Colorado CMAS

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

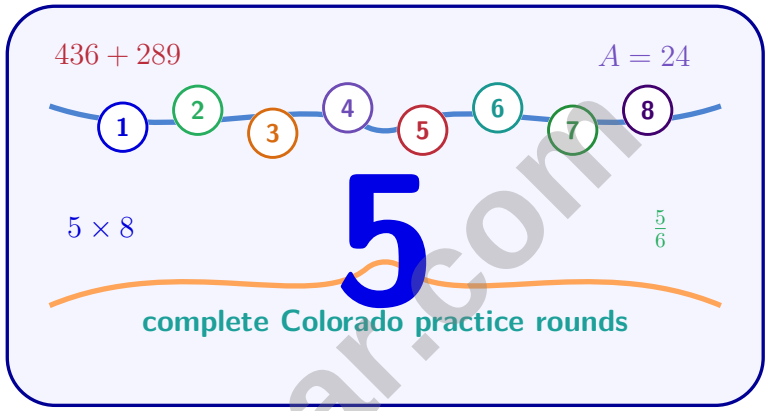
+ 2 ONLINE TESTS

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

PREPARE • PRACTICE • SUCCEED

5 Colorado CMAS Grade 6 Math Practice Tests

Standards-Aligned Mountain-Ready Math Thinking for Colorado Measures of Academic Success



Five complete 40-question Grade 6 practice rounds for CMAS, built for mountain-ready math thinking 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, Colorado Math Explorer!

Eight focused rounds using mountain-ready math thinking

This book gives you five full Grade 6 practice tests for CMAS. Each round uses ridge lines, trail signs, and high-country persistence as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

Your Colorado Practice Promise

Climb one step at a time: identify the skill, write the setup, and check the final result.

How to Use This Book

A five-session routine for mountain-ready math thinking

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

Colorado review rhythm: Use each round like a trail segment: finish it, study the hard turns, then climb again.

What Is Inside?

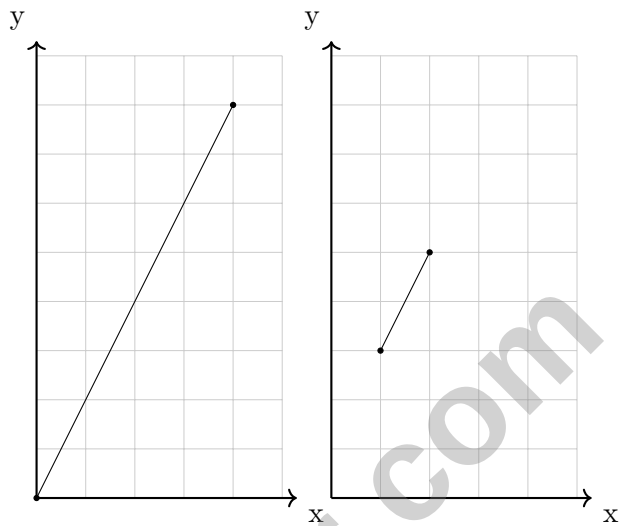
Eight CMAS tests, 320 questions, and a full review path

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. Mountain-ready math thinking means recognizing the skill even when the next question changes topic, changes format, or asks for an explanation.

Table of Contents

1) Two graphs show relationships between input and output. Graph 1 passes through $(0, 0)$ and $(4, 8)$. Graph 2 passes through $(1, 3)$ and $(2, 5)$. Which statement is true?



Graph 1 Graph 2

☐ A. Both graphs show proportional relationships

☐ B. Neither graph shows a proportional relationship

☐ C. Only Graph 2 shows a proportional relationship

☐ D. Only Graph 1 shows a proportional relationship

2) A landscape architect draws a garden plan with a scale of 1 cm = 2 feet. If a garden bed is drawn as 5 cm wide, what is the actual width?

☐ A. 5 feet

☐ B. 7 feet

☐ C. 10 feet

☐ D. 15 feet

3) A researcher created a scatter plot comparing study hours (x-axis) and test scores (y-axis) for 8 students. The dots show a loose upward trend but with some scatter. What conclusion is MOST accurate?

☐ A. Study hours perfectly predict test scores
☐ B. There is a weak positive correlation between study and scores
☐ C. Students who study less always score higher
☐ D. There is no relationship between study and test scores

4)

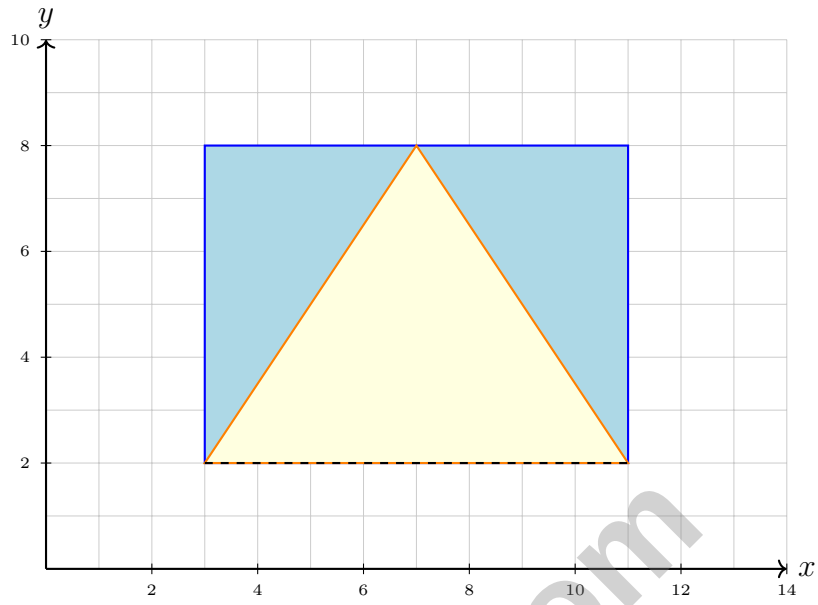
The ratio bar shows red and blue sections. What is the ratio of red to blue?

☐ A. 5 : 2
☐ B. 3 : 2
☐ C. 2 : 5
☐ D. 2 : 3

5) A printer prints 30 pages in 5 minutes. At this rate, how many pages will it print in 12 minutes?

☐ A. 36
☐ B. 60
☐ C. 90
☐ D. 72

6)



A composite figure consists of a rectangle and a triangle. The rectangle has vertices at $(3, 2)$, $(11, 2)$, $(11, 8)$, and $(3, 8)$. The triangle sits on top with vertices at $(3, 8)$, $(11, 8)$, and $(7, 12)$ (height extends to 12). What is the total area? (Note: Triangle height is 4 units above the rectangle.)

☐ A. 48 square units
☐ B. 52 square units
☐ C. 64 square units
☐ D. 60 square units

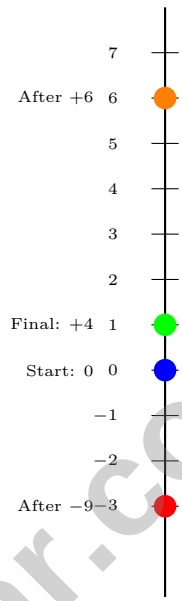
7)

Gallons	2	4	6
Miles	48	96	144

Based on the table, what is the rate in miles per gallon?

☐ A. 20 miles per gallon
☐ B. 96 miles per gallon
☐ C. 48 miles per gallon
☐ D. 24 miles per gallon

1) An elevator in a building starts at ground level (floor 0), goes up 6 floors, then down 9 floors, then up 4 floors. What floor is it on?

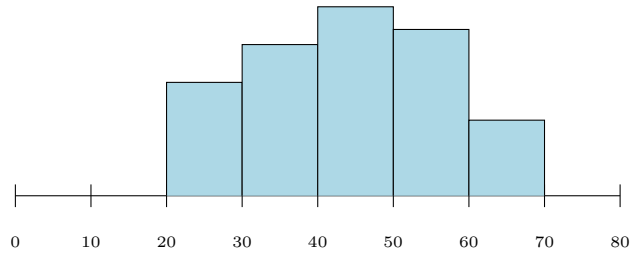


☐ A. Floor −1
☐ B. Floor 6
☐ C. Floor 19
☐ D. Floor 1

2) A student asks: "How many hours per week do students in my grade spend exercising?" Why is this a statistical question?

☐ A. Because exercise is healthy.
☐ B. Because it involves numbers and hours.
☐ C. Because different students exercise different amounts, requiring data from many people.
☐ D. Because the question is asked in science class.

3) A histogram shows students' reading times (minutes). The distribution is left-skewed with mean = 42 and median = 48. What does this tell us about the data?



Reading Time (min)

☐ A. A few students read for very long periods
☐ B. The range is very small
☐ C. Most students read at the same speed
☐ D. A few students read for very short periods

4) A standard die is rolled. What is the probability of rolling a 1 or a 2?

☐ A. $\frac{1}{6}$
☐ B. $\frac{1}{3}$
☐ C. $\frac{1}{2}$
☐ D. $\frac{2}{3}$

5) Raw data: $71, 78, 75, 82, 79, 81, 76, 83$. If organized in a stem-and-leaf plot, what is the value of the 4th data point when listed in order?

☐ A. 76
☐ B. 78
☐ C. 79
☐ D. 81

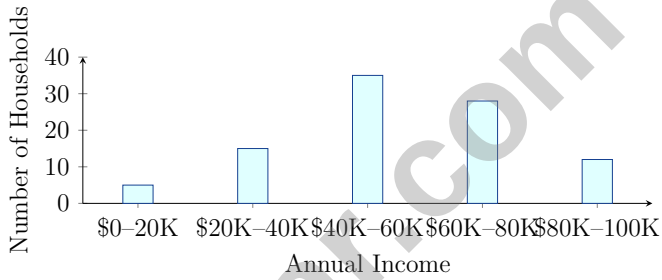
6) A library surveyed 1000 patrons about book genre. The circle graph shows 18% prefer mystery. How many patrons prefer mystery?

☐ A. 160
☐ B. 140
☐ C. 180
☐ D. 200

1) Which is the MOST statistical question?

☐ A. How many wheels does a bicycle have?
☐ B. What is the temperature in my room right now?
☐ C. How many hours of sleep do sixth graders get each night?
☐ D. What color is my coat?

2) A histogram shows household income ranges. Which range would be best represented by this histogram?



☐ A. It is best used to show total income of one household
☐ B. It effectively displays the distribution of income across many households
☐ C. It is best used to show income trends over time
☐ D. It is best used to compare two households

3) In a box plot, what does the left edge of the box represent?

☐ A. The minimum
☐ B. Q_1
☐ C. The median
☐ D. The mean

4) A dataset has 11 values arranged in order. The median is 55. If you remove the largest and smallest values, what will be the new median of the remaining 9 values?

☐ A. The median stays at 55.
☐ B. The median decreases to 50.
☐ C. The median increases to 60.
☐ D. Cannot be determined without knowing all values.

5) 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

6) A stem-and-leaf plot shows daily temperatures (in °F) recorded during winter:

Stem	Leaf
3	2, 5, 9
4	1, 4, 6, 8
5	0, 3, 7

How many temperatures are recorded?

☐ A. 7
☐ B. 8
☐ C. 10
☐ D. 11

Colorado CMAS Practice Test Answer Keys

How to use this Colorado CMAS 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 mountain-ready math thinking
3. rework the problem before reading the full explanation, using this reminder: Climb one step at a time: identify the skill, write the setup, and check the final result.

A calm Colorado correction routine turns every missed item into useful practice. Use each round like a trail segment: finish it, study the hard turns, then climb again.

Colorado Practice Test Answers and Explanations

Review the five printed CMAS tests with organized, persistent, and ready for higher ground habits.

Practice Test 1 Answers and Explanations

1) **Choice D is correct.** 6.EE.C.9 Graph 1 passes through the origin and has constant ratio $8/4 = 2$, so it is proportional. Graph 2 is not proportional because the ratios are different: $3/1 = 3$ but $5/2 = 2.5$.
2) **Choice C is correct.** 6.RP.A.3 Multiply: $5 \times 2 = 10$ feet.
3) **Choice B is correct.** 6.RP.A.3 An upward trend with scatter indicates a positive correlation (as one variable increases, the other tends to increase), but the scatter shows the relationship is not perfect—it's weak to moderate, not deterministic.
4) **Choice D is correct.** 6.RP.A.1 Look at the lengths in the bar: red takes 2 equal units and blue takes 3 equal units. Red to blue is $2 : 3$.
5) **Choice D is correct.** 6.RP.A.3 The unit rate is $30 \div 5 = 6$ pages per minute. In 12 minutes the printer prints $6 \times 12 = 72$ pages.
6) **Choice C is correct.** 6.G.A.1 Rectangle: base $11 - 3 = 8$, height $8 - 2 = 6$, area $= 48$ sq. units. Triangle: base $11 - 3 = 8$, height 4 units, area $= \frac{1}{2} \times 8 \times 4 = 16$ sq. units. Total $= 48 + 16 = 64$ sq. units.
7) **Choice D is correct.** 6.RP.A.1 Divide miles by gallons: $48 \div 2 = 24$ miles per gallon.
8) **Choice B is correct.** 6.NS.A.1 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.
9) **Choice D is correct.** 6.RP.A.3 The ratio is $24 : 4$ or $6 : 1$. For 8 hours: $6 \times 8 = 48$ widgets.
10) **The correct answer is 88.** 6.SP.B.5 With 10 scores, the median is the average of the 5th and 6th values: $(88 + 88) \div 2 = 88$.
11) **Choice A is correct.** 6.RP.A.3 The unit rate is found when $x = 1$. From the table, the hourly wage is $36 \div 3 = 12$ dollars per hour. The point $(1, 12)$ displays this unit rate, as it shows 1 hour earning \$12.
12) **Choice C is correct.** 6.RP.A.3 $\frac{1}{5} = \frac{20}{100} = 20\%$, since $1 \times 20 = 20$ and $5 \times 20 = 100$.
13) **Choice D is correct.** 6.RP.A.3 15% of $\$80 = 0.15 \times 80 = \$12$.
14) **Choice D is correct.** 6.RP.A.3 Multiply: $3 \times 1000 = 3000$ meters.
15) **Choice C is correct.** 6.SP.B.4 Total ratio parts: $3 + 2 + 1 = 6$. Savings share: $\frac{3}{6} \times \$200 = \frac{1}{2} \times \$200 = \$100$.
16) **Choice C is correct.** 6.EE.C.9 Rent is 30% of income: $0.30 \times 2000 = \$600$.
17) **The correct answer is 0.25.** 6.NS.B.3 One correct choice out of 4 possible choices. Probability $= \frac{1}{4} = 0.25$.
18) **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.
19) **Choice B is correct.** 6.NS.A.1 The first fraction stays the same; flip (invert) the second fraction and change divide to multiply.
20) **Choice A is correct.** 6.NS.B.2 $2{,}805 \div 15 = 187$. Check: $15 \times 187 = 2{,}805$.
21) **Choice A is correct.** 6.NS.B.3 Align the decimal points. In the tenths place, 6 is smaller than 8, so regroup one whole as ten tenths: the 5 becomes 4 and the tenths become 16. Then $16 - 8 = 8$ tenths, $4 - 3 = 1$ one, and $2 - 1 = 1$ ten, so the result is 11.8.
22) **Choice D is correct.** 6.NS.B.4 The factors of 24 are $1, 2, 3, 4, 6, 8, 12, 24$. Since 5 is not a factor of 24, we cannot divide equally into groups of 5.
23) **Choice A is correct.** 6.NS.B.4 $6(7 + 4) = 6 \cdot 7 + 6 \cdot 4 = 42 + 24$. The area model shows the two parts: height 6 with widths 7 and 4. Only Choice A shows the correct expansion.
24) **Choice B is correct.** 6.SP.B.4 Distance is a positive quantity. A number x units left of zero (at position $-x$) has distance $|-x| = x$ from zero.

Author's Note

Champion's Note

Hi, Math Champion!

◇ Look what you did! 5 full practice tests. That's hundreds of math problems. You started as a learner. You are now a math athlete. ◇

⋆ **Champions know:** hard work pays off. You did the hard work. Your math skills are strong because you practiced. ⋆

Champion's Stats

- **Focus:** HIGH! You stay on task.
- **Speed:** STRONG! You move at the right pace.
- **Accuracy:** SHARP! You catch your own mistakes.
- **Mindset:** CHAMPION! You believe in yourself.

Champion tip: on test day, walk in proud. You trained for this. You are ready!

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

Jay Daie

Your Math Coach

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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PRACTICE REGULARLY | STAY FOCUSED | SOLVE CONFIDENTLY | SUCCEED BRIGHTLY

PREPARE TODAY. SUCCEED TOMORROW!