

6

Massachusetts

MCAS

GRADE 4 MATH PRACTICE TESTS

Standards-Aligned Review with
Mixed Practice and Answer Key



MASTER KEY MATH CONCEPTS
BUILD CONFIDENCE FOR TEST DAY

INCLUDES COMPREHENSIVE ANSWER KEY
ALIGNED STATE STANDARDS

6 Massachusetts MCAS Grade 4 Math Practice Tests

Standards-Aligned Review with Mixed Practice and Answer Key



Six complete 30-question Grade 4 practice rounds for MCAS, built around historic streets, harbor winds, and precise explanations, with answer keys and clear explanations for every item.

Jay Daie and Reza Nazari



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Welcome, Massachusetts Math Explorer!

Six steady rounds on the Bay State math route

This book gives you six 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?

Six tests, 180 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 4–6	Skill-building rounds with fractions, measurement, area, data, and two-step problems.
Tests 4–6	Stamina rounds for mixed review, neat work, and flexible strategies.
Answer Pages	Compact keys and explanations that show why each answer works.

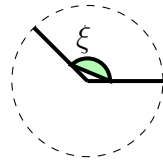
The tests are mixed on purpose. Real test readiness means recognizing the skill even when the next question changes topic.



Scan me!
For more practice
& answers

Table of Contents

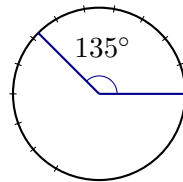
★ Practice Test 1	_____	15
★ Practice Test 2	_____	27
★ Practice Test 3	_____	39
★ Practice Test 4	_____	51
★ Practice Test 5	_____	62
★ Practice Test 6	_____	73
Practice Test Answer Keys	_____	84
Practice Test Answers and Explanations	_____	88



5)

The shaded angle ξ is measured from the rightward ray to the upper-left ray. What is its measure?

- A. 90°
 C. 135°
 B. 120°
 D. 180°



6)

This obtuse angle measures 135 degrees. How many one-degree angle units form this angle?

- A. 67.5 one-degree angles
 C. 270 one-degree angles
 B. 135 one-degree angles
 D. 13.5 one-degree angles

7) Which equation does NOT show a multiplicative comparison?

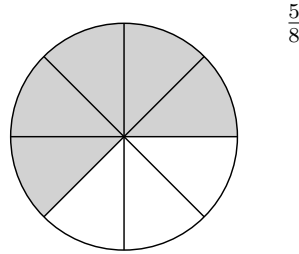
- A. $18 = 3 \times 6$
 C. $20 = 4 \times 5$
 B. $18 = 12 + 6$
 D. $35 = 5 \times 7$

8) A rectangular field has a perimeter of 80 meters. The length is 25 meters. What is the width?

- A. 10 m
 C. 20 m
 B. 15 m
 D. 55 m



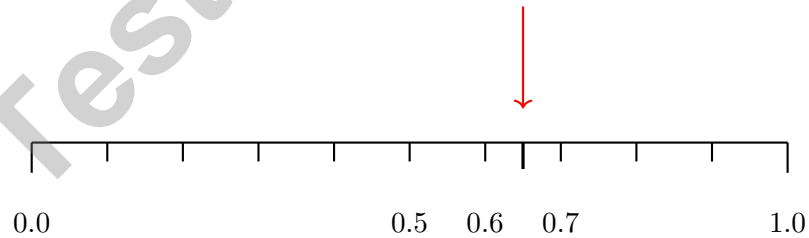
1) On a pie chart divided into 8 equal slices, how many slices represent $\frac{5}{8}$ of the pie?



- A. 2 slices C. 5 slices
 B. 3 slices D. 8 slices

2) A toy costs \$15. If Maya buys 5 toys, how much money does she spend in total?

3) Look at the number line below. What decimal is shown by the arrow?



- A. 0.6 C. 0.56
 B. 0.65 D. 0.68



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4) A quadrilateral has two pairs of parallel sides and four right angles, but the sides are not all equal. What is it?

A. Square

C. Rhombus

B. Rectangle

D. Trapezoid

5) A store has 100 apples. They receive 35 more apples. Then they sell 42 apples. How many apples are left?

A. 65

C. 135

B. 77

D. 93

6) A bake sale made 1,800 cookies. They filled boxes with 9 cookies in each box. How many full boxes were made?

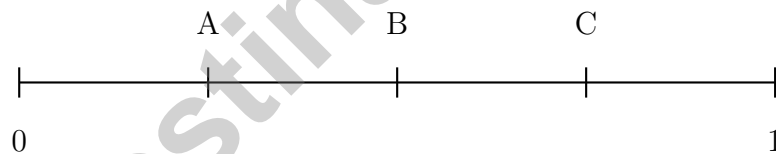
A. 100

C. 200

B. 150

D. 250

7) Where does 0.5 belong on this number line?



A. At mark A

C. At mark C

B. At mark B

D. Beyond mark C



1) Which comparison is true?

A. $0.6 < 0.59$

C. $0.6 > 0.59$

B. $0.6 = 0.59$

D. $0.6 < 0.5$

2) An angle measures 143° . It is divided into two parts by a ray. One part measures 68° . What is the measure of the other part?

3) When measuring an angle, which edge of the protractor must one ray of the angle lie along?

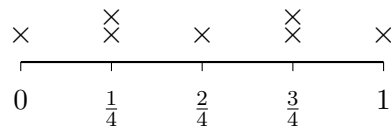
 A. The straight baseline edge C. The left curved side B. The rounded edge D. Any edge works equally well

4) Where should $\frac{2}{6}$ be placed on the number line?

 A. At 0 C. At $\frac{1}{3}$ B. Between 0 and $\frac{1}{3}$ D. Between $\frac{1}{3}$ and $\frac{2}{3}$ 

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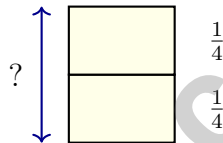
5) Here is a line plot with measurements in fourths:



What is the range (difference between highest and lowest values) on this line plot?

- A. $\frac{1}{4}$
 C. $\frac{3}{4}$
 B. $\frac{2}{4}$
 D. 1

6) A stacked bar model shows 2 bars of $\frac{1}{4}$ stacked on top of each other. What is the total height?



- A. $\frac{1}{4}$
 C. $\frac{2}{8}$
 B. $\frac{2}{4}$
 D. $\frac{1}{8}$

7) A toy store received 2,016 action figures in a shipment. They need to pack them into 9 boxes equally. How many figures go in each box?

- A. 224
 C. 220
 B. 228
 D. 216

8) Which equation matches: “20 is 5 times as many as 4”?

- A. $20 + 4 = 24$
 C. $20 = 5 \times 4$
 B. $20 - 4 = 16$
 D. $20 = 4 \times 4$



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

- The correct answer is $\frac{7}{8}$.** (4.NF.B.3) Sam and his mom each bring almonds: $\frac{4}{8}$ and $\frac{3}{8}$ pound. With same-size eighths: $4 + 3 = 7$ eighths, so $\frac{7}{8}$ pound total.
- Choice A is correct.** (4.NF.B.4) On the number line, we make 3 jumps of $\frac{1}{5}$ each. Starting at 0: hop to $\frac{1}{5}$, then $\frac{2}{5}$, then $\frac{3}{5}$. This shows $3 \times \frac{1}{5} = \frac{3}{5}$. The answer is $\frac{3}{5}$.
- Choice D is correct.** (4.OA.A.2) “2 times as many” means multiply by 2: $2 \times 16 = 32$ toy cars.
- Choice D is correct.** (4.NBT.B.4) Round each number to the nearest thousand: $26,345 \approx 26,000$ and $8,912 \approx 9,000$. Subtract: $26,000 - 9,000 = 17,000$.
- Choice C is correct.** (4.MD.C.5) The angle spans from 0° (rightward) to 135° , measuring 135° .
- Choice B is correct.** (4.MD.C.5) This obtuse angle measures 135° , which is **135** one-degree angles.
- Choice B is correct.** (4.OA.A.1) Multiplicative comparisons use the symbol \times (or words like “times as many”). Choices A, C, and D all use \times . Choice B uses $+$, which is an *additive* comparison—not multiplicative.
- Choice B is correct.** (4.MD.A.3) Using $P = 2\ell + 2w = 80$ with $\ell = 25$: $2(25) + 2w = 80$. Simplify: $50 + 2w = 80$, so $2w = 30$, thus $w = 15$ m.
- Choice A is correct.** (4.NF.B.3) The picture shows three paint cans. Two cans are filled (blue sections), one is empty. Add the two filled cans: $\frac{1}{3} + \frac{1}{3} = \frac{2}{3}$ total paint.
- Choice C is correct.** (4.MD.B.4) The shortest sticker is at $\frac{1}{8}$ inch and the longest is at $\frac{4}{8}$ inch. The difference is $\frac{4}{8} - \frac{1}{8} = \frac{3}{8}$ inch.
- Choice C is correct.** (4.NBT.B.6) Long division: $4 \div 5 = 0$ r4, bring down the 1 to get $41 \div 5 = 8$ r1, bring down the 2 to get $12 \div 5 = 2$ r2, bring down the 5 to get $25 \div 5 = 5$. Answer: **825**.
- Choice C is correct.** (4.NF.C.5) To convert $\frac{3}{10}$ meter to hundredths of a meter, multiply by $\frac{10}{10}$: $\frac{3}{10} = \frac{3 \times 10}{10 \times 10} = \frac{30}{100}$ meter.
- Choice D is correct.** (4.NBT.A.3) We’re rounding to the nearest hundred. Look at the tens digit: 4. Since $4 < 5$, we round DOWN. The hundreds digit stays at 3, so the answer is **9,300**. ✓
- Choice B is correct.** (4.NF.A.1) All have numerator 5. Smaller denominators give bigger pieces. Order by denominator size: $6 < 8 < 10$, so $\frac{5}{6} > \frac{5}{8} > \frac{5}{10}$.
- Choice B is correct.** (4.G.A.2) Triangles are classified in two ways: by their angle measures (acute, right, obtuse) or by their side lengths (equilateral, isosceles, scalene). Looking at angles or sides helps identify the type of triangle. The answer is **B**.
- The correct answer is A, D.** (4.NBT.A.1) A is true: 5 is in the hundreds place. D is true: 4 is in the tens place ($4 \times 10 = 40$). B, C, E are false. Answer: A and D. ✓
- Choice B is correct.** (4.MD.A.1) Since 1 kilogram = 1,000 grams, multiply: $6 \times 1,000 = 6,000$ g. The answer is **6,000** g.
- Choice D is correct.** (4.NBT.A.2) The thousands digits match, so compare the hundreds place: $100 < 200$, therefore $54,100 < 54,200$ ✓
- Choice A is correct.** (4.NF.B.3) One whole is $\frac{6}{6}$, plus $\frac{1}{6}$ more: $6 + 1 = 7$, so $\frac{6}{6} + \frac{1}{6} = \frac{7}{6} = 1\frac{1}{6}$ ✓.
- Choice A is correct.** (4.NF.B.3) $\frac{3}{4}$ shows 3 shaded parts out of 4 equal parts. Since each part is $\frac{1}{4}$, we have $\frac{3}{4} = \frac{1}{4} + \frac{1}{4} + \frac{1}{4}$ —three unit fractions added.
- Choice C is correct.** (4.MD.C.5) An acute angle measures between 0 and 90 degrees and has a small opening.
- The correct answer is $\frac{4}{3}$.** (4.NF.B.4) Four thirds: $4 \times \frac{1}{3} = \frac{4}{3}$.
- Choice A is correct.** (4.NF.B.4) The recipe is for 2 people and uses $\frac{3}{4}$ cup of oil. Making it for 8 people (4 times the recipe) needs $4 \times \frac{3}{4} = \frac{12}{4} = 3$ cups.
- Choice D is correct.** (4.OA.B.4) Look at the differences: 3, 5, 7. The differences increase by 2 each time, so the next difference is 9: $17 + 9 = 26$.
- Choice D is correct.** (4.NF.B.3) Add the wholes: $1 + 2 = 3$. Add the fractions: $\frac{5}{6} + \frac{1}{6} = \frac{6}{6} = 1$. Combine: $3 + 1 = 4$.



Notes From the Math Gardener

Hi, Math Gardener!

◇ Look at how much you grew! 6 tests is like 6 weeks of taking care of your math garden. Every problem was a seed. Every try was water. ◇

★ **Gardeners say:** growth takes time. You can't see roots, but they are there. You can't always feel smarter, but you are. Your math garden is full! ★

Garden Check-Up

- **Roots:** STRONG! Your basic math is solid.
- **Stems:** STURDY! You can do step-by-step problems.
- **Leaves:** GREEN! You have lots of math tools.
- **Flowers:** BRIGHT! You feel proud of your work.

Gardener tip: keep watering your math garden long after the test. Every habit you built will grow with you for years!

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

Jay Daie

Your Math Gardener

PRACTICE TODAY, SUCCEED TOMORROW!

This **Grade 4 Math Practice Tests** book is the perfect tool to help students strengthen their math skills, master important concepts, and build confidence for test success.

With 6 full-length practice tests, a variety of question types, and detailed answer explanations, students get the review and practice they need to improve accuracy, develop critical thinking, and achieve their best.

Ideal 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

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SUCCESS FOR LIFE.**

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.



Master Key Concepts

Reinforce important skills aligned with grade-level standards.



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 & Equivalent Fractions
- ✓ Decimals
- ✓ Geometry & Measurement
- ✓ Perimeter & Area
- ✓ Data, Graphs & Line Plots
- ✓ Patterns & Algebraic Thinking
- ✓ And More!



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