

# 3

# Massachusetts

# MCAS

## GRADE 4

# MATH

## PRACTICE TESTS

Standards-Aligned Review with  
Mixed Practice and Answer Key



**5 FULL-LENGTH**  
PRACTICE TESTS



**STANDARDS-ALIGNED**  
REVIEW



**MIXED PRACTICE**  
QUESTIONS



**ANSWER KEY**  
INCLUDED

$$a^2 + b^2 = c^2$$

$$\frac{3}{4}$$



# 3 Massachusetts MCAS Grade 4 Math Practice Tests

*Standards-Aligned Practice for Stronger Math Skills and Test Readiness*



Three 30-question trail tests packed with Grade 4 review, Massachusetts MCAS strategy tips, answer keys, and step-by-step explanations that turn every miss into the next move.

**Jay Daie and Reza Nazari**



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# Welcome, Massachusetts Math Explorer!

Three steady rounds on the Bay State math route

This book gives you three full Grade 3 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?

Three tests, 90 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 1–3	Skill-building rounds with fractions, measurement, area, data, and two-step problems.
Tests 1–3	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.

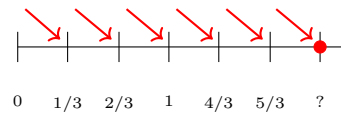


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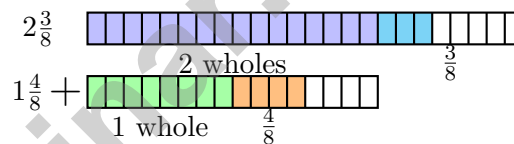
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- 1) A number line shows jumps of  $\frac{1}{3}$  starting at 0. If you make 6 jumps, where do you land?



- A.  $\frac{1}{3}$ 
 C. 2  
 B. 1
  D. 3
- 2) Isabella baked  $4\frac{1}{2}$  trays of cookies. She sold  $1\frac{1}{2}$  trays. How many trays of cookies does she have left?

- A.  $2\frac{1}{2}$ 
 C.  $3\frac{1}{2}$   
 B.  $5\frac{2}{2}$ 
 D.  $3\frac{2}{2}$



- 3) What is the sum shown by the bar diagrams above?

- A.  $3\frac{7}{8}$ 
 C.  $4\frac{1}{8}$   
 B.  $3\frac{6}{8}$ 
 D.  $4\frac{7}{8}$

- 4) Ava reads 8 pages a day for 12 days. Noah reads 10 pages a day for 9 days. How many more pages does Ava read than Noah?

- A. 2 pages
  C. 26 pages  
 B. 18 pages
  D. 6 pages



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5) A student wrote:  $\frac{3}{10} + \frac{3}{100} = \frac{6}{110}$ . What is the correct answer?

A.  $\frac{33}{100}$

B.  $\frac{6}{100}$

C.  $\frac{6}{110}$  (student is correct)

D.  $\frac{30}{100}$

6) Round 11,550 to the nearest hundred.

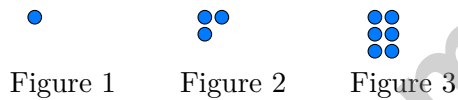
A. 11,500

B. 11,000

C. 11,550

D. 11,600

7) A pattern of circles grows as shown:



How many circles are in Figure 4?

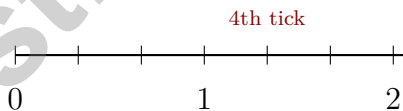
A. 9

B. 16

C. 12

D. 10

8) A number line is marked from 0 to 2, with tick marks every  $\frac{1}{3}$ . Which point is at the 4th tick after 0?



A.  $\frac{2}{3}$

B.  $\frac{4}{3}$

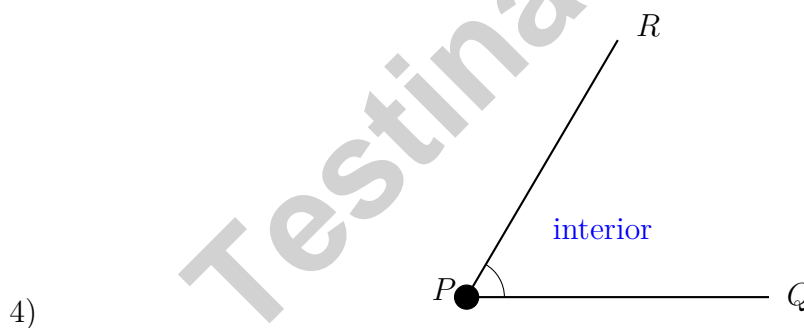
C.  $\frac{3}{4}$

D.  $\frac{1}{3}$





- 1) Iris has 9 game cards worth 34 points each. What is the total value of all the cards?
- A. 243 points                       C. 280 points  
 B. 380 points                       D. 306 points
- 2) Mia had 25,000 dollars. She spent 12,345 dollars. How much money does she have left?
- A. 12,655 dollars                       C. 13,655 dollars  
 B. 12,755 dollars                       D. 12,565 dollars
- 3) In a four-digit number, the thousands digit is 3, the hundreds digit is 4, the tens digit is 2, and the ones digit is 6. What is the number?
- A. 4,236                                   C. 2,346  
 B. 6,243                                   D. 3,246



Which part of the angle is labeled blue?

- A. The vertex                                   C. The interior  
 B. The sides                                   D. The exterior



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5) What does a point represent in geometry?

- A. An exact location with no size or shape
- B. A small circle on a diagram
- C. The corner of a shape
- D. The space between two lines

6) Maya painted  $\frac{6}{9}$  of her bedroom wall on Monday and  $\frac{2}{9}$  on Tuesday. What fraction of the wall did she paint in total?

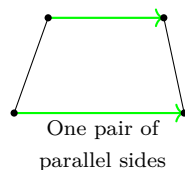
7) Complete the equation:  $7 \times \frac{1}{\underline{\quad}} = \frac{7}{9}$

- A. 7
- B. 2
- C. 9
- D. 16

8) A pizza is cut into 6 equal slices. Max ate 2 slices. Another pizza was cut into 3 equal slices, and Cole ate 1 slice. If both pizzas started the same size, did Max and Cole eat equivalent amounts?

- A. Yes, both ate  $\frac{1}{3}$
- B. Yes, both ate  $\frac{1}{2}$
- C. No, Max ate more
- D. No, Cole ate more

9) Look at the figure. It has one pair of parallel sides marked with matching arrows. Which shape is it?



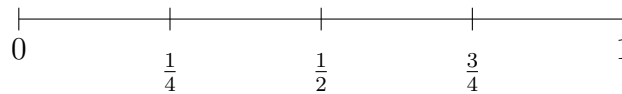
- A. Parallelogram
- B. Rectangle
- C. Trapezoid
- D. Rhombus



1) A spinner is divided into sections by angles. Three sections measure  $50^\circ$ ,  $60^\circ$ , and  $70^\circ$ . What is their combined angle measure?

- A.  $110^\circ$ 
 C.  $180^\circ$   
 B.  $130^\circ$ 
 D.  $120^\circ$

2) Three fractions are shown on the number line. Which is closest to 1?



- A.  $\frac{1}{4}$ 
 C.  $\frac{3}{4}$   
 B.  $\frac{1}{2}$ 
 D. All are equally close

3) What is  $\frac{4}{10}$  as a fraction with denominator 100?

- A.  $\frac{4}{100}$ 
 C.  $\frac{40}{100}$   
 B.  $\frac{14}{100}$ 
 D.  $\frac{44}{100}$

4)

\$2K	\$4K	\$3K	\$2K	\$1K
Monday	Tuesday	Wednesday	Thursday	Friday

The chart shows a store's rounded daily sales, in thousands of dollars. How much more did they sell Monday through Wednesday than Thursday and Friday combined?

- A. \$6,000
  C. \$10,000  
 B. \$8,000
  D. \$7,000



5) A room is 15 feet long and 12 feet wide. What is the area of the floor?

A. 27 sq ft

C. 180 sq ft

B. 54 sq ft

D. 120 sq ft

6) A triangle has all three angles less than  $90^\circ$ . How many acute angles does it have?

7) A school library has 12 books about animals. It has 4 times as many books about sports. How many sports books does the library have?

A. 16

C. 42

B. 32

D. 48

8) What is  $3 \times 807$ ?

A. 2321

C. 2521

B. 2121

D. 2421

9) Diego says that  $\frac{8}{10} = 0.08$ . Is he correct?

A. Yes,  $\frac{8}{10} = 0.08$

C. No,  $\frac{8}{10} = 80.0$

B. No,  $\frac{8}{10} = 0.8$

D. No,  $\frac{8}{10} = 8.0$

10) Divide both the numerator and denominator of  $\frac{12}{16}$  by 4. What fraction do you get?

A.  $\frac{8}{12}$

C.  $\frac{6}{8}$

B.  $\frac{4}{12}$

D.  $\frac{3}{4}$



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## 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

- 1) **Choice C is correct.** (4.NF.B.4) Each jump is  $\frac{1}{3}$ . Making 6 jumps is the same as  $6 \times \frac{1}{3} = \frac{6}{3}$ . Since 3 thirds make one whole,  $\frac{6}{3}$  equals **2** wholes.
- 2) **Choice C is correct.** (4.NF.B.3) Isabella baked many cookies but sold some. Subtract the sold amount from the total:  $4\frac{1}{2} - 1\frac{1}{2} = 3\frac{1}{2}$  trays of cookies left.
- 3) **Choice A is correct.** (4.NF.B.3) Add the wholes:  $2 + 1 = 3$ . Add the fractions:  $\frac{3}{8} + \frac{4}{8} = \frac{7}{8}$ . The sum is  **$3\frac{7}{8}$** .
- 4) **Choice D is correct.** (4.OA.A.3) Three steps! Step 1: Ava's total:  $8 \times 12 = 96$  pages. Step 2: Noah's total:  $10 \times 9 = 90$  pages. Step 3: "how many more" is a subtraction:  $96 - 90 = 6$  pages.
- 5) **Choice A is correct.** (4.NF.C.5) The student tried to add the denominators, which is wrong! The correct way: convert  $\frac{3}{10} = \frac{30}{100}$ , then add:  $\frac{30}{100} + \frac{3}{100} = \frac{33}{100}$ .
- 6) **Choice D is correct.** (4.NBT.A.3) We're rounding to the nearest hundred. Look at the tens digit: 5. Since  $5 \geq 5$ , we round UP! The hundreds digit changes from 5 to 6, giving us **11,600**. ✓
- 7) **Choice D is correct.** (4.OA.B.4) Circles in each figure: 1, 3, 6. The increases are +2, then +3. Next increase is +4:  $6 + 4 = 10$  circles.
- 8) **Choice B is correct.** (4.NF.B.4) Counting the tick marks: the 4th tick is at  $4 \times \frac{1}{3} = \frac{4}{3}$ .
- 9) **Choice C is correct.** (4.G.A.3) A square is perfectly balanced four ways: two lines pass through the centers of opposite sides (up/down and left/right), and two lines pass through opposite corners (diagonals). The answer is **4** lines of symmetry.
- 10) **Choice C is correct.** (4.G.A.2) A parallelogram is defined as a quadrilateral with two pairs of parallel sides. The blue and red arrows in the figure mark these two pairs of parallel sides. The answer is **C**.
- 11) **Choice D is correct.** (4.OA.A.1) Read  $32 = 8 \times 4$  in words: "32 equals 8 groups of 4," which is the same as "32 is 8 times as many as 4." The other choices describe adding or subtracting, not multiplying.
- 12) **Choice D is correct.** (4.NBT.B.5) Break 425 into parts:  $8 \times (400 + 20 + 5) = 3200 + 160 + 40 = 3400$ .
- 13) **Choice B is correct.** (4.MD.C.5) The interior is the space inside the angle between the two rays.
- 14) **Choice D is correct.** (4.NBT.A.1) The digit 8 in the hundreds place is worth 800. Moved to the thousands place, it's worth 8,000. The increase is  $8,000 - 800 = 7,200$ . ✓
- 15) **The correct answer is  $\frac{6}{4}$ .** (4.NF.B.4) With 6 tiles, each  $\frac{1}{4}$  meter long, we have  $6 \times \frac{1}{4} = \frac{6}{4} = 1\frac{1}{2}$  meters total.
- 16) **The correct answer is A, C.** (4.MD.A.3) Check A: Area =  $10 \times 6 = 60$  sq ft ✓ Check C: Perimeter =  $2(10) + 2(6) = 32$  ft ✓ The other options are incorrect.
- 17) **Choice A is correct.** (4.NBT.B.6) Divide:  $2 \div 5 = 0$  r2, bring down the 8 to get  $28 \div 5 = 5$  r3, bring down the 0 to get  $30 \div 5 = 6$ , bring down the 5 to get  $5 \div 5 = 1$ . The quotient is **561**.
- 18) **Choice C is correct.** (4.MD.B.4) Batch A sum:  $\frac{2}{8} + \frac{3}{8} + \frac{1}{8} = \frac{6}{8}$ . Batch B sum:  $\frac{3}{8} + \frac{5}{8} = \frac{8}{8}$ . The difference is  $\frac{8}{8} - \frac{6}{8} = \frac{2}{8}$ .
- 19) **Choice B is correct.** (4.NF.B.3) A unit fraction always has a numerator of 1. So  $\frac{3}{5}$  breaks down into three copies of  $\frac{1}{5}$ :  $\frac{3}{5} = \frac{1}{5} + \frac{1}{5} + \frac{1}{5}$ .
- 20) **Choice C is correct.** (4.MD.C.5)  $\frac{1}{9} \times 360^\circ = 40^\circ$ .
- 21) **Choice D is correct.** (4.NF.A.1) The shaded parts show the same area.  $\frac{1}{2}$  and  $\frac{2}{4}$  are equivalent because we split each half in half, creating twice as many pieces. Circle C shows only  $\frac{1}{4}$ , which is much less.
- 22) **The correct answer is Liam.** (4.NF.A.1) Use denominator 60:  $\frac{3}{4} = \frac{45}{60}$ ,  $\frac{4}{5} = \frac{48}{60}$ ,  $\frac{5}{6} = \frac{50}{60}$ . Since  $45 < 48 < 50$ , Liam ran the shortest distance.
- 23) **Choice A is correct.** (4.NF.B.3) The pie has light blue section ( $\frac{2}{8}$ ) and dark blue section ( $\frac{3}{8}$ ). Total:  $2 + 3 = 5$ , so  $\frac{2}{8} + \frac{3}{8} = \frac{5}{8}$ . ✓
- 24) **Choice B is correct.** (4.MD.A.2) Each bottle holds 12 fl oz. He buys 5 bottles, so multiply:  $5 \times 12 = 60$  fl oz. He buys **60** fluid ounces total.
- 25) **Choice B is correct.** (4.MD.C.5) The angle marked from  $0^\circ$  to  $75^\circ$  contains **75** one-degree angles.



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Star Player Pep Talk

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## Hi, Star Player!

◇ 3 practice tests. Every one of them was a chance to grow. You took every chance. That's why you're a math star today! ◇

★ **Star players know:** confidence comes from practice. You can't fake it. You build it. You built yours over 3 tests. It's real now! ★

### Star Player Stats

- **Practice:** OFF THE CHARTS!
- **Skills:** BROAD! You can do many problem types.
- **Toughness:** HIGH! You don't quit on hard problems.
- **Game Plan:** READY! You know your strategies.

**Star tip:** on test day, take it one play at a time. One problem. Then the next. You will earn your stars!

If you want to share something or ask a question, please email me at [jay@testinar.com](mailto:jay@testinar.com).

**Jay Daie**

Your Math Coach

# PRACTICE TODAY. SUCCEED TOMORROW!

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

With 3 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.



### 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
- ✓ Measurement & Data
- ✓ Geometry & Shapes
- ✓ Perimeter & Area
- ✓ Word Problems
- ✓ Patterns & Algebraic Thinking
- ✓ And More!



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