4

- 5) Noah drew an angle that measures 42 degrees. How many one-degree angles does his angle contain?

- 6) Complete the table using the rule “multiply by 2 then add 1”:

Input	1	2	3	4
Output	3	5	7	?

- A. 8
 B. 13
 C. 11
 D. 9
- 7) What is $1,428 \div 6$?
- A. 238
 B. 242
 C. 248
 D. 244
- 8) Two friends share pizza. One eats $\frac{3}{8}$ and the other eats $\frac{4}{8}$. How much pizza do they eat together?
- A. $\frac{7}{16}$ of the pizza
 B. $\frac{7}{8}$ of the pizza
 C. $\frac{1}{8}$ of the pizza
 D. $1\frac{1}{8}$ pizzas



Practice Test Answer Keys

How to use this section with a Grade 4 student:

1. check the answer first
2. mark questions to try again
3. rework the problem before reading the full explanation

A calm correction routine turns every missed item into useful practice.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- Choice D is correct.** (4.NF.A.1) Grid 1 shows $\frac{4}{8}$ with half shaded, Grid 2 shows $\frac{2}{4}$ with half shaded, Grid 3 shows $\frac{3}{6}$ with half shaded. All equal!
- The correct answer is 95.** (4.MD.C.6) Place the protractor's center at the vertex. Align the baseline ray with 0° . The second ray points to the 95° mark. Since $95^\circ > 90^\circ$ but $95^\circ < 180^\circ$, this is an obtuse angle. The answer is **95** degrees.
- Choice B is correct.** (4.NF.B.4) The numerator 9 tells us exactly how many tenths we have. So $\frac{9}{10} = 9 \times \frac{1}{10}$, which means we have **9** tenths.
- Choice C is correct.** (4.MD.C.5) $\frac{7}{12} + \frac{1}{12} = \frac{8}{12} = \frac{2}{3}$ of a full turn. $\frac{2}{3} \times 360^\circ = 240^\circ$.
- Choice A is correct.** (4.NF.C.5) Three dimes = $\frac{3}{10}$ dollar, and thirty pennies = $\frac{30}{100}$ dollar. They're equal!
- Choice A is correct.** (4.NF.B.4) When we multiply $2 \times \frac{1}{3}$, we're taking 2 copies of $\frac{1}{3}$, which gives us $\frac{2}{3}$. Picture A shows one whole divided into thirds with exactly 2 parts shaded. This is Picture A.
- Choice A is correct.** (4.NBT.B.5) Round: $47 \approx 50$ and $19 \approx 20$. Then $50 \times 20 = 1000$ is a good estimate of the product.
- Choice C is correct.** (4.NF.B.3) Subtract the wholes: $4 - 2 = 2$. Subtract the fractions: $\frac{5}{6} - \frac{1}{6} = \frac{4}{6}$. The difference is $2\frac{4}{6}$.
- Choice B is correct.** (4.NF.C.5) 3 tenths = 0.3 and 7 hundredths = 0.07. Add them: $0.3 + 0.07 = 0.37$.
- Choice C is correct.** (4.G.A.2) A triangle has three sides, so it cannot have a pair of opposite sides. Parallel sides require opposite sides, which triangles do not have. Rectangles, parallelograms, and trapezoids all have parallel sides. The answer is **C**.
- Choice D is correct.** (4.OA.B.4) We need a number that pairs with 3 to make 18. Ask: $3 \times ? = 18$. Since $3 \times 6 = 18$, the missing factor is **6**.
- Choice D is correct.** (4.NF.B.3) Option D has five pieces: $\frac{2}{12} + \frac{2}{12} + \frac{2}{12} + \frac{2}{12} + \frac{2}{12}$. Count: $2 + 2 + 2 + 2 + 2 = 10$, so we get $\frac{10}{12}$ ✓.
- Choice A is correct.** (4.NF.B.4) With 4 bars, each showing $\frac{2}{4}$ shaded, we have $4 \times \frac{2}{4} = \frac{8}{4} = 2$ shaded in total.
- Choice C is correct.** (4.NBT.A.1) In 6,217, counting from the right: ones is 7, tens is 1, hundreds is 2, thousands is 6. The tens place contains **1**. ✓
- Choice A is correct.** (4.MD.C.7) The two ribbons meet at a vertex and form an angle. Add them: $39^\circ + 51^\circ = 90^\circ$.
- The correct answer is A, D.** (4.NBT.B.4) A: In $4,567 + 2,456$, since $7 + 6 = 13$, we regroup in ones ✓. B: $5,000 - 1,234$ requires regrouping ×. C: In $6,234 + 1,567$, we write 2 in tens, not 0 ×. D: In $8,000 - 2,345$, we must regroup across zeros ✓. E: False ×. Correct: A and D.
- Choice B is correct.** (4.NF.B.4) The pattern counts by eighths: $\frac{1}{8}, \frac{2}{8}, \frac{3}{8}, \dots$. So next is $4 \times \frac{1}{8} = \frac{4}{8}$.
- Choice A is correct.** (4.NF.B.3) The grid has 12 equal squares, and 7 are filled. So the fraction is $\frac{7}{12}$, which is **7** copies of $\frac{1}{12}$.
- Choice A is correct.** (4.NBT.B.6) We round 4,156 to the compatible number 4,000 (a number that divides nicely by 4). Since $4,000 \div 4 = 1,000$, the quotient is about **1,000**. Why "compatible"? It makes mental math easy.
- Choice A is correct.** (4.MD.C.5) Since 45 degrees is less than 90 degrees, this is an acute angle.
- The correct answer is 8,600.** (4.NBT.A.3) We're rounding to the nearest hundred. Look at the tens digit: 4. Since $4 < 5$, round DOWN. Ming has about **8,600** stickers. ✓
- Choice C is correct.** (4.MD.A.1) Since 1 centimeter = 10 millimeters, multiply: $19 \times 10 = 190$ mm. The answer is **190** mm.
- Choice A is correct.** (4.NF.B.3) Sam and Ming both ate pieces with the same-sized slices. Together: $2 + 3 = 5$ slices, so $\frac{5}{6}$ of the pizza.
- Choice C is correct.** (4.MD.A.3) Carpet needed = $14 \times 10 = 140$ sq ft.
- Choice D is correct.** (4.OA.A.1) Divide the larger group by the smaller: $15 \div 5 = 3$. So Group 2 has **3** times as many counters as Group 1.
- Choice D is correct.** (4.OA.A.2) Toy B's group has 3 rows of \$3—"3 times as much." Multiply: $3 \times \$3 = \9 .



Trail Guide's Final Note

Hi, Brave Trail-Walker!

◇ You walked all 4 miles of the practice trail. Smooth paths, steep climbs, narrow passes. Every step taught you something. ◇

★ **Trail guides know:** the most important thing is to keep moving. Slow steps still get you there. You have a steady stride now. ★

Trail Survey

- **Route Knowledge:** You know lots of problem types.
- **Steady Pace:** You don't rush. You don't stop.
- **Pack Loaded:** You have all the math tools you need.
- **Confidence:** You trust your training.

Guide's tip: on test day, stay on the trail you've walked before. Use the strategies you've practiced. Trust the route. The summit is one steady walk away!

If you want to share something or ask a question, please email me at jay@testinar.com.

Jay Daie

Your Math Trail Guide

PRACTICE TODAY, SUCCEED TOMORROW!

This **Grade 4 Math Practice Tests** book is the perfect tool to help students build strong math skills, master key concepts, and gain the confidence they need to excel.

With 4 full-length practice tests, a variety of question types, and detailed answer explanations, students get the review and practice they need to strengthen problem-solving skills and achieve their best.

Perfect for classroom use, homework, test preparation, and extra practice at home.

PERFECT FOR:

- ✓ Classroom Practice
- ✓ Homework & Review
- ✓ Independent Learning
- ✓ Test Preparation
- ✓ Skill Reinforcement
- ✓ Confidence Building

★ **CONFIDENCE TODAY.
SUCCESS TOMORROW!**

WHAT STUDENTS WILL GAIN



Stronger Math Skills

Build a solid foundation through targeted practice and review.



Better Problem Solving

Develop logical thinking and effective solution strategies.



Test Confidence

Become familiar with test-style questions and formats.



Track Progress

Measure growth across multiple practice tests.



Prepare for Success

Build the confidence needed to do your best on test day.

TOPICS COVERED

- ✓ Place Value & Number Sense
- ✓ Addition & Subtraction
- ✓ Multiplication & Division
- ✓ Fractions & Decimals
- ✓ Geometry & Measurement
- ✓ Data, Graphs & Line Plots
- ✓ Perimeter & Area
- ✓ Patterns & Algebraic Thinking
- ✓ Word Problems
- ✓ And More!



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