

9

Colorado

CMAS

GRADE 5 MATHEMATICS PRACTICE TESTS

Full-Length Standards-Aligned Practice
for Strong Math Performance

$$A = l \times w$$

$$x^2 + 3x - 4 = 0$$

$$y = 2x + 1$$



9
FULL-LENGTH
PRACTICE
TESTS

$$2,345 \times 6 = 14,070$$



$$\frac{3}{4} + \frac{1}{8} = \frac{7}{8}$$

$$7.2 \div 0.8 = 9$$



$$(12 + 8) \div 4 = 5$$



Build Confidence



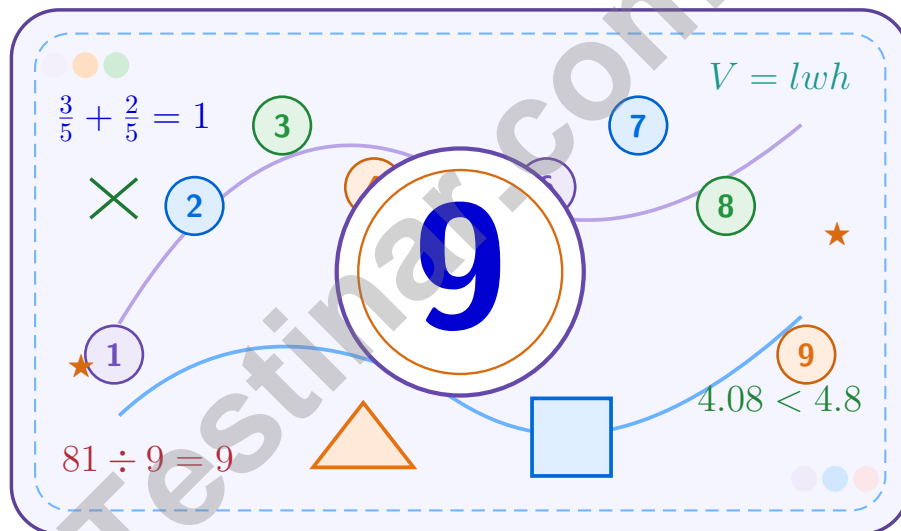
Improve Math Skills



Achieve Success

9 Colorado CMAS Grade 5 Math Practice Tests

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



Nine full tests, focused skill boosters, 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 nine 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 nine tests into steady growth

A Nine-Session Climb Map

Session	Mission Focus
1	Take Test 1; review place value and operation slips.
2	Take Test 2; keep work neat and easy to read.
3	Take Test 3; give extra time to fractions and decimals.
4	Take Test 4; slow down on word problems and units.
5	Take Test 5; compare scores and habits with earlier rounds.
6	Take Test 6; notice which habits are now automatic.
7	Take Test 7; explain open-ended answers clearly.
8	Take Test 8; review topics that still need attention.
9	Take Test 9; finish with calm, careful, confident work.

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.



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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.



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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

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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) A storage box has dimensions length 8 cm, width 6 cm, height 5 cm. What is the volume?

A. 19 cm^3

B. 48 cm^3

C. 38 cm^3

D. 240 cm^3

2) Evaluate: $[(8 + 2) \times (6 - 3)] - 10$

A. 20

B. 30

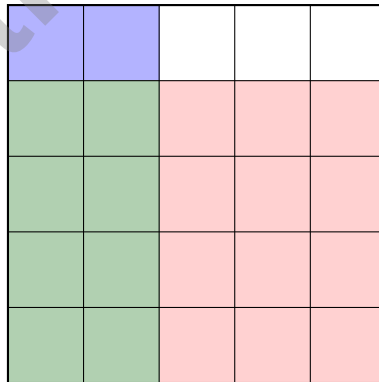
C. 35

D. 40

3) In the number 6.184, what digit is in the thousandths place?

Record your answer in the space provided.

4) A student is building a small rectangular garden. The length is $\frac{2}{5}$ of a meter and the width is $\frac{4}{5}$ of a meter. What is the area in square meters?



A. $\frac{8}{25}$ square meters

B. $\frac{2}{5}$ square meters

C. $\frac{6}{10}$ square meters

D. $\frac{2}{9}$ square meters



5) Subtract: $\frac{2}{5} - \frac{1}{10}$

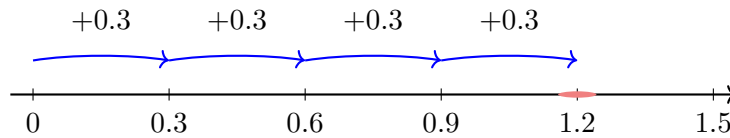
A. $\frac{3}{10}$

B. $\frac{1}{5}$

C. $\frac{2}{5}$

D. $\frac{2}{15}$

6) What is $1.2 \div 0.3$?




A. 3

B. 6

C. 5

D. 4

7) The model shows 1 whole cut into pieces of size $\frac{1}{4}$. How many pieces of size $\frac{1}{4}$ are there in all?1 whole 1 whole cut into pieces of size $\frac{1}{4}$

A. 4

B. 5

C. 1

D. 8



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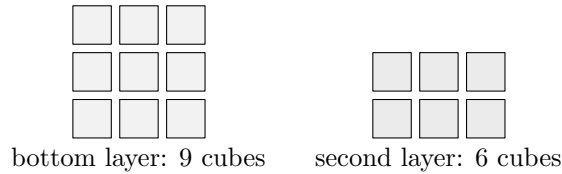
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- 1) A box is partially filled. The bottom layer has 9 unit cubes (3 by 3). The second layer has 6 unit cubes. What is the total?



- A. 15 unit cubes C. 18 unit cubes
 B. 9 unit cubes D. 27 unit cubes
- 2) Two patterns of ordered pairs are given. Pattern X: (1, 3), (2, 6), (3, 9). Pattern Y: (1, 6), (2, 12), (3, 18). Identify the relationship.
- A. $Y = X + 1$ C. $Y = X + 3$
 B. $Y = X + 2$ D. $Y = 2 \times X$
- 3) Pattern A starts at 1. Pattern B starts at 3.

Step	0	1	2	3	4
Pattern A	1	10	100	1,000	10,000
Pattern B	3	30	300	3,000	30,000

- Which statement explains the relationship between the two patterns?
- A. Each Pattern B value is 3 times the matching Pattern A value.
 B. Each Pattern B value is 10 times the matching Pattern A value.
 C. Each Pattern B value is 3 more than the matching Pattern A value.
 D. Each Pattern B value is 10 more than the matching Pattern A value.



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1) Write the expanded form of 7.29 using fractions: $7 + \frac{\quad}{10} + \frac{\quad}{100}$.

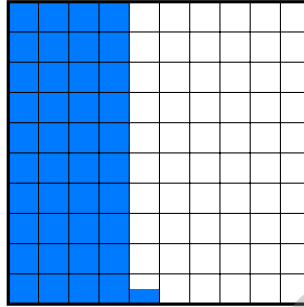
A. $72 + \frac{9}{100}$

B. $7 + \frac{2}{100} + \frac{9}{1000}$

C. $7 + \frac{9}{10} + \frac{2}{100}$

D. $7 + \frac{2}{10} + \frac{9}{100}$

2) Use the thousandths place-value grid to compare 0.405 and 0.504:



0.405 (405 thousandths shaded)

Which is greater?

A. 0.405

B. Cannot compare

C. Equal

D. 0.504

3) Write an expression for: multiply 3 by the sum of 9 and 12.

Record your expression in the space provided.



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1) A recipe uses 400 grams of rice twice in one week. How many kilograms of rice are used in all?

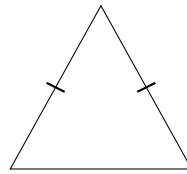
A. 0.4 kg

C. 4 kg

B. 0.8 kg

D. 8 kg

2) Look at the triangle. Two sides are marked with tick marks. What kind of triangle is it based on its sides?



A. Scalene

C. Equilateral

B. Isosceles

D. Right

3) A company's profit is 28×10^4 dollars. How much is that?

A. \$28000

C. \$2800000

B. \$280000

D. \$28

4) A water pitcher holds 2.75 liters. You add 1.38 liters more. How much water is in the pitcher now?

A. 4.03 L

C. 4.23 L

B. 4.43 L

D. 4.13 L

5) Find the quotient: $58 \div 1,000$.

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 Colorado scores.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice D is correct.** (5.MD.C.4) $V = 8 \times 6 \times 5 = 240 \text{ cm}^3$.
- 2) **Choice A is correct.** (5.MD.C.4) Simplify both groups first: $8 + 2 = 10$ and $6 - 3 = 3$. Multiply to get 30, then subtract 10 to get 20.
- 3) **The correct answer is 4.** (5.OA.A.1) Reading after the decimal: 1 is tenths, 8 is hundredths, 4 is thousandths.
- 4) **Choice A is correct.** (5.NBT.A.1) Area = $\frac{2}{5} \times \frac{4}{5} = \frac{8}{25}$ square meters.
- 5) **Choice A is correct.** (5.NF.A.2) $\frac{2}{5} = \frac{4}{10}$. $\frac{4}{10} - \frac{1}{10} = \frac{3}{10}$.
- 6) **Choice D is correct.** (5.NF.A.2) The number line shows 1.2 divided into four jumps of 0.3 each. Therefore, $1.2 \div 0.3 = 4$.
- 7) **Choice A is correct.** (5.NF.B.6) Each whole contains 4 pieces of size $\frac{1}{4}$. With 1 whole, there are $1 \times 4 = 4$ pieces.
- 8) **Choice A is correct.** (5.G.A.2) The second coordinate is always 2 more than the first. Each coordinate increases by 1, so the next point is (3, 5).
- 9) **Choice A is correct.** (5.MD.A.1) 1 meter = 1,000 millimeters. Divide: $8000 \div 1000 = 8 \text{ m}$.
- 10) **Choice D is correct.** (5.NF.B.5) $12 \times \frac{1}{4} = 3$ feet. Multiplying by a fraction less than 1 shrinks the quantity.
- 11) **Choice C is correct.** (5.NF.B.5) Multiply: $52 \times 18 = 52 \times (20 - 2) = (52 \times 20) - (52 \times 2) = 1,040 - 104 = 936$ cartridges.
- 12) **The correct answer is 42000000.** (5.NBT.B.5) Multiplying by a power of 10 shifts the value to a larger place. Attach six zeros to 42: 42,000,000. This confirms the answer.
- 13) **Choice D is correct.** (5.NBT.A.2) A right triangle with all three sides of different lengths is a right scalene triangle.
- 14) **Choice A is correct.** (5.G.B.3) LCD of 6 and 4 is 12. $\frac{1}{6} = \frac{2}{12}$ and $\frac{1}{4} = \frac{3}{12}$.
- 15) **The correct answer is 9.1.** (5.NBT.A.4) Hundredths digit is 7 (with 5 in thousandths). Since $7 \geq 5$, round tenths up: $9.0 \rightarrow 9.1$.
- 16) **Choice B is correct.** (5.NBT.A.4) Both expressions multiply 7 by a fraction. Since $\frac{2}{3} > \frac{1}{2}$, $7 \times \frac{2}{3}$ has the larger value.
- 17) **Choice C is correct.** (5.NF.B.5) "Twice" means multiply by 2. Since it is twice the whole sum, group $8 + 5$ first: $2 \times (8 + 5)$.
- 18) **Choice B is correct.** (5.OA.A.2) Add the ribbon lengths shown: $2\left(\frac{1}{4}\right) + 3\left(\frac{1}{2}\right) + 2\left(\frac{3}{4}\right) + 1 + 1\frac{1}{4} = 5\frac{3}{4}$ yards.
- 19) **Choice C is correct.** (5.NBT.A.2) $15 \times 10^3 = 15 \times 1000 = 15000$ meters.
- 20) **Choice D is correct.** (5.NBT.A.2) The x-coordinate represents hours studied (5 hours) and the y-coordinate represents the test score (85 points). So the point (5, 85) means a student studied for 5 hours and earned a score of 85.
- 21) **Choices A, B are correct.** (5.NBT.B.7) Align decimals and subtract. A and B are true. C should be 0.70, and D should be 2.97.
- 22) **Choice D is correct.** (5.NBT.B.7) Total fl oz: $12 \times 32 = 384$ fl oz. Convert to gallons: $384 \div 128 = 3$ gallons.
- 23) **Choice C is correct.** (5.MD.C.4) Volume = $19 \times 13 \times 7 = 247 \times 7 = 1729 \text{ cm}^3$.
- 24) **Choice D is correct.** (5.MD.C.4) Each term of B is 2 times the corresponding A term.
- 25) **Choice A is correct.** (5.G.A.2) First count the table legs: $8 \times 4 = 32$. Then find the chairs left: $10 - 2 = 8$. Altogether, $32 + 8 = 40$.
- 26) **Choice A is correct.** (5.OA.A.1) Borrow 1: $9\frac{1}{3} = 8\frac{4}{3}$. Then $8\frac{4}{3} - 4\frac{2}{3} = 4\frac{2}{3}$ gallons.
- 27) **Choice A is correct.** (5.NBT.A.3) $2 \times 1 = 2$; $3 \times \frac{1}{10} = 0.3$; $7 \times \frac{1}{100} = 0.07$. So $2 + 0.3 + 0.07 = 2.37$.
- 28) **Choice A is correct.** (5.NBT.A.3) $\frac{1}{2} \div 5 = \frac{1}{2} \times \frac{1}{5} = \frac{1}{10}$.
- 29) **Choice A is correct.** (5.G.B.4) A rhombus is a parallelogram because both pairs of opposite sides are parallel.
- 30) **Choice B is correct.** (5.MD.C.3) Find each part first: Prism A is $5 \times 4 \times 6 = 120$ cubic inches, and Prism B is $6 \times 4 \times 2 = 48$ cubic inches. Because the parts do not overlap, add them: $120 + 48 = 168$ cubic inches.
- 31) **Choice D is correct.** (5.MD.C.3) $V = 6 \times 4 \times 3 = 72$ cubic meters.
- 32) **Choice C is correct.** (5.MD.C.5) The known width and height make groups of $3 \times 8 = 24$ cubic centimeters. Since $168 \div 24 = 7$, the length is 7 cm.



Strong Climber, Listen Up!

◇ You did it. You climbed all 9 practice tests like a steady mountain climber—one foothold, one breath, one step at a time. The view from the top is wonderful because you earned it. Test day is the next peak, and you are stronger than the climber you were when you started. ◇

★ **Here is what mountain guides teach:** pacing matters more than speed. Take steady steps. Check your footing. Keep your eyes on the path. The same wisdom helps on a math test: read carefully, work calmly, and check your work before you move on. ★

Climber's Field Notes

- **Endurance:** STRONG! You can finish a long climb without losing focus.
- **Footwork:** STEADY! Your steps (your steps in problem-solving) are reliable.
- **Map Reading:** CLEAR! You read questions carefully before you start.
- **Summit Mindset:** READY! You know how to push through the last stretch.

Field tip: on test day, take small breaths between problems. Each problem is a foothold. Take it. Move on. Take the next. That is how mountains get climbed—and how tests get conquered.

If you want to share a proud moment or ask a question, please email me at jay@testinar.com. I'd love to hear from you!

Jay Daie

Your Math Guide (Onward and Upward)

PRACTICE MORE. ACHIEVE MORE.

Give your child the edge they need to excel in **Grade 5 Math!** This book includes **9 full-length** practice tests designed to build confidence, sharpen skills, and improve test performance.

9

**FULL-LENGTH
PRACTICE
TESTS**

- ✓ Realistic.
- ✓ Rigorous.
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More practice today for a **stronger** tomorrow.



THIS BOOK HELPS YOUR CHILD:



Build Confidence

Familiar, focused practice reduces anxiety and boosts self-belief.



Strengthen Skills

Reinforces key math concepts through high-quality, standards-aligned questions.



Improve Test Readiness

Full-length tests help students understand test format, pacing, and question types.



Track Progress

Identify strengths and target areas with purposeful practice.



Achieve Success

Better preparation leads to higher scores and bright futures.

COVERS ALL ESSENTIAL TOPICS

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