

# 6

# Colorado CMAS

# GRADE 5 MATH

## PRACTICE TESTS

Complete Standards-Based Practice  
— for Grade 5 Math Success —



**6 FULL-LENGTH  
PRACTICE TESTS**

Realistic style questions



**STANDARDS-BASED  
PRACTICE**

Covers all Grade 5  
Math standards



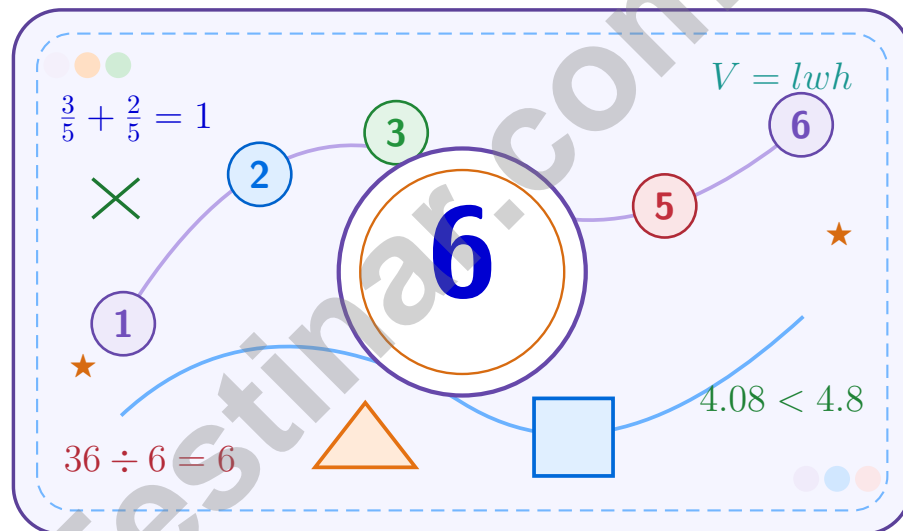
**BUILD CONFIDENCE.  
IMPROVE SCORES.**

Target weak areas and  
achieve success

★ STRONG PRACTICE. BRIGHT FUTURE. ★

# 6 Colorado CMAS Grade 5 Math Practice Tests

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



Six full tests, a focused skill booster, 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 six 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 six tests into steady growth

## 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.

## A Six-Week Climb Map

Week	Mission Focus
<b>Week 1</b>	Take Test 1 and review any place-value or operation slips.
<b>Week 2</b>	Take Test 2 and focus on showing neat, easy-to-read work.
<b>Week 3</b>	Take Test 3 and give extra time to fractions or decimals if needed.
<b>Week 4</b>	Take Test 4 and slow down on word problems and units.
<b>Week 5</b>	Take Test 5 and compare your score and habits with earlier rounds.
<b>Week 6</b>	Take Test 6 and finish with calm, careful, confident work that uses everything you practiced before.



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# 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 Colorado CMAS. 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

1

Questions: 40 Duration: No time limit

Calculator Policy: Calculators are not allowed



## 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) Kelly wrote  $5 + (6 \times 8)$ . Which sentence best describes her expression?
- A. Add 5 to the product of 6 and 8
  - B. Multiply 5 and 6, then add 8
  - C. Subtract 5 from  $6 \times 8$
  - D. Divide  $6 \times 8$  by 5

- 2) Find the difference:  $4\frac{1}{2} - 1\frac{1}{4}$ .

*Record your answer in the space provided.*

- 3) The expanded form of a number is  $8 + 0.5 + 0.03 + 0.001$ . What is the number in standard form?
- A. 8531
  - B. 8.531
  - C. 85.31
  - D. 0.531
- 4) The place-value chart shows the result of multiplying 0.29 by a power of 10. The result is 290. What power of 10 was used?

Hundreds	Tens	Ones	Tenths	Value
2	9	0	0	290

- A.  $10^1$
- B.  $10^2$
- C.  $10^3$
- D.  $10^4$



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1) A library ordered 5,600 books. They will distribute them equally to 100 classrooms. How many books does each classroom get?

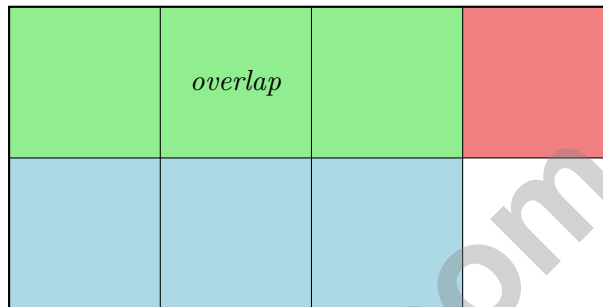
A. 5.6

C. 560

B. 56

D. 56,000

2) The area model below shows  $\frac{1}{2} \times \frac{3}{4}$ . What fraction is shaded (overlap region)?



A.  $\frac{3}{8}$

B.  $\frac{3}{6}$

C.  $\frac{2}{8}$

D.  $\frac{1}{2}$



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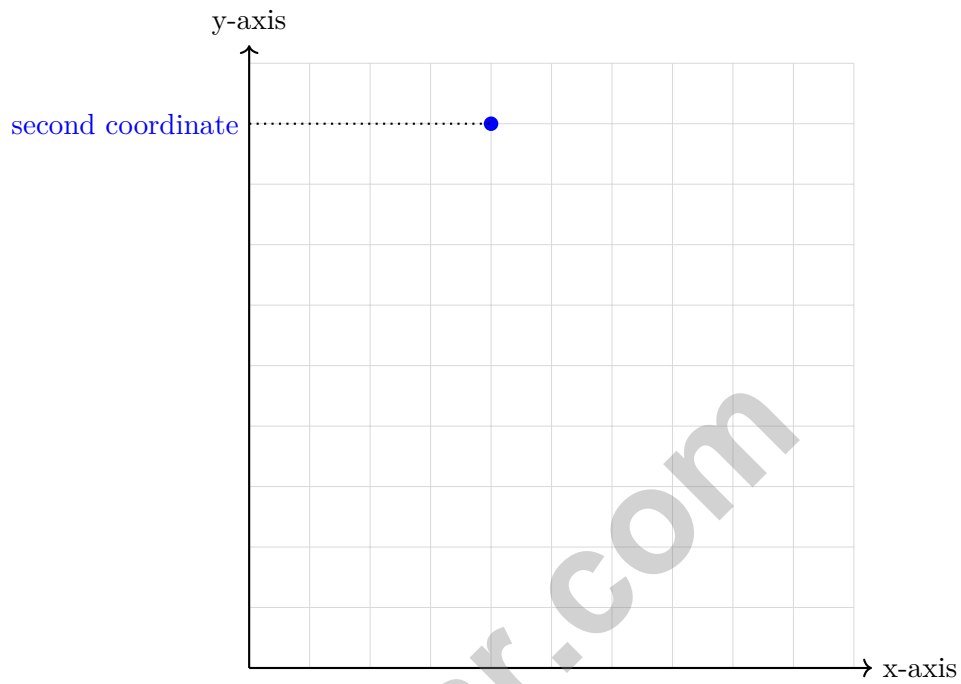
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1) What is the y-coordinate of the point at (4, 9)?



A. 4

B. 9

C. 13

D. 5

2) What is  $6 \times \frac{1}{8}$ ?

A.  $\frac{3}{4}$

B.  $\frac{5}{8}$

C.  $\frac{1}{48}$

D.  $\frac{1}{2}$



## Grade 5 Mathematics Reference Materials

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- 1) A rectangular prism is 10 cm long, 6 cm wide, and 4 cm high. What is its volume?
- A. 120 cubic centimeters       C. 60 cubic centimeters  
 B. 240 cubic centimeters       D. 20 cubic centimeters
- 2) A roll has 6 meters of paper. Each craft uses one fourth meter. Which division equation matches the situation?
- A.  $\frac{1}{4} \div 6 = n$        C.  $6 \div \frac{1}{4} = n$   
 B.  $6 \times \frac{1}{4} = n$        D.  $6 + \frac{1}{4} = n$
- 3) Sarah has  $\frac{3}{4}$  of a pound of chocolate. She uses  $\frac{1}{3}$  of it to make brownies. How much chocolate does she use?
- A.  $\frac{3}{12}$  pounds or  $\frac{1}{4}$  pounds       C.  $\frac{2}{3}$  pounds  
 B.  $\frac{3}{16}$  pounds       D. 1 pound
- 4) Write an expression for: add 25 to the product of 4 and 3, then divide the result by 2.

*Record your expression 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.**

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## Practice Test Answers and Explanations

### Practice Test 1 Answers and Explanations

- 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.
- The correct answer is  $3\frac{1}{4}$ .** **(5.NF.A.1)** Rewrite  $4\frac{1}{2} = 4\frac{2}{4}$ . Subtract:  $(4 - 1) + (\frac{2}{4} - \frac{1}{4}) = 3\frac{1}{4}$ .
- Choice B is correct.** **(5.NBT.A.1)** Adding the expanded parts:  $8 + 0.5 + 0.03 + 0.001 = 8.531$ .
- Choice C is correct.** **(5.NBT.A.2)**  $0.29 \times 1000 = 290$ . Moving the decimal 3 places right requires multiplying by  $10^3$ .
- Choice C is correct.** **(5.G.B.3)** An equilateral triangle has all angles equal to 60 degrees (acute). It cannot be obtuse. All other pairs are possible.
- Choice A is correct.** **(5.NF.B.6)** Each whole contains 4 pieces of size  $\frac{1}{4}$ . With 3 wholes, there are  $3 \times 4 = 12$  pieces.
- Choice B is correct.** **(5.NF.A.2)**  $\frac{1 \times 5}{6 \times 5} = \frac{5}{30}$ .
- Choice C is correct.** **(5.MD.C.4)** Prism X:  $4 \times 5 \times 6 = 120 \text{ cm}^3$ . Prism Y:  $3 \times 5 \times 8 = 120 \text{ cm}^3$ . Both are equal.
- Choice A is correct.** **(5.NBT.A.4)** The hundredths place is 5. The thousandths place is 1. Since  $1 < 5$ , keep the hundredths digit the same. So 9.951 rounds to 9.95.
- The correct answer is  $1\frac{1}{4}$ .** **(5.NF.A.2)**  $\frac{3}{4} + \frac{1}{2} = \frac{3}{4} + \frac{2}{4} = \frac{5}{4} = 1\frac{1}{4}$ .
- Choice B is correct.** **(5.NF.B.4)** Convert:  $2\frac{1}{2} = \frac{5}{2}$  and  $1\frac{1}{3} = \frac{4}{3}$ . Multiply:  $\frac{5}{2} \times \frac{4}{3} = \frac{20}{6} = 3\frac{2}{6} = 3\frac{1}{3}$ .
- Choice D is correct.** **(5.MD.C.5)** Find both volumes: Box A is  $8 \times 5 \times 4 = 160$ , and Box B is  $7 \times 5 \times 4 = 140$ . The difference is 20 cubic feet.
- Choice B is correct.** **(5.NF.A.2)** The bar for  $\frac{1}{2}$  divides into 2 parts; the bar for  $\frac{1}{4}$  divides into 4 parts. Common denominator is 4.
- The correct answer is  $37\frac{1}{2}$ .** **(5.NF.B.5)** One eighth of 100 is  $12\frac{1}{2}$ . Three eighths is  $3 \times 12\frac{1}{2} = 37\frac{1}{2}$ .
- Choice C is correct.** **(5.NBT.B.6)**  $624 \div 24 = 26$ . Area model:  $624 = 24 \times 26$ . Check:  $24 \times 26 = 624$ .
- Choice D is correct.** **(5.NF.A.2)**  $\frac{9}{12} - \frac{3}{12} = \frac{6}{12}$ , which simplifies to  $\frac{1}{2}$ .
- Choice A is correct.** **(5.NF.B.6)** This asks for  $\frac{1}{2}$  of  $\frac{3}{4}$  pound, so multiply:  $\frac{1}{2} \times \frac{3}{4} = \frac{3}{8}$  pound.
- Choices A, D are correct.** **(5.OA.B.3)** Pattern Q adds twice as much as Pattern P, so matching terms in Q are double the terms in P, and Q grows faster. B is false after one step, and C is false at the 3rd term.
- Choice B is correct.** **(5.MD.B.2)** Count the X marks above  $1\frac{1}{2}$  inches. There are 4 X marks, so 4 plants were exactly  $1\frac{1}{2}$  inches tall.
- Choice B is correct.** **(5.NBT.A.2)** When dividing by 10, each digit moves to a place with one-tenth the value, so 640 becomes 64.
- Choice D is correct.** **(5.MD.C.5)** The product  $\frac{1}{4} \times \frac{1}{3}$  correctly gives  $\frac{1}{12}$  (4 columns times 3 rows = 12 squares). Choice D is incorrect because the denominator IS 12.
- Choice D is correct.** **(5.OA.A.2)** The divisor is the whole sum  $2 + 3$ , so it needs parentheses. That gives  $10 \div (2 + 3)$ .
- Choice C is correct.** **(5.NBT.A.2)**  $3 \times 10^3 = 3 \times 1000 = 3000$ , so  $n = 3$ .
- Choice B is correct.** **(5.MD.B.2)** Add the weights shown by the line plot:  $\frac{1}{2} + 2\left(\frac{3}{4}\right) + 3(1) + 4\left(1\frac{1}{4}\right) = \frac{1}{2} + 1\frac{1}{2} + 3 + 5 = 10$  pounds.
- Choice C is correct.** **(5.G.B.4)** 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.NF.B.7)** Dividing by a whole number means multiplying by its reciprocal:  $\frac{1}{6} \div 4 = \frac{1}{6} \times \frac{1}{4} = \frac{1}{24}$ .
- Choice A is correct.** **(5.NBT.B.5)** Multiply:  $34 \times 25 = 34 \times (20 + 5) = (34 \times 20) + (34 \times 5) = 680 + 170 = 850$  tickets.
- Choice A is correct.** **(5.G.B.4)** The matching tick marks show Figure A has four equal sides. It has no right-angle marks, so it is a rhombus but not a square.
- Choice A is correct.** **(5.NF.B.6)** Each full cup makes 5 one-fifth-cup sauce cups.  $9 \div \frac{1}{5} = 9 \times 5 = 45$  small cups.
- Choice A is correct.** **(5.G.B.3)** Perpendicular lines meet at a right angle ( $90^\circ$ ). The bottom and left sides of a rectangle meet at a right angle.



### Composer's Final Notation

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## Greetings, Mathematical Composer!

★ Beautiful composition! You've written six complete mathematical symphonies, carefully arranging mathematical notes, creating harmonious solutions, and expressing elegant problem-solving like a master composer! Each problem was a musical piece requiring rhythm, structure, and creative expression. Your mathematical compositions have reached professional quality! ★

◇ **Here's what renowned composers understand:** creating beautiful music requires understanding musical theory, practicing techniques, and developing personal style. They compose numerous pieces, refining their craft with each creation. You've done exactly that through these six tests! Each test was a new composition, and you've developed your unique mathematical voice! ◇

#### Musical Review of Compositions

- **Melody Creation:** Your solution paths flow smoothly and logically!
- **Harmonic Balance:** You combine different methods beautifully!
- **Rhythm Precision:** You maintain steady pacing throughout tests!
- **Performance Ready:** Your compositions are ready for the grand concert!

**Remember this musical truth:** great composers trust their instincts when performing. After six complete compositions, your mathematical instincts are finely tuned. On test day, let your knowledge flow naturally like music. Don't overthink; trust the beautiful mathematical melodies you've composed through practice!

Want to share a particularly elegant mathematical composition or discuss solution harmonies? Send your musical works to [reza@testinar.com](mailto:reza@testinar.com). I appreciate mathematical artistry!

**Reza Nazari & Jay Daie**

Your Math Coaches for Accurate Work

# 6 FULL-LENGTH TESTS. ENDLESS POTENTIAL.

PRACTICE TODAY. SUCCEED TOMORROW.

Give your child the tools they need to build strong math skills and test-taking confidence! This book includes **6 full-length practice tests** along with standards-based practice, mixed review, word problems, and a complete answer key.

★★★  
PRACTICE  
WITH PURPOSE.  
ACHIEVE WITH  
CONFIDENCE.

## WHAT'S INSIDE:



### 6 FULL-LENGTH PRACTICE TESTS

Realistic tests designed to reflect the actual test format and help build confidence.



### STANDARDS-BASED PRACTICE

Covers all essential Grade 5 math standards with clear explanations and examples.



### MIXED REVIEW

Reinforces key concepts with a variety of question types and review exercises.



### WORD PROBLEMS

Build critical thinking and problem-solving skills with real-world scenarios.



### COMPLETE ANSWER KEY

Step-by-step explanations for every question to support learning and growth.



### IMPROVE. PRACTICE. ACHIEVE.

Consistent practice leads to stronger skills, higher scores, and greater success.



## WHY PRACTICE MAKES A DIFFERENCE



### BUILD CONFIDENCE

Feel prepared and ready for any challenge.



### IMPROVE ACCURACY

Strengthen skills and reduce careless mistakes.



### THINK STRATEGICALLY

Develop problem-solving skills and deepen understanding.



### MANAGE TIME

Practice under timed conditions to build stamina.



### STAY MOTIVATED

Track progress and celebrate every win.



### ACHIEVE SUCCESS

Reach goals and unlock your full potential!



Visit [testinar.com/math5](https://testinar.com/math5)

for more Grade 5 math resources and practice materials!



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Smart Practice. Stronger Results.