

7

Massachusetts

MCAS

GRADE 5

MATHEMATICS

PRACTICE TESTS

✓
**PRACTICE
PREPARE
SUCCEED**

★★★

Comprehensive Standards-Aligned
Review for Strong Grade 5
Math Performance



$$\frac{3}{4} + \frac{2}{4} = \frac{5}{4}$$

$$2.4 + 1.6 = 4.0$$

$$A = \frac{bh}{2}$$



**7 FULL-LENGTH
PRACTICE TESTS**

Realistic style
questions



**STANDARDS-
ALIGNED**

Covers all Grade 5
standards



BUILD CONFIDENCE

Target weak areas
and improve
performance



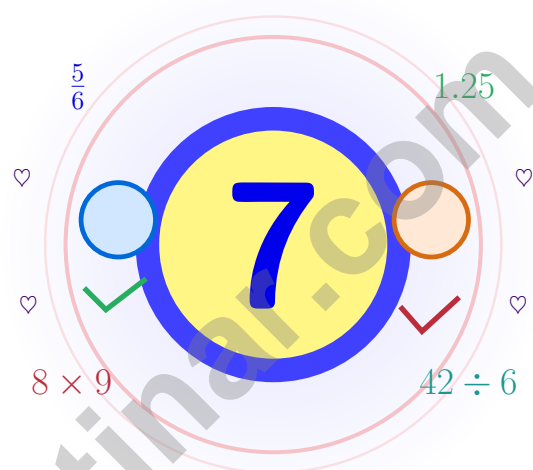
ACHIEVE SUCCESS

Develop skills,
stay prepared,
excel on test day

★ PRACTICE TODAY. PERFORM TOMORROW. **SUCCEED** FOREVER. ★

7 Massachusetts MCAS Grade 5 Math Practice Tests

A seven-step adventure for Massachusetts Grade 5 thinkers



Seven full tests, a concise review, and helpful support that turns Grade 5 practice in The Bay State into steady, confident growth from page one to the final check.

Jay Daie and Reza Nazari



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Strap In, Massachusetts – Seven-Test Journey

Seven full tests and a coach's voice on every page

Massachusetts Mathematicians, Read This First

This practice book is your steady companion for seven tests, not a place to be perfect. Math is a lot like the Freedom Trail – one careful step leads to the next, and every stop adds something to the story.

Use these seven tests like stepping-stones. Take one test at a time, check your answers honestly, and notice which skills need more attention. Small improvements add up across seven rounds.

Notice

Look closely at what the problem says, shows, and asks.

Try

Pick a plan and step through it carefully.

Grow

Use every correction as a clue for what to master next.

A strong habit for Massachusetts mathematicians: read carefully, estimate when it helps, show your steps, and keep going even when a question feels tricky. That is how steady math confidence is built.

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From Cover to Final Test

A simple routine that turns practice into progress

Step 1: Step 1

Warm up with a quick review.

Spend a few minutes waking up your memory before the test begins.

Step 2: Step 2

Take one full practice test.

Work in a calm spot and focus on careful thinking before speed.

Step 3: Step 3

Check your work honestly.

Circle missed questions and notice which topics keep showing up.

Step 4: Step 4

Fix, reflect, and try again.

Read the explanation, repair the work, and bring that lesson into the next test.

A Good 7-Week Massachusetts Rhythm

Week 1	Take Test 1 like the first stop on a long trail.
Week 2	Take Test 2 and slow down on word problems.
Week 3	Take Test 3 and lift fraction and decimal work.
Week 4	Take Test 4 and pay close attention to labels and units.
Week 5	Take Test 5 and compare your habits with your first test.
Week 6	Take Test 6 and practice staying calm during tricky questions.
Week 7	Take Test 7 with calm, careful, confident work.



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Grade 5 Mathematics Reference Materials

PERIMETER AND AREA

Perimeter of Rectangle $P = 2l + 2w$ or $P = 2(l + w)$

Area of Rectangle $A = l \times w$

Area of Triangle $A = \frac{1}{2} \times b \times h$

Volume of Rectangular Prism $V = l \times w \times h$

LENGTH

Customary

1 foot (ft) = 12 inches (in.)

1 yard (yd) = 3 feet (ft)

1 yard (yd) = 36 inches (in.)

Metric

1 meter (m) = 100 centimeters (cm)

1 centimeter (cm) = 10 millimeters (mm)

1 kilometer (km) = 1,000 meters (m)

CAPACITY

Customary

1 cup (c) = 8 fluid ounces (fl oz)

1 pint (pt) = 2 cups (c)

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WEIGHT AND MASS

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TIME

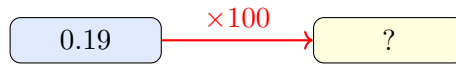
1 minute (min) = 60 seconds (sec) 1 week = 7 days

1 hour (hr) = 60 minutes (min) 1 year = 12 months

1 day = 24 hours (hr) 1 year = 52 weeks



1) Decimal right-arrow diagram: show how 0.19 moves right when multiplied by 100.



2 places right

- A. 1.9
- B. 19
- C. 190
- D. 1900

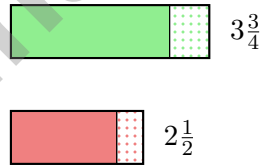
2) A diagram shows one sixth divided into 5 equal parts. Which equation represents it?

- A. $\frac{1}{6} \div 5 = n$
- B. $5 \div \frac{1}{6} = n$
- C. $\frac{1}{6} + 5 = n$
- D. $5 \times \frac{1}{6} = n$

3) If $6 \times 9 = 54$, how many zeros does 600×900 have?

- A. 3
- B. 6
- C. 5
- D. 4

4)



Bar model: $3\frac{3}{4} + 2\frac{1}{2} = ?$

- A. $6\frac{1}{4}$
- B. $6\frac{1}{2}$
- C. $6\frac{3}{4}$
- D. 7



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1) Which pair has two expressions that both equal 5000?

A. 40×10 and 4×100

C. 50×100 and 500×10

B. 40×10 and 4×1000

D. 30×1000 and 3×10000

2) A polygon has 6 sides, 6 vertices, and all sides and angles equal. What name can be used for this shape?

Record your answer in the space provided.

3) Which two ordered pairs would form a vertical line segment on the grid?

A. (2, 3) and (5, 3)

C. (2, 4) and (2, 2)

B. (4, 1) and (5, 9)

D. (1, 5) and (8, 2)

4) Two recipes call for flour. The first uses $\frac{3}{4}$ cup and the second uses $\frac{2}{3}$ cup. How much flour for both?

A. $1\frac{5}{12}$ cups

C. $\frac{1}{12}$ cup

B. $\frac{5}{7}$ cup

D. 1 cup

5) A prism has volume 200 m^3 , length 8 m, and width 5 m. Find its height.

Record your answer in the space provided.



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1) Observation: $5 \times 20 = 100$; $5 \times 200 = 1,000$; $5 \times 2,000 = 10,000$. Based on this pattern, how many zeros does $5 \times 20,000$ have?

- A. 5
 B. 4
- C. 3
 D. 6

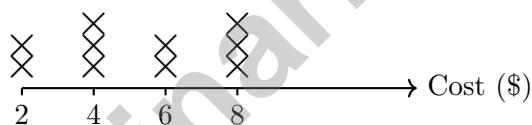
2) A rectangular gift box has dimensions 19 cm, 13 cm, and 7 cm. What is its volume?

- A. 1456 cm^3
 B. 1547 cm^3
- C. 1729 cm^3
 D. 1833 cm^3

3) A recipe calls for $1\frac{3}{8}$ cups of milk and $2\frac{7}{10}$ cups of water. Estimate the total liquid.

- A. 3 cups
 B. 4 cups
- C. 5 cups
 D. 6 cups

4) The line plot shows the cost of items at a flea market:



What is the total cost of all items?

- A. \$44
 B. \$48
- C. \$52
 D. \$56

5) **Reasoning:** Two rectangular prisms have the same volume of 240 cm^3 . Prism A has dimensions 10 cm by 8 cm by ?. Prism B has dimensions 12 cm by 10 cm by ?. Which prism has the greater height?

- A. Prism A
 B. Prism B
- C. Same height
 D. Cannot determine



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Practice Test Answer Keys

How to use this section:

1. check your answer
2. circle missed questions
3. rework them before reading the explanation

Good correction habits build strong scores.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice B is correct.** (5.NBT.A.2) $0.19 \times 100 = 19$ (decimal moves 2 places right).
- 2) **Choice A is correct.** (5.NF.B.6) The one-sixth piece is split into 5 equal parts. So the matching equation is $\frac{1}{6} \div 5 = n$.
- 3) **Choice D is correct.** (5.NBT.A.2) The known fact $6 \times 9 = 54$ has no trailing zero. The factors 600 and 900 contribute four zeros, so the product has 4 zeros.
- 4) **Choice A is correct.** (5.NF.A.1) Convert to fourths: $3\frac{3}{4} + 2\frac{2}{4} = 5\frac{5}{4} = 6\frac{1}{4}$.
- 5) **Choice B is correct.** (5.NF.B.5) $10 \times \frac{6}{5} = 12$ units. Since $\frac{6}{5} > 1$, the scaled length is larger than 10 units.
- 6) **Choice A is correct.** (5.MD.A.1) Total: $18.5 + 21.75 + 19.25 + 18 = 77.5$ kg. Remaining: $80 - 77.5 = 2.5$ kg.
- 7) **Choice D is correct.** (5.G.B.4) A rectangle is a quadrilateral, and its opposite sides are parallel.
- 8) **Choice B is correct.** (5.NBT.A.2) $3.7 \times 10^2 = 370$. The 3 moves to the hundreds place.
- 9) **Choice A is correct.** (5.G.B.4) The definition of a trapezoid is a quadrilateral with exactly one pair of parallel sides. All other options are not always true.
- 10) **Choice B is correct.** (5.NF.B.6) $\frac{4}{7} \times \frac{7}{8} = \frac{28}{56}$, which simplifies to $\frac{1}{2}$ mile.
- 11) **Choice A is correct.** (5.OA.A.1) Parentheses first: $8 - 3 = 5$. Then multiply and divide from left to right: $2 \times 5 = 10$ and $10 \div 5 = 2$. Finally, $10 + 2 = 12$.
- 12) **Choice B is correct.** (5.NBT.B.7) Check by multiplying: $0.7 \times 5 = 3.5$. The quotient is reasonable because it checks with the inverse operation.
- 13) **Choice D is correct.** (5.G.A.2) The x -coordinate represents units right from the origin: 9 units. The y -coordinate represents units up: 4 units. So the coordinates are (9, 4).
- 14) **Choice B is correct.** (5.G.A.2) The x -coordinate (40) is units sold, and the y -coordinate (200) is revenue in dollars. So 40 units were sold for \$200.
- 15) **Choice A is correct.** (5.NF.A.1) $9 - 4 = 5$ and $\frac{6}{9} - \frac{3}{9} = \frac{3}{9} = \frac{1}{3}$. Result: $5\frac{1}{3}$.
- 16) **The correct answer is 23.** (5.OA.B.3) The terms are 7, 11, 15, 19, 23, so the 5th term is 23. A complete response explains that the pattern adds 4 each step.
- 17) **Choice A is correct.** (5.NF.B.6) Each whole contains 4 pieces of size $\frac{1}{4}$. With 3 wholes, there are $3 \times 4 = 12$ pieces.
- 18) **Choices A, B are correct.** (5.MD.B.2) The two eighths and one fourth add to $\frac{1}{2}$ lb. Splitting $\frac{1}{2}$ lb equally between 2 groups gives $\frac{1}{4}$ lb each.
- 19) **The correct answer is 0.04.** (5.NBT.A.2) Move the decimal point one place left: $0.4 \rightarrow 0.04$.
- 20) **Choice D is correct.** (5.NBT.A.4) The tenths digit is 7. Since $7 \geq 5$, round ones up: $18 \rightarrow 19$. So 18.75 seconds rounds to 19 seconds.
- 21) **Choice C is correct.** (5.NF.B.7) $10 \div \frac{1}{2} = 10 \times 2 = 20$. We can cut 20 rolls.
- 22) **Choice D is correct.** (5.NF.A.2) LCD = 15. $\frac{3}{5} = \frac{9}{15}$; $\frac{2}{3} = \frac{10}{15}$. $\frac{10}{15} - \frac{9}{15} = \frac{1}{15}$.
- 23) **Choice D is correct.** (5.NBT.B.7) Align decimals: $3.40 + 0.27$. Hundredths: $0 + 7 = 7$; tenths: $4 + 2 = 6$; ones: $3 + 0 = 3$. Sum is 3.67.
- 24) **Choice A is correct.** (5.NBT.A.1) A digit in the hundredths place is worth hundredths. The digit 5 means 5 hundredths, which is 0.05.
- 25) **Choice A is correct.** (5.NF.B.5) $\frac{6}{5} > 1 > \frac{5}{6}$, so the first product (24) is greater than the second product (about 16.67).
- 26) **Choice B is correct.** (5.NF.B.4) Grid: $5 \times 4 = 20$ cells. Shaded (2 of 4 rows, 3 of 5 columns): $2 \times 3 = 6$ cells. Answer: $\frac{6}{20} = \frac{3}{10}$.
- 27) **Choice A is correct.** (5.MD.C.5) Use the rectangular-prism volume formula: $7 \times 3 \times 3 = 63$. So the volume is 63 cubic centimeters.
- 28) **The correct answer is 7.** (5.G.A.1) The first number in an ordered pair is the x -coordinate.
- 29) **Choice D is correct.** (5.NBT.A.2) Dividing by 1,000 moves the decimal three places left, so 8.1 becomes 0.0081.
- 30) **The correct answer is 4.62.** (5.NBT.B.7) Line up decimal points and subtract place by place. $7.00 - 2.38 = 4.62$. This confirms the answer.



Seven-Test Success Note

Dear Student,

★ You did something important: you completed seven full practice tests. That takes patience, focus, and real effort. Every time you kept going—even when a problem felt tricky—you trained your brain to stay calm and solve step by step. ★

◇ **Here is the big win:** you now have experience. On test day, many questions will feel familiar because you practiced. Familiarity builds confidence, and confidence helps you think clearly. ◇

My Test-Day Checklist

- **Read carefully:** underline important numbers and words.
- **Show your work:** it helps you catch mistakes.
- **Check your answer:** ask, “Does this make sense?”
- **Stay steady:** if one problem is hard, skip it and come back.

Remember: you don't need to be perfect to do well. You just need to use your strategies and keep trying—the same way you did in practice.

Want to share a proud moment from your practice? Email me at reza@testinar.com.

Reza Nazari & Jay Daie

Your Math Coaches (Practice Makes Progress)

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PRACTICE TODAY. PERFORM TOMORROW.

Success in math starts with practice! This book provides the **practice, confidence, and skills** your child needs to excel on the Grade 5 Math test and beyond.

KEY BENEFITS:



TARGETED PRACTICE

Focus on the most important Grade 5 math skills.



STANDARD-ALIGNED

All tests align with state standards for Grade 5.



BUILD CONFIDENCE

Strengthen skills, reduce test anxiety, and boost confidence.



IMPROVE PERFORMANCE

Timed practice helps improve speed and accuracy.



ACHIEVE SUCCESS

Develop strong test-taking skills and achieve your best score!

PERFECT FOR:

✓ Classroom Practice

✓ Homework Help

✓ Test Preparation

✓ Summer Learning

✓ On-the-Go Practice

✓
PRACTICE
PREPARE
SUCCEED



STRONG SKILLS. BRIGHT FUTURE.

Give your child the tools they need to succeed in math and in life!



Visit testinar.com/math5 for more Grade 5 math resources and practice materials!



TRUSTED
BY PARENTS

Quality resources you can trust.



DESIGNED
FOR SUCCESS

Proven practice for real results.



SUPPORT
YOUR CHILD

Every step of the way.