

$\frac{2}{3}$

# FULL-LENGTH

$\frac{2}{4}$

0,25

# Maryland

$7 \times 8 =$



Aligned to State Standards

## MCAP

$7 \times 8$

# MATH

$56 \div 7$

Grade

# 5

$(a+b)^2$

# PRACTICE TESTS

Complete State Standards Review  
with Answer Key and  
Essential Math Skills Practice



**3 Full-Length Practice Tests**  
Aligned to State Standards



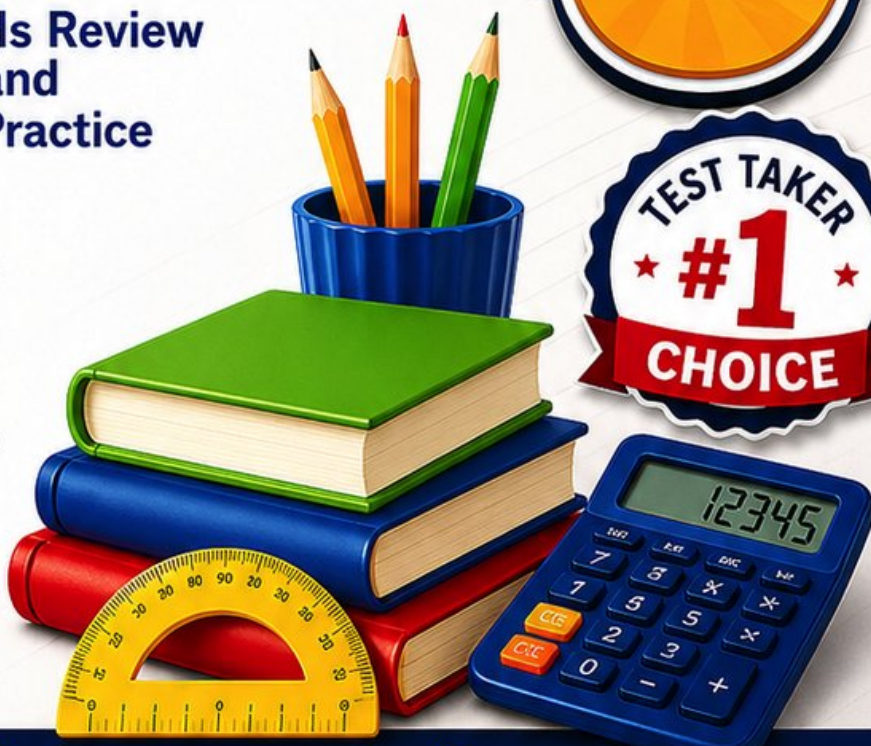
**Covers All Grade 5 Math Topics**  
Numbers & Operations, Fractions,  
Decimals, Geometry, Measurement,  
Data & Problem Solving



**Build Confidence**  
Strengthen Skills • Improve Accuracy  
• Boost Test Readiness



**Detailed Answer Key**  
Step-by-Step Explanations  
for All Questions



WRITTEN FOR  
GRADE 5 STUDENTS



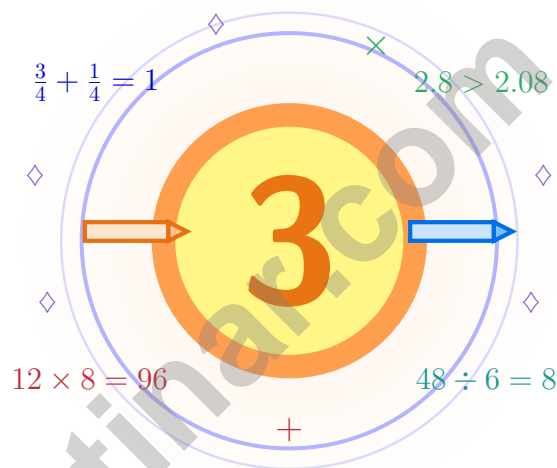
PERFECT FOR  
TEST PREP & REVIEW



CLASSROOM, HOME,  
OR SELF-STUDY USE

# 3 Maryland MCAP Grade 5 Math Practice Tests

*Bay-bright math for thinkers who steer with care*



Three full tests, a friendly quick review, smart strategy pages, and student-tested support that help Grade 5 mathematicians from The Old Line State walk in ready to think.

**Jay Daie and Reza Nazari**



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# Maryland, This Book Is for You

Bay-bright math for thinkers who steer with care

## Welcome Letter for Maryland Math Students

Math is like the Chesapeake – wide, full of life, and best understood with a careful map and steady hands on the wheel.

Some questions will feel easy from the very first read. Others will ask you to pause, sketch, estimate, or try again. That is not a problem. That is practice doing exactly what it should do. Every honest attempt grows your math brain a little stronger.

### Notice

Notice the numbers, units, and any tricky words.

### Sketch

Sketch a picture, table, or quick number line.

### Confirm

Confirm your answer with an estimate or check.

**A Maryland promise to yourself:** I will read the problem like a tide chart and steer my work like a careful Bay captain.

# A Map of the Pages

A simple game plan that turns practice into real progress

## Step 1: Plan

**Plan a quiet hour for one full test.**  
Wake up the big Grade 5 ideas before the test starts so your brain is already warmed up.

## Step 2: Practice

**Take the test with steady focus.**  
Find a calm corner, settle in, and aim for careful, honest choices before quick ones.

## Step 3: Inspect

**Inspect every answer like a careful builder.**  
Circle missed questions, sort out what went sideways, and notice which skills are calling for more attention.

## Step 4: Adjust

**Adjust what needs adjusting and ride into the next test.**  
Read the explanation, fix the work, and carry that lesson forward into the next test.

## 21 Days to Test Day

<b>Week 1</b>	Begin with Test 1 – a low-pressure read of your math.
<b>Week 2</b>	Run Test 2 with one new habit, like always checking labels.
<b>Week 3</b>	Finish Test 3 with calm, careful, confident effort.



Scan me

# Three-Test Walkthrough

## What these practice tests help Grade 5 students build

These three practice tests prepare Grade 5 students in the Old Line State for the Maryland MCAP with the steady focus of a Bay sailor. The goal is bigger than getting answers right. Students are practicing how to read with care, choose a strategy, solve step by step, and explain their reasoning clearly – the same way mathematicians do every single day.

### Selected-Response Questions

Students solve the problem and choose the best answer. Estimating first, ruling out weak choices, and checking for reasonableness can save both time and points.

### Constructed-Response Questions

Students show their steps, explain a method, or back up an answer with clear math. Clean reasoning matters because it shows how the answer was actually found.

### Grade 5 Ideas That Show Up Again and Again

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

**What strong work looks like on the MCAP:** the math is correct, the steps are readable, the labels and units match the problem, and the final answer truly answers the question being asked.



# 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)

#### Metric

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

1 gram (g) = 1,000 milligrams (mg)

### 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) Use the formula  $V = l \times w \times h$  to find the volume of a rectangular prism with length 5 ft, width 3 ft, and height 4 ft.

A.  $60 \text{ ft}^3$

C.  $35 \text{ ft}^3$

B.  $40 \text{ ft}^3$

D.  $12 \text{ ft}^3$

2) A bakery packages cookies in containers. There are 29 containers with 16 cookies each. How many cookies are packaged?

A. 460

C. 470

B. 480

D. 464

3) A student reads  $\frac{1}{2}$  chapter each night. How many nights will it take to read 8 chapters?

Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	8
----	----	----	----	----	----	----	----	---

$$8 \text{ chapters} \div \frac{1}{2} \text{ chapter per night}$$

A. 8

C. 14

B. 12

D. 16

4) Pattern A: 0, 4, 8, 12. Pattern B: 0, 1, 2, 3. For the nonzero matching terms, what fraction of A is B?

*Record your answer in the space provided.*



5) Find:  $3.6 \times 10^4$ .

*Record your answer in the space provided.*

6) A price is \$5.944. Round to nearest cent (hundredth).

A. \$5.90

C. \$5.95

B. \$5.94

D. \$6.00

7) Compare without calculating:  $9 \times (18 + 32)$    $(9 \times 18) + 32$

A. >

C. =

B. <

D. Cannot tell

8) A model is made from a 7 m by 3 m by 4 m prism and a 5 m by 3 m by 2 m prism. The prisms do not overlap. Find the model's volume.

*Record your answer in the space provided.*



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### CAPACITY

Customary	Metric
1 cup (c) = 8 fluid ounces (fl oz)	1 liter (L) = 1,000 milliliters (mL)
1 pint (pt) = 2 cups (c)	
1 quart (qt) = 2 pints (pt)	
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### WEIGHT AND MASS

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1 pound (lb) = 16 ounces (oz)	1 kilogram (kg) = 1,000 grams (g)
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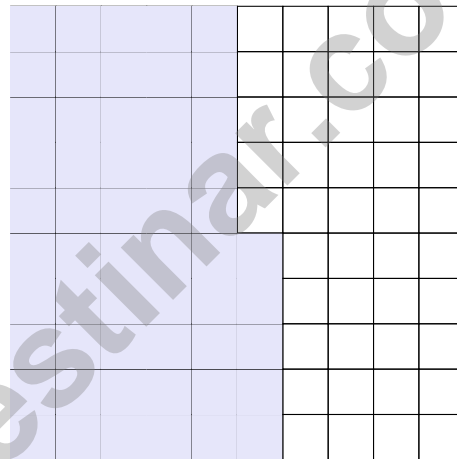
- 1) The model shows 2 wholes, with each whole cut into pieces of size  $\frac{1}{2}$ . How many pieces of size  $\frac{1}{2}$  are there in all?

1 whole 

1 whole 

2 wholes, each cut into pieces of size  $\frac{1}{2}$

- A. 4
- B. 2
- C. 6
- D. 1
- 2) Decimal-grid visual: 55 shaded squares (out of 100). Which decimal is shown?



- A. 0.55
- B. 0.65
- C. 5.5
- D. 55
- 3) Linda read 3 books with 50 pages each and 4 books with 25 pages each. Which expression gives the total pages?
- A.  $(3 + 4) \times (50 + 25)$
- B.  $3 \times 50 + 4 \times 25$
- C.  $3 \times 4 + 50 \times 25$
- D.  $50 + 25 + 3 + 4$



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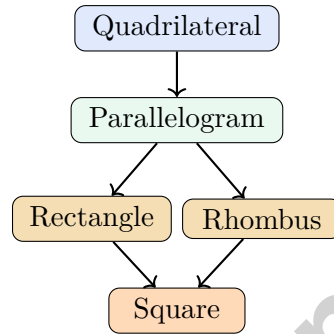
1) Evaluate:  $\{2 + [5 \times (4 - 1)]\}$

A. 11

C. 17

B. 15

D. 22



2)

Which statement is supported by the hierarchy?

A. Every rectangle is a rhombus.

C. Every rhombus is a square.

B. A square is both a rectangle and a rhombus.

D. Every quadrilateral is a parallelogram.

3) Subtract:  $10 - 3\frac{2}{7}$ .

A.  $6\frac{5}{7}$

C.  $7\frac{1}{7}$

B.  $6\frac{4}{7}$

D.  $7\frac{5}{7}$

4) A solid figure has volume 30 cubic units. If it is 5 cubes long and 3 cubes wide, how tall is it?

*Record your answer in the space provided.*



## 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.**

Testinar.com



## Practice Test Answers and Explanations

### Practice Test 1 Answers and Explanations

- Choice A is correct.** (5.NF.B.7) Using  $V = l \times w \times h$ :  $V = 5 \times 3 \times 4 = 60 \text{ ft}^3$ .
- Choice D is correct.** (5.NBT.B.5) Multiply:  $29 \times 16 = 29 \times (10 + 6) = (29 \times 10) + (29 \times 6) = 290 + 174 = 464$  cookies.
- Choice D is correct.** (5.NF.B.7)  $8 \div \frac{1}{2} = 8 \times 2 = 16$ . It will take 16 nights.
- The correct answer is  $\frac{1}{4}$ .** (5.OA.B.3)  $1 = \frac{1}{4} \times 4$ ,  $2 = \frac{1}{4} \times 8$ , etc.
- The correct answer is 36000.** (5.NBT.A.2) Move the decimal point four places right:  $3.6 \rightarrow 36,000$ .
- Choice B is correct.** (5.NBT.A.4) The hundredths digit is 4. The thousandths digit is 4. Since  $4 < 5$ , keep hundredths as 4. So \$5.944 rounds to \$5.94.
- Choice A is correct.** (5.OA.A.2) The left expression multiplies both 18 and 32 by 9. The right expression multiplies only 18 by 9, then adds one 32, so the left expression is greater.
- The correct answer is 114  $\text{m}^3$ .** (5.MD.C.3) The first prism is  $7 \times 3 \times 4 = 84$  cubic meters. The second is  $5 \times 3 \times 2 = 30$  cubic meters. Together they make 114 cubic meters.
- Choice B is correct.** (5.NF.A.2) LCD = 12.  $\frac{4}{6} = \frac{8}{12}$ ;  $\frac{1}{4} = \frac{3}{12}$ .  $\frac{8}{12} - \frac{3}{12} = \frac{5}{12}$ .
- Choice B is correct.** (5.NBT.A.2) The basic fact stays  $2 \times 3 = 6$ . Since 2,000 has three zeros, the product is 6,000.
- Choice C is correct.** (5.NF.A.2) Common denominator is 15:  $\frac{3}{5} = \frac{9}{15}$  and  $\frac{1}{3} = \frac{5}{15}$ . So  $\frac{9}{15} + \frac{5}{15} = \frac{14}{15}$  mile.
- 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.
- Choice C is correct.** (5.G.A.2) The next first coordinate is 4. Use the rule:  $4(4) - 2 = 16 - 2 = 14$ , so the next point is (4, 14).
- Choice B is correct.** (5.NF.B.7) The room is exactly filled, so compare volumes. Room volume:  $18 \times 12 \times 10 = 2160$  cubic feet. Number of boxes:  $2160 \div 360 = 6$  boxes.
- Choice B is correct.** (5.MD.C.3)  $2 \times 4 \times 3 = 24$  cubic units. Choice A:  $2 \times 3 \times 3 = 18$ . Choice C:  $2 \times 2 \times 5 = 20$ . Choice D:  $3 \times 3 \times 2 = 18$ .
- Choice B is correct.** (5.MD.C.5) The known length and height make groups of  $14 \times 5 = 70$  cubic inches. Since  $210 \div 70 = 3$ , the width is 3 in.
- Choice C is correct.** (5.NBT.A.2) Dividing by 100 moves the decimal two places left:  $0.9 \rightarrow 0.09 \rightarrow 0.009$ .
- Choice B is correct.** (5.G.A.2) The x-coordinate (8) is the age in weeks, and the y-coordinate (24) is the weight in pounds. So an 8-week-old puppy weighs 24 pounds.
- Choice C is correct.** (5.NF.B.5) Since  $\frac{7}{8} < 1$ , multiplying 20 by it gives a result smaller than 20. No computation needed!
- Choice A is correct.** (5.NF.B.6) "Half of  $\frac{3}{4}$ " means  $\frac{1}{2} \times \frac{3}{4} = \frac{3}{8}$ .
- Choice D is correct.** (5.NF.A.1) Convert  $1\frac{1}{2}$  to  $\frac{6}{4}$ . Add:  $\frac{6}{4} + \frac{3}{4} = \frac{9}{4} = 2\frac{1}{4}$  cups.
- Choices A, B are correct.** (5.G.A.2) For (4, 3), the first number tells you to move 4 right, and the second number tells you to move 3 up. Choices C and D switch those two moves.
- The correct answer is  $\frac{1}{12}$ .** (5.NF.B.7)  $\frac{1}{2} \times \frac{1}{6} = \frac{1}{12}$ .
- Choice B is correct.** (5.NBT.B.7) In the tenths place:  $5 > 3$ , so  $2.53 > 2.35$  regardless of hundredths.
- Choice C is correct.** (5.G.A.1) Point U is at (5, 5), with both coordinates positive.
- Choice D is correct.** (5.MD.B.2) Count all marks:  $1 + 3 + 2 + 3 = 9$  students.
- Choice A is correct.** (5.MD.C.4)  $5 \times 1 \times 2 = 10$  unit cubes fit inside the container.
- Choice A is correct.** (5.NBT.B.7) Add:  $1 + 1.8 = 2.8$ ; then  $2.8 + 1.25 = 4.05$  (hundredths:  $0 + 5 = 5$ ; tenths:  $8 + 2 = 10$ , regroup; ones:  $2 + 1 + 1 = 4$ ).
- Choice D is correct.** (5.G.B.3) Shape D has two pairs of parallel sides, so it is a parallelogram. It does not have four right angles, so it is not a rectangle.
- Choice B is correct.** (5.NBT.B.7)  $12.5 \div 5 = 2.5$ . Think of  $125 \div 5 = 25$ , then place decimal one place from right: 2.5.
- Choice C is correct.** (5.NF.B.7) Volume =  $15 \times 10 \times 8 = 150 \times 8 = 1200 \text{ ft}^3$ .



## Dear Hero of This Story,

◇ Once upon a time, there was a brave Grade 5 student who decided to take 3 practice tests. At first, the problems were tough. But the student kept showing up, kept trying, and kept learning. Slowly, the tough problems became easier. The student's confidence grew. By the time the 3<sup>th</sup> test was finished, that student had become the hero of their own math story. That student is you. ◇

★ **Storytellers know:** every great story has a hard middle. The hard middle is where the hero grows. You've lived your hard middle, and now your story is heading toward a strong ending: a confident test day. ★

### Your Hero's Toolkit

- **Brave Heart:** You face hard problems instead of running.
- **Sharp Mind:** You think carefully before you act.
- **Steady Hand:** You write neatly and check your work.
- **Kind Spirit:** You're patient with yourself when you make mistakes.

**Storyteller's tip:** when you sit down on test day, remember the hero you've become. The chapters before this moment have made you stronger. Now, write your best chapter yet.

If you'd like to share your experience or have questions, please email me at [reza@testinar.com](mailto:reza@testinar.com). I'd love to hear from you!

**Reza Nazari & Jay Daie**

Your Math Storyteller (The Best Pages Are Ahead)

# Build Skills. Boost Confidence. Excel on the Grade 5 Math Test.

Help your child succeed with confidence! This book includes **3 full-length Grade 5 Math practice tests** aligned to state standards. With a focus on essential skills, problem solving, and test readiness, it's the perfect resource for classroom, home, or on-the-go practice.



## WHAT'S INSIDE:



### 3 Full-Length Grade 5 Math Practice Tests

Realistic test format to build familiarity and confidence.



### Covers All Essential Math Topics

Fractions, decimals, geometry, measurement, data, number operations, and more.



### Build Strong Math Skills

Strengthen understanding and problem-solving through varied question types.



### Detailed Answer Key

Step-by-step explanations to help your child learn from mistakes and improve.



### Track Progress & Improve

Use score trackers to identify strengths and focus on areas that need more practice.



## The Smarter Way to Prepare!

Consistent practice builds stronger skills, sharper thinking, and test-day success.

- ✓ Reinforce classroom learning
- ✓ Improve accuracy and speed
- ✓ Reduce test anxiety
- ✓ Achieve your best score!



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and practice materials!