

5

Maryland MCAP

GRADE 6 MATH PRACTICE TESTS

Standards Aligned Problem Solving
For Comprehensive Assessment Programs



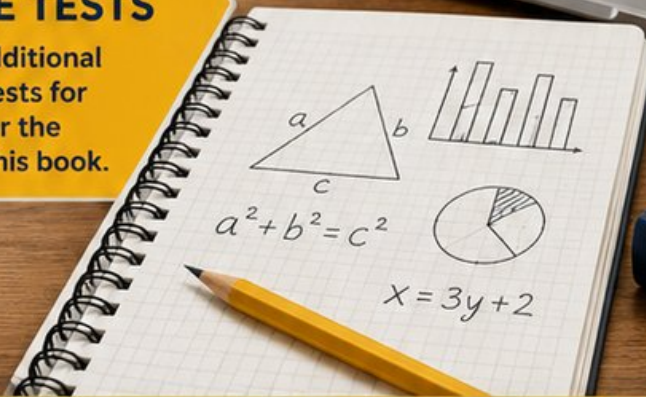
5 PRINTED TESTS

- ✓ Full-Length Practice Tests
- ✓ Realistic Questions
- ✓ Answer Key & Explanations



+ 2 ONLINE TESTS

Use these two additional online practice tests for extra review after the printed tests in this book.

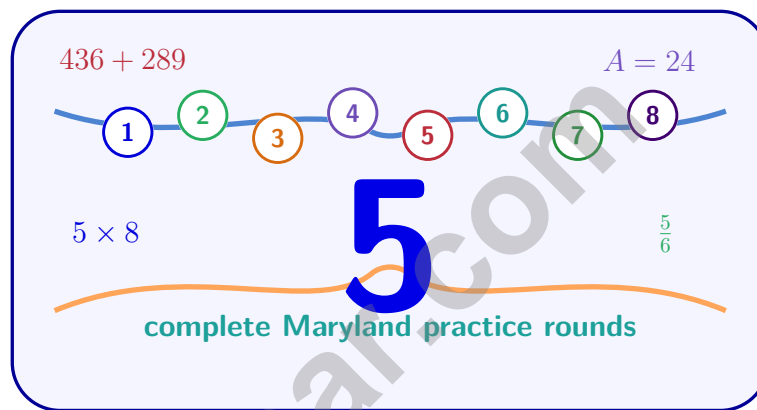


PREPARE • PRACTICE • SUCCEED



5 Maryland MCAP Grade 6 Math Practice Tests

*Standards-Aligned Chesapeake Review Precision for Maryland Comprehensive Assessment
Program*



Five complete 40-question Grade 6 practice rounds for MCAP, built for Chesapeake review precision with ratios, rational numbers, expressions, equations, geometry, statistics, answer keys, and clear explanations for every item.

Jay Daie and Reza Nazari



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Welcome, Maryland Math Explorer!

Eight focused rounds using Chesapeake review precision

This book gives you five full Grade 6 practice tests for MCAP. Each round uses bay bridges, classroom charts, and careful explanation habits as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

Your Maryland Practice Promise

Connect the facts before solving: identify the relationship, choose the tool, and explain the answer.

Read

Plan

Check

How to Use This Book

A five-session routine for Chesapeake review precision

1. **Work in order.** Take one 40-question test at a time in a quiet place.
2. **Preview the skills.** Scan the quick review pages before beginning the first round.
3. **Correct actively.** Retry missed items before reading the full explanation.
4. **Mark confidence.** Put a small star beside problems where your plan felt strong.
5. **Plan the next round.** Use the growth log to choose one habit and one skill to practice.

Maryland review rhythm: Take one round, use the answer explanations as a bridge, and return with a cleaner plan.



What Is Inside?

Eight MCAP tests, 320 questions, and a full review path

Part	What You Will Practice
Tests 1–2	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Tests 3–4	Skill-building rounds with expressions, equations, geometry, data, and problem models.
Test 5	Final stamina round for mixed review, neat work, and flexible strategy choices.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Chesapeake review precision means recognizing the skill even when the next question changes topic, changes format, or asks for an explanation.



Scan me!
For more practice
& answers

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1) What is $(-2) \times (-3) \times (-5)$?

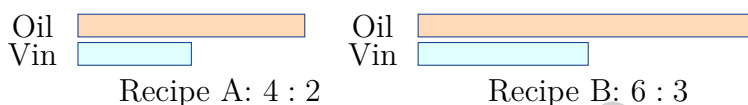
A. -30

C. 10

B. 30

D. -10

2) Two recipes use olive oil and vinegar. The diagram shows the two recipes side by side.



Which statement is true?

A. Recipe A has an oil-to-vinegar ratio of 4 : 3.

C. Recipe B has an oil-to-vinegar ratio of 3 : 6.

B. The recipes cannot be compared using ratios.

D. Both recipes have the same oil-to-vinegar ratio.

3) A factory makes 360 toys in 6 hours. What is the rate in toys per hour?

A. 60 toys per hour

C. 80 toys per hour

B. 54 toys per hour

D. 360 toys per hour

4) A graph shows the relationship between gallons of paint and square feet painted. The line passes through (2, 500) and (4, 1000).

Do these points lie on the same proportional relationship? Why or why not?

A. No, the ratios are different: $\frac{500}{2} \neq \frac{1000}{4}$

C. No, because 1000 is not double 500

B. Yes, the ratios are equal: $\frac{500}{2} = \frac{1000}{4} = 250$

D. Yes, because the x-values are both even



5) A point is on the y -axis between Quadrants I and II. Which of the following could be its coordinates?

A. $(0, -3)$

C. $(4, 0)$

B. $(0, 4)$

D. $(-4, 0)$

6) Which of the following ratios is in simplest form?

A. $8 : 12$

C. $10 : 15$

B. $6 : 9$

D. $5 : 7$

7) A student is finding the unit price of shirts. 4 shirts cost \$48. The student divides $4 \div 48$ and gets 0.083. What is the student's error?

A. Forgot to find the unit rate at all

C. Did not round the answer correctly

B. Divided the quantity by the cost

D. Used the wrong operation entirely

instead of cost by quantity

8) A toy store stocks action figures and dolls in a ratio of $5 : 6$. If the store has 30 action figures, how many dolls does it have?

Action Figures	Dolls
5	6
10	12
30	?

A. 35

C. 40

B. 36

D. 45



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9) Express 25% as a fraction in simplest form.

- A. $\frac{1}{4}$
 B. $\frac{25}{100}$

- C. $\frac{1}{25}$
 D. $\frac{25}{75}$



10) Total: 500 vehicles

A parking lot has 500 vehicles. The shaded portion represents trucks. How many trucks are in the lot?

- A. 150
 B. 175
 C. 250
 D. 325

11) A recipe for 4 servings uses 2 cups of rice. How much rice is needed for 10 servings?

- A. 4 cups
 B. 4.5 cups
 C. 5 cups
 D. 6 cups

12) A factory fills bottles with 500 mL of juice each. How many liters is needed to fill 6 bottles?

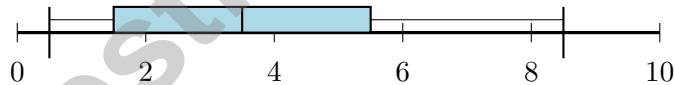
- A. 0.3 liters
 B. 3 liters
 C. 30 liters
 D. 300 liters



- 1) A frequency table is created from a dot plot. The table shows: Value 2: Frequency 4; Value 3: Frequency 6; Value 4: Frequency 5; Value 5: Frequency 3. How many data points are in this data set?

Value	Frequency
2	4
3	6
4	5
5	3

- A. 15 data points C. 17 data points
 B. 16 data points D. 18 data points
- 2) A climate scientist collects temperature data from 100 cities. What is the population?
- A. The 100 cities sampled C. The temperature readings
 B. All cities on Earth D. The countries represented
- 3) Use the box plot to find Q_1 :



- A. 0.5 C. 3.5
 B. 8.5 D. 1.5
- 4) What is $-9 + 4$? using a number line



- 5) A dataset has a mean of 50 and a median of 48. Which statement is most likely true?
- A. The data is symmetric with no outliers.
- B. There are some large values pulling the mean higher than the median.
- C. There are some small values pulling the mean lower than the median.
- D. The range must be less than 10.
- 6) A bag contains 18 marbles. If the probability of drawing a green marble is $\frac{2}{9}$, how many green marbles are in the bag?
- A. 2
- B. 4
- C. 6
- D. 9
- 7) Which graph is MOST misleading if the vertical axis does not start at zero?
- A. Bar graph
- B. Line graph
- C. Circle graph
- D. Dot plot
- 8) What is the volume of a rectangular prism with length 6 in, width 4 in, and height 2 in?
- A. 12 in^3
- B. 24 in^3
- C. 36 in^3
- D. 48 in^3
- 9) A rectangle has vertices at (1, 1), (7, 1), (7, 4), and (1, 4). What is its perimeter?
- A. 9 units
- B. 15 units
- C. 18 units
- D. 24 units



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- 1) Points $A(-2, 1)$ and $B(4, 1)$ lie on a coordinate plane. What is the distance between them?
- A. 4 units C. 6 units
 B. 5 units D. 7 units
- 2) Sarah's daily allowance for 4 days was \$8, \$10, \$6, \$12. What is her mean daily allowance?
- A. \$9 C. \$10
 B. \$9.50 D. \$8
- 3) The MAD of a data set represents what?
- A. The difference between the highest and lowest values. C. The spread of the middle 50% of the data.
 B. The average distance of the data points from the mean. D. The value that appears most often.
- 4) The five-number summary for test scores is: $\min = 42$, $Q_1 = 68$, $\text{median} = 76$, $Q_3 = 84$, $\max = 95$. How many points separate Q_1 from Q_3 ?
- A. 8 C. 26
 B. 16 D. 53



5) A scientist records water temperature ($^{\circ}\text{C}$) in two lakes over 10 days:

Lake	Mean	Median
Lake A	20	20
Lake B	20	18

What can be inferred about the two lakes?

- A. Lake A has some very warm days pulling the mean up
- B. Lake B is more stable
- C. Lake B has some unusually warm days
- D. Both lakes have identical temperature patterns
- 6) A spinner has 6 equal sections numbered 1, 2, 3, 4, 5, 6. What is the probability of spinning an odd number?
- A. $\frac{1}{6}$
- B. $\frac{1}{3}$
- C. $\frac{1}{2}$
- D. $\frac{2}{3}$
- 7) A class conducted a survey on favorite ice cream flavors: vanilla (18 students), chocolate (22 students), strawberry (12 students), mint (8 students). Which data display would BEST show the relative popularity of each flavor as a proportion of the total?
- A. Double-bar graph
- B. Circle graph
- C. Histogram
- D. Line plot
- 8) A package of 15 pens costs \$4.50. What is the unit price per pen?
- A. \$0.20 per pen
- B. \$0.25 per pen
- C. \$0.30 per pen
- D. \$0.40 per pen



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& answers

Maryland MCAP Practice Test Answer Keys

How to use this Maryland MCAP answer section with a Grade 6 student:

1. check the answer first, then write one quick reason the choice is correct
2. mark questions to try again, especially the skills that feel connected to Chesapeake review precision
3. rework the problem before reading the full explanation, using this reminder:
Connect the facts before solving: identify the relationship, choose the tool, and explain the answer.

A calm Maryland correction routine turns every missed item into useful practice. Take one round, use the answer explanations as a bridge, and return with a cleaner plan.



Maryland Practice Test Answers and Explanations

Review the five printed MCAP tests with connected, precise, and ready for the next review habits.

Practice Test 1 Answers and Explanations

- Choice A is correct.** **(6.NS.B.3)** First: $(-2) \times (-3) = 6$ (positive). Then: $6 \times (-5) = -30$ (positive times negative is negative).
- Choice D is correct.** **(6.RP.A.3)** Recipe A has 4 : 2, which simplifies to 2 : 1. Recipe B has 6 : 3, which also simplifies to 2 : 1, so the recipes have the same oil-to-vinegar ratio.
- Choice A is correct.** **(6.RP.A.1)** Divide toys by hours: $360 \div 6 = 60$ toys per hour.
- Choice B is correct.** **(6.RP.A.3)** Both points yield the same unit rate of 250 square feet per gallon: $\frac{500}{2} = 250$ and $\frac{1000}{4} = 250$. Proportional points maintain a constant ratio.
- Choice B is correct.** **(6.NS.C.8)** A point on the y -axis between Quadrants I (upper right) and II (upper left) must have $x = 0$ and positive y . The point $(0, 4)$ satisfies these conditions.
- Choice D is correct.** **(6.RP.A.1)** A ratio is in simplest form when the two numbers have no common factor greater than 1. The numbers 5 and 7 share no common factor except 1, so 5 : 7 is already simplified.
- Choice B is correct.** **(6.RP.A.2)** The correct calculation is $\$48 \div 4 = \12 per shirt. The student reversed the division, computing $4 \div 48$ instead of $48 \div 4$. Unit price requires cost per unit, not units per cost.
- Choice B is correct.** **(6.RP.A.3)** The ratio is 5 : 6. When action figures are 30 (multiply by 6), dolls are $6 \times 6 = 36$.
- Choice A is correct.** **(6.RP.A.3)** $25\% = \frac{25}{100}$. Simplify by dividing numerator and denominator by 25: $\frac{25 \div 25}{100 \div 25} = \frac{1}{4}$.
- Choice B is correct.** **(6.RP.A.3)** 35% of 500 = $0.35 \times 500 = 175$ trucks.
- Choice C is correct.** **(6.RP.A.3)** Unit rate: $2 \div 4 = 0.5$ cups per serving. For 10 servings: $0.5 \times 10 = 5$ cups.
- Choice B is correct.** **(6.RP.A.3)** Total mL: $6 \times 500 = 3000$ mL. Convert: $3000 \div 1000 = 3$ liters.
- Choice B is correct.** **(6.SP.B.4)** Net income: $\$3000 - \$400 - \$150 - \$100 = \$2350$.
- Choice A is correct.** **(6.EE.C.9)** The ratio of distance to time is $100/2 = 50$ and $200/4 = 50$ mph, confirming constant speed. The proportional equation is $d = 50t$, not $d = 100t$.
- Choice D is correct.** **(6.EE.C.9)** Comparing the percentages: 45%, 30%, 20%, and 5%, the smallest is 5% for Other.
- Choice B is correct.** **(6.RP.A.3)** Divide: $9 \text{ m} \div 3 \text{ m/cm} = 3 \text{ cm}$.
- Choice A is correct.** **(6.NS.A.1)** $\frac{3}{8} \div \frac{1}{4} = \frac{3}{8} \times 4 = \frac{12}{8} = \frac{3}{2}$. So $\frac{3}{8}$ is $1\frac{1}{2}$ jump lengths of size $\frac{1}{4}$.
- Choice A is correct.** **(6.NS.B.3)** Divide: $2.4 \div 4 = 0.6$ meters. Each piece is 0.6 meters long.
- Choice D is correct.** **(6.NS.B.4)** This is an LCM problem. Multiples of 8: 8, 16, 24, ... Multiples of 12: 12, 24, ... Both buses are at the station together at 24 minutes.
- Choice D is correct.** **(6.NS.B.4)** The student only multiplied $5 \times 3 = 15$ instead of distributing to both terms. The correct solution is $5(3 + 8) = 5 \cdot 3 + 5 \cdot 8 = 15 + 40 = 55$. The area model shows both parts, confirming both must be distributed to.
- The correct answer is A statistical question anticipates variability and is answered by collecting data..** **(6.SP.A.2)** Options B and C are correct: statistical questions expect varied answers and require data collection. Option A is wrong (statistical questions do NOT have single answers). Option D is irrelevant (statistical questions can be about unfamiliar topics). Option E partially overlaps with B and C but is less precise.
- Choice A is correct.** **(6.NS.C.5)** The increase is $8 - (-5) = 8 + 5 = 13^\circ\text{F}$.
- Choice A is correct.** **(6.SP.B.4)** The opposite of 2050 is -2050 , representing 2050 feet below the reference point.
- Choice C is correct.** **(6.SP.B.4)** Distance from -4 to 2 is $2 - (-4) = 6$. Distance from 0 to 6 is also 6.
- The correct answer is 19.** **(6.RP.A.1)** Range = max - min = $22 - 3 = 19$.
- Choice A is correct.** **(6.NS.C.7)** Negatives come before positives. Among negatives: $-0.9 < -0.25$. Among positives: $0.1 < 0.4$.



Author's Note

From a Friend Who Believes in You

Hi, Friend!

◇ I just want to say something important: I am proud of you. You did 5 full practice tests. That takes time, hard work, and heart. ◇

★ **Friendly truth:** a test is just one part of your math journey. You are SO much more than a score. The work you did is the real win! ★

What I Want You to Know

- **You are smart.** Every test you finished proves it.
- **You are brave.** You tried hard problems.
- **You are growing.** Mistakes taught you new things.
- **You are ready.** The skills are inside you.

One more thing: on test day, take a deep breath. Smile. Remember that someone (me!) believes in you. You can do this!

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

Jay Daie

Your Math Friend

PRACTICE MORE. ACHIEVE MORE.

This book provides **5 full-length Math practice tests** designed to help Grade 6 students strengthen their skills, build confidence, and excel on standardized assessments.

Each test is carefully crafted to reflect the latest standards and covers a wide range of math topics with realistic questions and detailed answer explanations.



BUILD CONFIDENCE

Practice builds familiarity and reduces test anxiety.



IMPROVE ACCURACY

Sharpen skills and avoid common mistakes.



ACHIEVE SUCCESS

Consistent practice leads to greater results.

WHAT'S INSIDE?



5 Full-Length Practice Tests

Realistic tests designed to mirror actual exam conditions.



Realistic Questions

A variety of question types to strengthen problem-solving skills.



Answer Keys & Explanations

Detailed solutions to help students learn and improve.



Performance Tracking

Track progress and identify areas that need improvement.



Comprehensive Coverage

All essential topics aligned with Grade 6 math standards.



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