

# 8

FULL-LENGTH

# Maryland

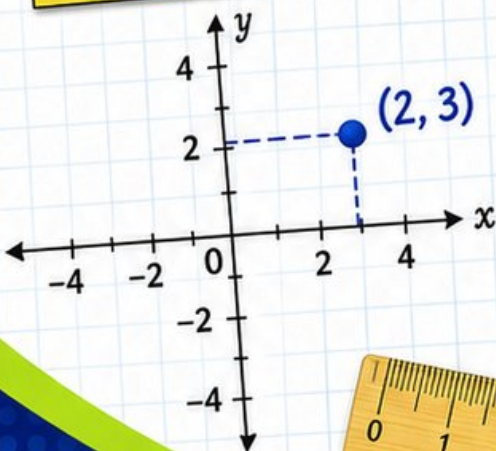
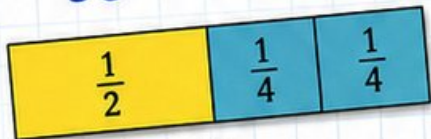
# MCAP

# GRADE 5

# MATH PRACTICE TESTS

Mixed Practice Questions with Answer Key  
for Students, Parents, and Teachers

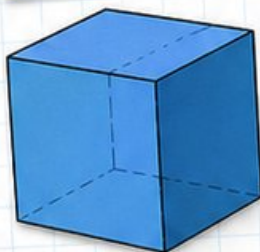
$$36 \div 4 = 9$$



$$2.4 \times 7 = 16.8$$

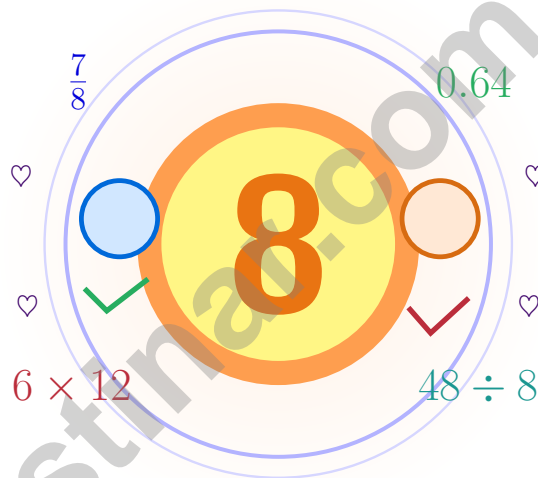
$$7 \times (12 - 5) = 49$$

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



# 8 Maryland MCAP Grade 5 Math Practice Tests

*Seven practice tests woven into one calm routine*



**Eight full tests, a focused quick review, and helpful support that turns Grade 5 practice in The Old Line State into steady, confident growth from page one to the final check.**

**Jay Daie and Reza Nazari**



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# Hello, Maryland – Eight Tests, Steady Growth

Seven chances to read carefully, solve smartly, and grow stronger

## To Maryland Students Who Love a Puzzle

This practice book is your steady companion for eight tests, not a place to be perfect. Math is like the Chesapeake – wide, full of life, and best understood with a careful map and steady hands on the wheel.

Use these eight 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.

### Look

Look at the problem like a detective looks at a clue.

### Test

Test your idea with one careful step at a time.

### Grow

Grow stronger by reviewing exactly what tripped you up.

**A strong habit for Maryland 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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# How This Book Wants to Help

A simple routine that turns practice into progress

## Step 1: Read

**Read the quick review pages first.**  
Spend a few minutes waking up your memory before the test begins.

## Step 2: Try

**Try one full test with full attention.**  
Work in a calm spot and focus on careful thinking before speed.

## Step 3: Reflect

**Reflect on which skills want more sunlight.**  
Circle missed questions and notice which topics keep showing up.

## Step 4: Lift

**Lift those skills before the next test.**  
Read the explanation, repair the work, and bring that lesson into the next test.



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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)

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1 pound (lb) = 16 ounces (oz)

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### TIME

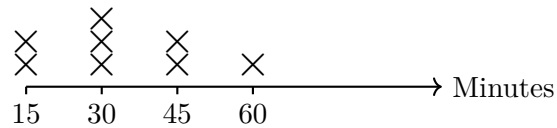
1 minute (min) = 60 seconds (sec)    1 week = 7 days

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

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



1) The line plot shows times (in minutes) students spent on homework:

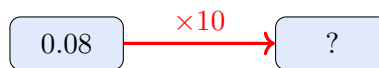


How many more students spent 30 minutes than 60 minutes on homework?

- A. 2 more students
  - B. 3 more students
  - C. 4 more students
  - D. 5 more students
- 2) Which product has exactly 4 zeros?
- A.  $20 \times 50$
  - B.  $50 \times 40$
  - C.  $20 \times 500$
  - D.  $20 \times 50,000$
- 3) Use the meaning of  $\frac{1}{3} \times \frac{1}{4}$  in an area model: shade  $\frac{1}{3}$  of one direction and  $\frac{1}{4}$  of the other in a rectangle. What fraction of the rectangle is double-shaded?

*Record your answer in the space provided.*

4) The arrow diagram shows a relationship between two numbers. What is the missing number?



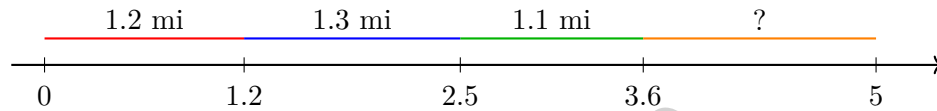
- A. 0.008
- B. 80
- C. 8
- D. 0.8



5) A classroom cubby has volume 128 cubic inches. Its base is 8 inches by 4 inches. What is its height?

- A. 3 inches
- B. 4 inches
- C. 5 inches
- D. 32 inches

6) A runner completes a 5-mile course in 4 segments: 1.2 miles, 1.3 miles, 1.1 miles, and the final segment. How long is the final segment?



- A. 1.2 miles
- B. 1.3 miles
- C. 1.4 miles
- D. 1.5 miles

7)

Starting Value	Scaling Factor	Product
12	$\frac{1}{3}$	4
12	1	12
12	$\frac{5}{4}$	15

Using the table, which statement is true?

- A. All three products are smaller than 12
- B. The factor 1 shrinks the quantity
- C. Factors less than 1 shrink; factors greater than 1 grow
- D. The factor  $\frac{5}{4}$  shrinks the quantity

8) Convert 5,000 milliliters to liters.

- A. 0.5 L
- B. 500 L
- C. 50 L
- D. 5 L



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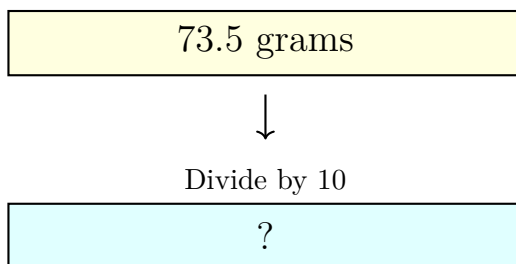
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1)

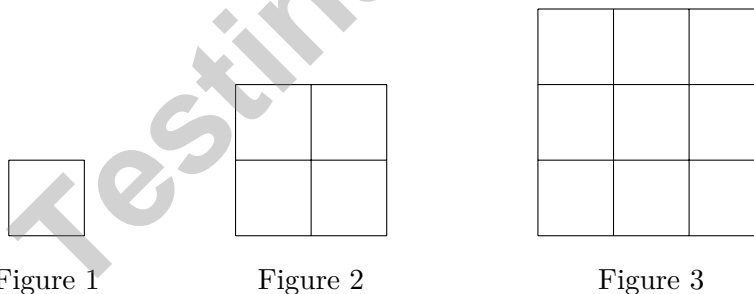
What is  $73.5 \div 10$ ?

- |   |  |
|---|--|
| <input type="checkbox"/> A. 0.735 grams | <input type="checkbox"/> C. 735 grams  |
| <input type="checkbox"/> B. 7.35 grams  | <input type="checkbox"/> D. 7350 grams |

2) A baker has  $\frac{1}{2}$  pound of butter. She uses an equal amount in each of 4 batches of cookies. How many pounds of butter does each batch use?

- |   |   |
|---|---|
| <input type="checkbox"/> A. $\frac{1}{2}$ pound | <input type="checkbox"/> C. $\frac{1}{6}$ pound |
| <input type="checkbox"/> B. $\frac{1}{4}$ pound | <input type="checkbox"/> D. $\frac{1}{8}$ pound |

3) A square grid has a growing pattern:



If the pattern continues, how many unit squares are in Figure 5?

- |                                |                                |
|--------------------------------|--------------------------------|
| <input type="checkbox"/> A. 20 | <input type="checkbox"/> C. 30 |
| <input type="checkbox"/> B. 25 | <input type="checkbox"/> D. 36 |



## Grade 5 Mathematics Reference Materials

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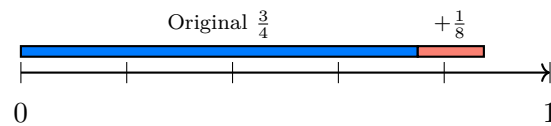
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1) A farmer plants seeds. Tomato seeds: 60, 120, 180, 240. Basil seeds: 20, 40, 60, 80. Tomato seeds are how many times the matching basil seeds?

- A. 1  C. 3  
 B. 2  D. 4

2) A recipe calls for  $\frac{3}{4}$  cup sugar and a variant needs  $\frac{1}{8}$  cup more. What is the new total?



A.  $\frac{7}{8}$  cup  C. 1 cup  
 B.  $\frac{1}{2}$  cup  D.  $\frac{4}{8}$  cup

3) In an error, a student plots points from Rules A and B but accidentally swaps the coordinates. Rule A: 2, 4, 6, 8. Rule B: 1, 2, 3, 4. The student writes (1, 2), (2, 4), (3, 6), (4, 8). What is the first correct pair?

- A. (2, 1)  C. (4, 8)  
 B. (1, 2)  D. (8, 4)

4) A recipe calls for 6 cups of flour. If you double the recipe, how much flour do you need?

- A. 3 cups  C. 9 cups  
 B. 6 cups  D. 12 cups

5) A rectangular prism has dimensions 6 m, 5 m, and 8 m. What is the volume?

- A.  $200 \text{ m}^3$   C.  $240 \text{ m}^3$   
 B.  $220 \text{ m}^3$   D.  $260 \text{ m}^3$



## 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

- Choice A is correct.** (5.MD.B.2) At 30 minutes: 3 marks. At 60 minutes: 1 mark. Difference:  $3 - 1 = 2$  more students.
- Choice C is correct.** (5.NBT.A.2)  $20 \times 500$  is  $2 \times 5$  with four zeros altogether. Since  $2 \times 5 = 10$ , the product is 10,000, which has 4 zeros.
- The correct answer is  $\frac{1}{12}$ .** (5.MD.C.5) Splitting into 3 rows and 4 columns gives 12 equal parts; the overlapping region is 1 of those parts:  $\frac{1}{12}$ .
- Choice D is correct.** (5.NBT.A.1)  $0.08 \times 10 = 0.8$ . Multiplying by 10 moves the decimal point one place to the right.
- Choice B is correct.** (5.MD.C.5) The base layer has  $8 \times 4 = 32$  square units. Divide the volume by the base area:  $128 \div 32 = 4$ , so the height is 4 inches.
- Choice C is correct.** (5.MD.C.5) Total is 5 miles. Sum of known segments:  $1.2 + 1.3 + 1.1 = 3.6$  miles. Final segment:  $5 - 3.6 = 1.4$  miles.
- Choice C is correct.** (5.NF.B.5) From the table:  $\frac{1}{3} < 1$  gives  $4 < 12$  (shrinks), 1 gives  $12 = 12$  (unchanged), and  $\frac{5}{4} > 1$  gives  $15 > 12$  (grows).
- Choice D is correct.** (5.MD.A.1) 1 liter = 1,000 milliliters. Divide:  $5000 \div 1000 = 5$  L.
- Choice C is correct.** (5.MD.A.1) Using this definition, a quadrilateral with exactly one pair of parallel sides is a trapezoid. Rectangles, rhombuses, and squares have two pairs of parallel sides.
- Choice B is correct.** (5.NBT.A.4) 8.29 has tenths=2 and hundredths=9. Since  $9 \geq 5$ , round tenths up:  $2 \rightarrow 3$ , giving 8.3. The other choices round to 8.2 or 8.4.
- Choice A is correct.** (5.OA.A.2) The grouped multiplication  $6 \times 8$  is the product. The 5+ means Kelly is adding 5 to that product.
- Choice D is correct.** (5.NF.B.7) Start with one unit fraction,  $\frac{1}{6}$ , and share it into 5 equal parts. Each part is  $\frac{1}{6} \div 5 = \frac{1}{30}$  of the whole.
- Choice D is correct.** (5.NF.B.4) Two jumps of  $\frac{2}{3}$  each:  $2 \times \frac{2}{3} = \frac{4}{3} = 1\frac{1}{3}$ .
- The correct answer is 0.04.** (5.NBT.A.2) Move the decimal point one place left:  $0.4 \rightarrow 0.04$ .
- Choice A is correct.** (5.NBT.A.2) Round:  $1,456 \approx 1,500$  and  $48 \approx 50$ . So  $1,500 \div 50 = 30$ . Actual:  $1,456 \div 48 = 30$  R16.
- Choice D is correct.** (5.NBT.B.7)  $8.4 \div 6 = 1.4$ , which is between 1 and 2.
- Choice A is correct.** (5.G.B.4) A geometric circle has a curved boundary, so it is not a polygon, a quadrilateral, or a rectangle.
- Choice C is correct.** (5.NF.A.2) The list for 10 reaches 90, and the list for 9 also reaches 90. No smaller number appears in both lists, so the LCD is 90.
- Choice D is correct.** (5.MD.A.1) Since 2 pints = 1 quart, multiply 3 by 2:  $3 \times 2 = 6$  pints.
- Choice B is correct.** (5.MD.A.1) The known length and height make groups of  $18 \times 8 = 144$  cubic inches. Since  $432 \div 144 = 3$ , the width is 3 inches.
- Choice C is correct.** (5.NF.B.7) The one-eighth strip is the amount being shared. So the matching equation is  $\frac{1}{8} \div 2 = n$ .
- Choices A, B are correct.** (5.NBT.A.2) Multiplying by 10 moves 4.56 one place right to 45.6, and dividing by 10 moves it one place left to 0.456. C keeps the same value, and D moves too far left.
- Choice C is correct.** (5.MD.A.1) First add the miles:  $156 + 144 = 300$  miles. Then convert miles to feet:  $300 \times 5,280 = 1,584,000$  feet.
- Choice B is correct.** (5.G.A.2) The output starts at 1 for input 1, then doubles each time. That gives outputs 1, 2, 4, 8, paired with inputs 1 through 4.
- Choice D is correct.** (5.NF.B.6) Check the factor by multiplying:  $\frac{3}{5} \times \frac{1}{2} = \frac{3}{10}$ . One half of  $\frac{3}{5}$  is exactly  $\frac{3}{10}$ , so the missing factor is  $\frac{1}{2}$ .
- Choice B is correct.** (5.G.A.2) Hour 3: Machine A produces  $3 \times 3 = 9$ , Machine B produces  $5 \times 3 = 15$ . Pair is (9, 15).



### Workshop Notes for an Inventor

#### Dear Math Inventor,

◇ 8 practice tests. 8 chances to invent new ways of thinking. You tried strategies, broke them, fixed them, and built them stronger. That's what inventors do. That's what you do. ◇

★ **What inventors know:** the first idea isn't always the best one. Sometimes you have to try, fail, learn, and try again. You've practiced that exact loop on every test. That practice is why your problem-solving brain is so flexible now. ★

#### Inventor's Workshop Inventory

- **Sketch Pad:** FULL of ideas! You can imagine multiple ways to solve.
- **Toolbox:** STOCKED! You have many strategies to draw on.
- **Workbench:** ORGANIZED! Your work is clear and step-by-step.
- **Invention Mindset:** STRONG! You're not afraid to try something new.

**Inventor's tip:** on test day, if your first idea doesn't work, switch tools. Try a different strategy. Inventors don't get stuck on one tool—they pick the right one for the job. Same on a math test.

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 Inventor (Build Big Things)

$45 \div 5 = ?$

# PRACTICE TODAY.

$\frac{3}{5} + \frac{1}{10} = ?$



## ACHIEVE TOMORROW!



$3^2 + 4^2 = 25$

This book includes **8** full-length **Grade 5** math practice tests to help students master essential skills, build confidence, and achieve success. Each test is carefully designed to reflect real math standards and cover a variety of question types with detailed answer explanations.

$7x - 4 = 17$

$1\frac{1}{2} + 2\frac{1}{3} = ?$

## 8 FULL-LENGTH MATH PRACTICE TESTS



### REALISTIC PRACTICE

Tests mirror Grade 5 math standards and real assessment formats.



### ANSWER KEY INCLUDED

Detailed answer explanations help students understand and learn.



### BUILD CONFIDENCE & SKILLS

Strengthens problem-solving abilities and reinforces key math concepts.



### IMPROVE & TRACK PROGRESS

Identify strengths and focus on areas that need improvement.



### ACHIEVE SUCCESS

Boosts test readiness and helps students achieve their best results.

### COVERS ALL KEY GRADE 5 MATH TOPICS

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

...and More!



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