

# 9

# Maryland

## MCAP

# GRADE 5 MATHEMATICS PRACTICE TESTS

Full-Length Standards-Aligned Practice  
for Strong Math Performance

$$A = l \times w$$

$$x^2 + 3x - 4 = 0$$

$$y = 2x + 1$$



**9**  
FULL-LENGTH  
PRACTICE  
TESTS

$$2,345 \times 6 = 14,070$$



$$\frac{3}{4} + \frac{1}{8} = \frac{7}{8}$$

$$7.2 \div 0.8 = 9$$



$$(12 + 8) \div 4 = 5$$



Build Confidence



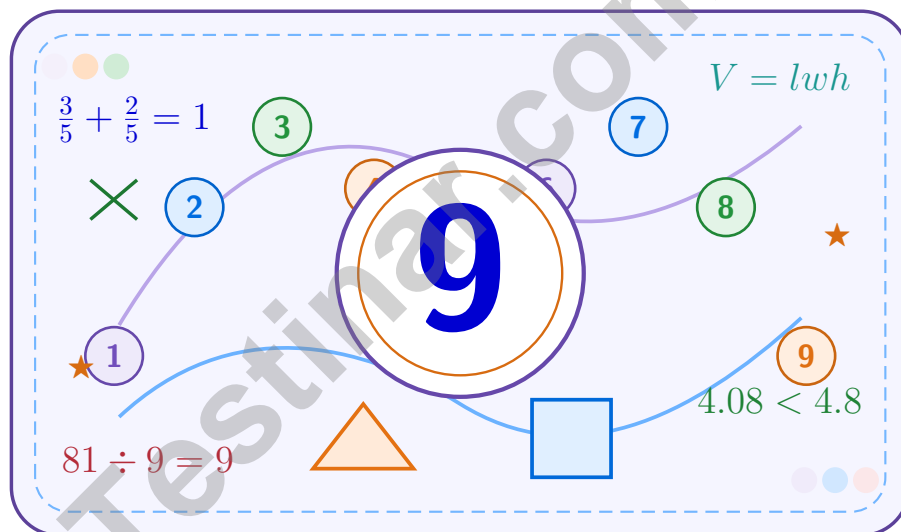
Improve Math Skills



Achieve Success

# 9 Maryland MCAP Grade 5 Math Practice Tests

*A nine-step confidence climb with clear review, smart strategy, and practice that gets stronger every round*



**Nine full tests, focused skill boosters, and student-friendly support from start to finish for Grade 5 mathematicians who want to climb higher.**

**Jay Daie and Reza Nazari**



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# Welcome to the Confidence Climb

This book is here to help you practice with purpose and rise step by step

## To the Grade 5 Mathematician

This practice book is a place to think, try, fix, and grow. You do not have to be perfect on the first question or the first test. What matters most is careful effort, clear work, and learning from each round of practice.

Use these nine 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 fast.

### Try

Give each problem your best thinking.

### Check

Study mistakes and learn what happened.

### Rise

Bring that lesson into the next round.

**A strong habit for every page:** 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.

# How to Use This Book

A simple practice routine that turns nine tests into steady growth

## A Nine-Session Climb Map

Session	Mission Focus
1	Take Test 1; review place value and operation slips.
2	Take Test 2; keep work neat and easy to read.
3	Take Test 3; give extra time to fractions and decimals.
4	Take Test 4; slow down on word problems and units.
5	Take Test 5; compare scores and habits with earlier rounds.
6	Take Test 6; notice which habits are now automatic.
7	Take Test 7; explain open-ended answers clearly.
8	Take Test 8; review topics that still need attention.
9	Take Test 9; finish with calm, careful, confident work.

### Step 1: Warm Up

**Start with the quick review.**  
Spend a few minutes refreshing the ideas before you start a test.

### Step 2: Take the Test

**Take one full practice test.**  
Work in a quiet space and let accuracy matter more than speed.

### Step 3: Study the Pattern

**Check your work honestly.**  
Circle missed questions and notice patterns in the mistakes.

### Step 4: Learn, Then Retry

**Read the explanation and try again.**  
Learning happens after the test too. Fixing mistakes is one of the smartest parts of practice.



Scan me

# Test Overview

## What this practice book helps students do

These practice tests are designed to help Grade 5 students get comfortable with the kind of thinking used on the Maryland MCAP. The goal is bigger than only getting answers right. Students are practicing how to read closely, choose a strategy, solve carefully, and explain their work when needed.

### Selected-Response Questions

Students solve the problem and choose the best answer. Estimating first and crossing out weak choices can save time and points.

### Constructed-Response Questions

Students show their thinking, steps, models, or explanations. Even when unsure, writing what they know can help organize the problem.

### Grade 5 Skills You Will Practice Often

- place value, comparing numbers, and rounding
- multi-digit addition, subtraction, multiplication, and division
- fractions, decimals, and mixed numbers
- perimeter, area, volume, and measurement conversions
- coordinate points, patterns, graphs, and tables
- geometry and multi-step word problems

**What strong work looks like:** the answer is correct, the steps are clear, the labels or units are included, and the final result makes sense.



# Table of Contents

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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)

1 quart (qt) = 2 pints (pt)

1 gallon (gal) = 4 quarts (qt)

#### Metric

1 liter (L) = 1,000 milliliters (mL)

### WEIGHT AND MASS

#### Customary

1 pound (lb) = 16 ounces (oz)

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1 kilogram (kg) = 1,000 grams (g)

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### TIME

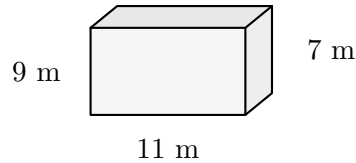
1 minute (min) = 60 seconds (sec)    1 week = 7 days

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

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



- 1) A baker found that rounding  $7\frac{3}{11}$  to 7 and  $2\frac{9}{10}$  to 3 gave an estimate of 10 for their sum. Is the estimate within 0.5 of the true sum?
- A. Yes, it equals the exact sum                       C. No, it is off by more than 0.5  
 B. Yes, it is within 0.5                               D. Cannot determine from the estimate
- 2) A rectangular prism has dimensions 11 m, 9 m, and 7 m. What is its volume?



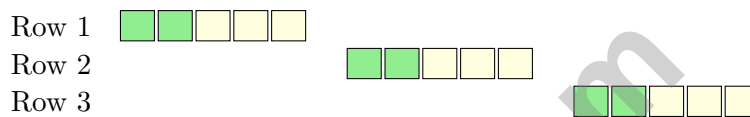
- A. 567 cubic meters                               C. 693 cubic meters  
 B. 627 cubic meters                               D. 756 cubic meters
- 3) A store stacks 6 identical rectangular boxes. Each box measures 3 meters by 3 meters by 3 meters. What is the total volume of all the boxes?
- A. 27 cubic meters                               C. 162 cubic meters  
 B. 33 cubic meters                               D. 189 cubic meters
- 4) Add:  $1\frac{1}{6} + 2\frac{2}{6}$
- A.  $3\frac{1}{2}$      C.  $3\frac{5}{6}$   
 B.  $3\frac{2}{6}$      D.  $3\frac{4}{6}$
- 5) Which statement compares  $14 + 7 \times 3$  and  $(14 + 7) \times 3$  correctly?
- A.  $14 + 7 \times 3 < (14 + 7) \times 3$   
 B.  $14 + 7 \times 3 > (14 + 7) \times 3$   
 C. They are equal  
 D. Cannot compare



6) Sam drinks  $\frac{2}{3}$  of a  $1\frac{1}{2}$ -liter water bottle. How many liters does he drink?

*Record your answer in the space provided.*

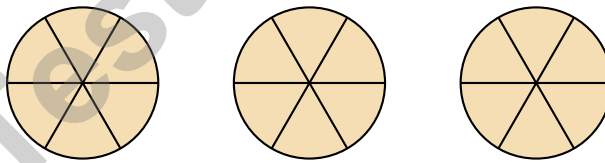
7) Bar model for  $3 \times \frac{2}{5}$ :



What is the product?

- |   |   |
|---|---|
| <input type="checkbox"/> A. $\frac{2}{5}$<br><input type="checkbox"/> B. $\frac{2}{15}$ | <input type="checkbox"/> C. $\frac{6}{15}$<br><input type="checkbox"/> D. $\frac{6}{5}$ or $1\frac{1}{5}$ |
|---|---|

8) A pizza parlor cuts each large pizza into slices that are  $\frac{1}{6}$  of a pizza. How many slices are in 3 pizzas?



3 pizzas, each cut into 6 slices

- |  |  |
|--|--|
| <input type="checkbox"/> A. 12<br><input type="checkbox"/> B. 15 | <input type="checkbox"/> C. 18<br><input type="checkbox"/> D. 24 |
|--|--|



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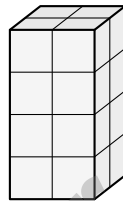
1) In a science experiment, the temperature rose by 0.6 degrees and later by 0.06 degrees. Which change was larger?

- A. The rise of 0.6 degrees  
 B. The rise of 0.06 degrees  
 C. They were equal  
 D. Cannot compare

2) Pattern: 81, 27, 9, 3, ... Next?

- A. 1  
 B. 2  
 C. 3  
 D. 0

3) Which rectangular prism holds exactly 16 unit cubes?



- A.  $3 \times 3 \times 2$   
 B.  $2 \times 3 \times 3$   
 C.  $2 \times 2 \times 5$   
 D.  $2 \times 2 \times 4$

4) What is  $0.078 \times 100$ ?

- A. 0.078  
 B. 0.78  
 C. 7.8  
 D. 78

5) A company has 2,400 employees. They are split equally into 100 teams for training. How many employees are in each team?

- A. 0.24  
 B. 2.4  
 C. 24  
 D. 240



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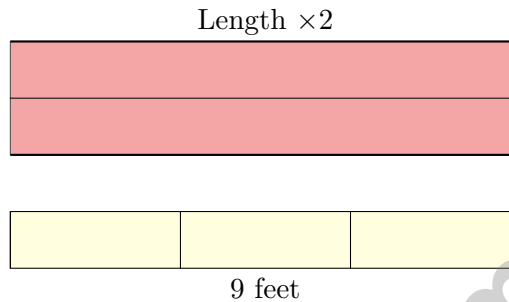
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1) The output is 4 more than the input. What is the 5th ordered pair if the inputs start at 1?

- A. (4, 8)                       C. (6, 10)  
 B. (5, 9)                       D. (5, 1)



2)

A rope is 9 feet. If doubled, what is the new length?

- A.  $4\frac{1}{2}$  feet                       C. 18 feet  
 B. 9 feet                               D. 27 feet

3) A paint can holds  $1\frac{1}{2}$  gallons. How many gallons are in 7 paint cans?

- A.  $10\frac{1}{2}$  gallons                       C. 9 gallons  
 B. 11 gallons                               D.  $8\frac{1}{2}$  gallons

4) Rosa multiplies 18 by  $\frac{4}{3}$ . Without calculating, what can she say about the product?

- A. The product is less than 18                       C. The product is between 18 and 36  
 B. The product is equal to 18                       D. The product is greater than 36

5) A length is 25.982 meters. Round to the nearest whole meter.

- A. 25 m                                       C. 25.98 m  
 B. 25.9 m                                       D. 26 m



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- 1) A swimming pool is 20 meters long, 10 meters wide, and 2 meters deep. What is the volume of water it can hold?

Swimming pool  
20 m long  $\times$  10 m wide  $\times$  2 m deep

- A. 200 m<sup>3</sup>                       C. 400 m<sup>3</sup>  
 B. 300 m<sup>3</sup>                       D. 500 m<sup>3</sup>
- 2) A scientist measures liquid volumes:

Container	Volume (mL)
A	350
B	480
C	420

What is the total volume in liters?

*Use: 1 liter = 1,000 mL*

- A. 1.05 liters                       C. 1.25 liters  
 B. 1.15 liters                       D. 1.35 liters
- 3) A triangle has sides measuring 3 cm, 4 cm, and 5 cm. What type of triangle is this based on its sides?
- A. Equilateral                       C. Scalene  
 B. Isosceles                           D. Obtuse



## 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 Maryland scores.**

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## Practice Test Answers and Explanations

### Practice Test 1 Answers and Explanations

- 1) **Choice B is correct.** (5.NF.A.2) True values:  $7\frac{3}{11} + 2\frac{9}{10} \approx 7.27 + 2.90 = 10.17$ . Estimate is 10. Difference:  $0.17 < 0.5$ . Close enough.
- 2) **Choice C is correct.** (5.NF.B.7) Volume =  $11 \times 9 \times 7 = 693$  cubic meters.
- 3) **Choice C is correct.** (5.NF.B.7) One box has volume  $3 \times 3 \times 3 = 27$  cubic meters. There are 6 boxes, so  $27 \times 6 = 162$  cubic meters.
- 4) **Choice A is correct.** (5.NF.A.1) Add whole parts:  $1 + 2 = 3$ . Add fractions:  $\frac{1}{6} + \frac{2}{6} = \frac{3}{6} = \frac{1}{2}$ . Result:  $3\frac{1}{2}$ .
- 5) **Choice A is correct.** (5.NF.A.1) In  $14 + 7 \times 3$ , only the 7 is multiplied by 3. In  $(14 + 7) \times 3$ , the whole sum is multiplied by 3, so the second expression is larger.
- 6) **The correct answer is 1.** (5.NF.B.6)  $\frac{2}{3} \times \frac{3}{2} = 1$  liter.
- 7) **Choice D is correct.** (5.NF.B.6) Each row shows  $\frac{2}{5}$ . Three rows make  $3 \times \frac{2}{5} = \frac{6}{5}$ , which is one whole and one fifth more.
- 8) **Choice C is correct.** (5.NF.B.7)  $3 \div \frac{1}{6} = 3 \times 6 = 18$ . There are 18 slices in 3 pizzas.
- 9) **Choice A is correct.** (5.NF.A.2)  $\frac{5}{6} - \frac{1}{6} = \frac{4}{6}$ , simplifies to  $\frac{2}{3}$ .
- 10) **Choice B is correct.** (5.OA.A.1) Four jumps of 6 land at  $4 \times 6 = 24$ . Backing up 4 more gives  $24 - 4 = 20$ .
- 11) **Choice B is correct.** (5.NBT.B.5) Add the four partial products:  $300 + 20 + 150 + 10 = 480$ .
- 12) **Choice B is correct.** (5.MD.C.3) A cube with side length 5 meters has 5 rows, 5 columns, and 5 layers of cubic meter units, so the volume expression is  $5 \times 5 \times 5$ .
- 13) **Choice D is correct.** (5.NF.B.7) Use total amount divided by the size of one piece. The equation is  $8 \div \frac{1}{3} = n$ .
- 14) **Choice B is correct.** (5.G.B.3) Shape B is an equilateral triangle with all three sides equal and all three angles equal ( $60^\circ$  each), making it regular.
- 15) **Choice D is correct.** (5.G.A.1) The origin is the point where the x-axis and y-axis intersect, labeled as  $(0, 0)$ .
- 16) **Choice D is correct.** (5.MD.A.1) 1 gallon = 4 quarts = 8 pints = 16 cups. So 3 gallons =  $3 \times 16 = 48$  cups.
- 17) **Choice C is correct.** (5.OA.A.2) Choice C translates correctly: the product of 2 and 8 is  $2 \times 8$ , and 5 more gives  $2 \times 8 + 5$ . The other pairs change the grouping or order.
- 18) **Choice C is correct.** (5.NBT.A.2) Dividing by 1,000 (which is  $10^3$ ) requires moving the decimal 3 places to the left:  $96.3 \div 1,000 = 0.0963$ .
- 19) **Choice C is correct.** (5.NF.B.7) One box:  $14 \times 10 \times 6 = 840$  in<sup>3</sup>. Two boxes:  $840 \times 2 = 1680$  in<sup>3</sup>.
- 20) **The correct answer is 3.** (5.G.A.2) For nonzero terms,  $9 \div 3 = 3$ ,  $18 \div 6 = 3$ , and  $27 \div 9 = 3$ .
- 21) **Choice A is correct.** (5.G.A.2)  $\frac{1}{5} \div 4 = \frac{1}{5} \times \frac{1}{4} = \frac{1}{20}$ .
- 22) **Choices A, B are correct.** (5.OA.A.2) A is true because 3 copies of  $(6 + 4)$  can be written as 2 copies plus 1 more copy. B is true because 10 groups of 7 are greater than 10 groups of  $7 - 1$ . C adds an extra 9, and D leaves out one group of 5.
- 23) **Choice C is correct.** (5.MD.A.1) 1 kilogram = 1,000 grams. Multiply:  $12 \times 1000 = 12000$  g.
- 24) **Choice B is correct.** (5.MD.A.1) A power of 10 tells how many factors of 10 to use.  $24 \times 10^2 = 24 \times 100 = 2400$ . This confirms the answer.
- 25) **The correct answer is 12.85.** (5.NBT.A.2) Total spent:  $8.65 + 3.50 = 12.15$ . Remaining:  $25.00 - 12.15 = 12.85$ .
- 26) **Choice C is correct.** (5.MD.C.5) Third pair: X-value is 5 (position 3 in 1, 3, 5, 7), Y-value is 6 (position 3 in 2, 4, 6, 8).
- 27) **The correct answer is rectangle.** (5.G.B.4) A square has all the properties of a rectangle: four right angles and two pairs of opposite sides that are parallel. A square is a special type of rectangle.
- 28) **Choice B is correct.** (5.G.B.4) Lowest: 2 m (2 marks), Highest: 5 m (1 mark). Range =  $5 - 2 = 3$  meters.
- 29) **Choice B is correct.** (5.MD.C.5) The base area is  $20 \times 4 = 80$  square centimeters. Since  $400 \div 80 = 5$ , the height is 5 cm.
- 30) **The correct answer is  $2\frac{3}{4}$ .** (5.NF.A.2)  $4\frac{1}{2} = 4\frac{2}{4} = 3\frac{6}{4}$ . Subtract:  $3\frac{6}{4} - 1\frac{3}{4} = 2\frac{3}{4}$ .



## Champion in Training!

◇ What a season! You've completed 9 full practice tests, and that's the kind of training that builds real champions. Every test was a workout, and your math muscles are stronger today than they were before. Your stamina, focus, and accuracy have all leveled up. ◇

★ **Here's what every great coach knows:** the team that practices the most plays the best. You've put in the practice. You know the plays. You've handled the drills. Now it's almost game day, and you are ready. ★

### Your Training Camp Stats

- **Math Stamina:** HIGH! You can stay focused for a full test.
- **Strategy Playbook:** LOADED! You have multiple ways to attack a problem.
- **Mistake Recovery:** STRONG! You can pick yourself up and keep going.
- **Game Day Mindset:** READY! You know how to stay calm under pressure.

**Pre-game tip:** the night before test day, get a great sleep. Eat a good breakfast. Bring a sharp pencil and a positive attitude. And remember—you have already trained for this. Trust your training.

If you want to share a proud moment or ask a question, please email me at [jay@testinar.com](mailto:jay@testinar.com). I'd love to hear from you!

**Jay Daie**

Your Math Coaches (Game On!)

# PRACTICE MORE. ACHIEVE MORE.

Give your child the edge they need to excel in **Grade 5 Math!** This book includes **9 full-length** practice tests designed to build confidence, sharpen skills, and improve test performance.

# 9

**FULL-LENGTH  
PRACTICE  
TESTS**

- ✓ Realistic.
- ✓ Rigorous.
- ✓ Results-Driven.

More practice today for a **stronger** tomorrow.



## THIS BOOK HELPS YOUR CHILD:



### Build Confidence

Familiar, focused practice reduces anxiety and boosts self-belief.



### Strengthen Skills

Reinforces key math concepts through high-quality, standards-aligned questions.



### Improve Test Readiness

Full-length tests help students understand test format, pacing, and question types.



### Track Progress

Identify strengths and target areas with purposeful practice.



### Achieve Success

Better preparation leads to higher scores and bright futures.

## COVERS ALL ESSENTIAL TOPICS

- ✓ Whole Numbers & Operations
- ✓ Fractions & Decimals
- ✓ Algebraic Thinking
- ✓ Geometry
- ✓ Measurement & Data
- ✓ Graphing & Data Analysis
- ✓ Number Patterns
- ✓ Word Problems
- ✓ Ratio & Proportion
- ✓ Perimeter, Area & Volume
- ✓ And More!



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