3 FULL-LENGTH Colorado CMAS MATH PRACTICE TESTS

Aligned to State Standards

Grade 5

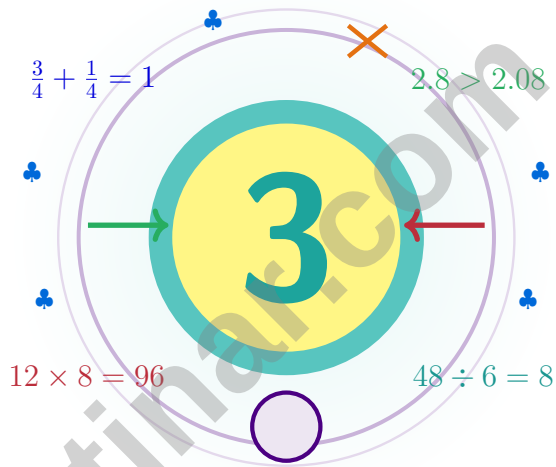
Complete State Standards Review with Answer Key and Essential Math Skills Practice

- **3 Full-Length Practice Tests**
  Aligned to State Standards
- **Covers All Grade 5 Math Topics**
  Numbers & Operations, Fractions, Decimals, Geometry, Measurement, Data & Problem Solving
- **Build Confidence**
  Strengthen Skills • Improve Accuracy • Boost Test Readiness
- **Detailed Answer Key**
  Step-by-Step Explanations for All Questions

WRITTEN FOR GRADE 5 STUDENTS | PERFECT FOR TEST PREP & REVIEW | CLASSROOM, HOME, OR SELF-STUDY USE

3 Colorado CMAS Grade 5 Math Practice Tests

Mile-high math for clear-thinking climbers



Three full tests, a friendly quick review, smart strategy pages, and student-tested support that help Grade 5 mathematicians from The Centennial State walk in ready to think.

Jay Daie and Reza Nazari

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Open the Door, Colorado – Math Awaits

Mile-high math for clear-thinking climbers

An Invitation to Grade 5 in Colorado

Math problems are like Rocky Mountain switchbacks – they look steep until you find the trail, then they rise one calm step at a time.

Some questions will feel easy from the very first read. Others will ask you to pause, sketch, estimate, or try again. That is not a problem. That is practice doing exactly what it should do. Every honest attempt grows your math brain a little stronger.

Notice

Notice the numbers, units, and any tricky words.

Sketch

Sketch a picture, table, or quick number line.

Confirm

Confirm your answer with an estimate or check.

A Colorado promise to yourself: I will treat each problem like a switchback: small steps, steady breathing, eyes on the next move.

A Simple Path Through This Book

A simple game plan that turns practice into real progress

Step 1: Plan

Plan a quiet hour for one full test.
Wake up the big Grade 5 ideas before the test starts so your brain is already warmed up.

Step 2: Practice

Take the test with steady focus.
Find a calm corner, settle in, and aim for careful, honest choices before quick ones.

Step 3: Inspect

Inspect every answer like a careful builder.
Circle missed questions, sort out what went sideways, and notice which skills are calling for more attention.

Step 4: Adjust

Adjust what needs adjusting and ride into the next test.
Read the explanation, fix the work, and carry that lesson forward into the next test.

Practice Plan for Colorado Grade 5

Week 1	Begin with Test 1 – a low-pressure read of your math.
Week 2	Run Test 2 with one new habit, like always checking labels.
Week 3	Finish Test 3 with calm, careful, confident effort.

Inside the Practice Tests

What these practice tests help Grade 5 students build

These three practice tests help Grade 5 students in Colorado climb toward the Colorado CMAS the way bighorn sheep climb a ridge – careful, sure-footed, never in a panic. The goal is bigger than getting answers right. Students are practicing how to read with care, choose a strategy, solve step by step, and explain their reasoning clearly – the same way mathematicians do every single day.

Selected-Response Questions

Students solve the problem and choose the best answer. Estimating first, ruling out weak choices, and checking for reasonableness can save both time and points.

Constructed-Response Questions

Students show their steps, explain a method, or back up an answer with clear math. Clean reasoning matters because it shows how the answer was actually found.

Grade 5 Ideas That Show Up Again and Again

- place value, comparing numbers, and rounding
- multi-digit addition, subtraction, multiplication, and division
- fractions, mixed numbers, and decimals
- perimeter, area, volume, and measurement conversions
- line plots, tables, numerical patterns, and coordinate points
- geometry and multi-step real-world problems

What strong work looks like on the CMAS: the math is correct, the steps are readable, the labels and units match the problem, and the final answer truly answers the question being asked.

Table of Contents

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	**Metric**
1 foot (ft) = 12 inches (in.)	1 meter (m) = 100 centimeters (cm)
1 yard (yd) = 3 feet (ft)	1 centimeter (cm) = 10 millimeters (mm)
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CAPACITY

Customary	**Metric**
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TIME

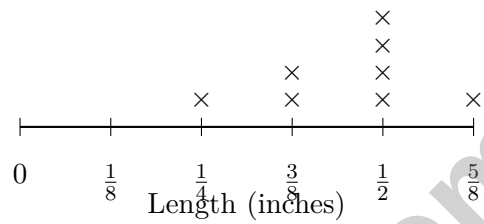
1 minute (min) = 60 seconds (sec)	1 week = 7 days
1 hour (hr) = 60 minutes (min)	1 year = 12 months
1 day = 24 hours (hr)	1 year = 52 weeks

1) Which statement is true?

☐ A. $2.35 + 1.64 = 3.99$
☐ B. $3.45 + 2.56 = 6.02$
☐ C. $4.28 + 3.65 = 7.83$
☐ D. $5.12 + 2.73 = 7.75$

2) The line plot shows measurements (in inches) of wood pieces for a birdhouse:

Wood Piece Lengths



What is the difference between the longest and shortest pieces?

☐ A. $\frac{1}{4}$ inch
☐ B. $\frac{3}{8}$ inch
☐ C. $\frac{1}{2}$ inch
☐ D. $\frac{5}{8}$ inch

3) A baker has $\frac{3}{4}$ of a pan of brownies. She makes 2 pans this size. How much brownie does she have in total?

☐ A. $\frac{3}{4}$ pan
☐ B. $\frac{6}{4}$ pans or $1\frac{1}{2}$ pans
☐ C. $\frac{3}{8}$ pan
☐ D. $\frac{2}{3}$ pan

4) A baker needs $\frac{3}{4}$ cup of flour and $\frac{1}{5}$ cup of sugar. Estimate the total.

☐ A. Less than $\frac{1}{2}$ cup
☐ B. About 1 cup
☐ C. About $1\frac{1}{2}$ cups
☐ D. More than 2 cups

5) A student graphs reading progress. The x-axis shows hours read, and the y-axis shows pages read. What does the point $(2, 50)$ mean?

☐ A. pages read is 50 when hours read is 2
☐ B. hours read is 50 when pages read is 2
☐ C. hours read and pages read are both 52
☐ D. pages read is 2 when hours read is 50

6) A box has $V = 210$ ft^3, $l = 7$ ft, $w = 5$ ft. Find its height.

Record your answer in the space provided.

7) A recipe makes 8 cups of soup. Maya wants to make $\frac{3}{4}$ of the recipe. How many cups of soup will she make?

Record your answer in the space provided.

8) A sports equipment bin measures 11 centimeters long, 5 centimeters wide, and 8 centimeters tall. What is its volume?

☐ A. 440 cubic centimeters
☐ B. 55 cubic centimeters
☐ C. 88 cubic centimeters
☐ D. 40 cubic centimeters

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1) Which expression is worked out correctly?

Student	Steps for $6 + 2 \times 5$	Final
A	$6 + 2 = 8; 8 \times 5$	40
B	$2 \times 5 = 10; 6 + 10$	16
C	$6 \times 2 = 12; 12 + 5$	17
D	$6 + 5 = 11; 11 \times 2$	22

☐ A. A
☐ B. B
☐ C. C
☐ D. D

2) Find: $\frac{1}{3} \div 5$.

Record your answer in the space provided.

3) Compare two rectangular prisms: Prism A is 9 cm × 4 cm × 3 cm; Prism B is 6 cm × 6 cm × 3 cm. Which has the greater volume?

☐ A. Prism A
☐ B. Prism B
☐ C. They are equal
☐ D. Cannot determine

4) Find: $612 \div 18$.

Record your answer in the space provided.

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1) The chart shows a pattern. What is the missing value?

Expression	Value
7×10	70
7×100	700
$7 \times 1{,}000$	7,000
$7 \times 10{,}000$	?

☐ A. 7,000
☐ B. 70,000
☐ C. 700,000
☐ D. 7,000,000

2) A bakery divides 2,145 cupcakes among 65 catering orders equally. How many cupcakes per order?

☐ A. 30
☐ B. 32
☐ C. 33
☐ D. 35

3) What must be added to $\frac{3}{8}$ to get $1\frac{1}{4}$?

☐ A. $\frac{7}{8}$
☐ B. $\frac{8}{8}$
☐ C. $\frac{5}{8}$
☐ D. 1 whole

4) Without calculating, which expression is three times as much as $(8+5)$?

☐ A. $3+(8+5)$
☐ B. $(8+5)-3$
☐ C. $(8+5)\div 3$
☐ D. $3\times(8+5)$

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.

Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

1) **Choice A is correct.** 5.NBT.B.7 Only A is true. B should be 6.01, C should be 7.93, and D should be 7.85.
2) **Choice B is correct.** 5.MD.B.2 Longest is $\frac{5}{8}$, shortest is $\frac{1}{4}$. Difference: $\frac{5}{8} - \frac{1}{4} = \frac{5}{8} - \frac{2}{8} = \frac{3}{8}$.
3) **Choice B is correct.** 5.NF.B.4 $2 \times \frac{3}{4} = \frac{6}{4} = 1\frac{1}{2}$ pans.
4) **Choice B is correct.** 5.NF.A.2 $\frac{3}{4}$ is close to 1, and $\frac{1}{5}$ is close to 0. So $\frac{3}{4} + \frac{1}{5} \approx 1 + 0 = 1$ cup.
5) **Choice A is correct.** 5.G.A.2 The first coordinate, 2, matches the x-axis label: hours read. The second coordinate, 50, matches the y-axis label: pages read. So the point means pages read is 50 when hours read is 2.
6) **The correct answer is 6 ft.** 5.MD.C.4 The base area is $7 \times 5 = 35$ square feet. Since $210 \div 35 = 6$, the height is 6 ft.
7) **The correct answer is 6.** 5.NF.B.6 The question asks for $\frac{3}{4}$ of 8 cups, so multiply: $\frac{3}{4} \times 8 = 6$. The answer is 6 cups.
8) **Choice A is correct.** 5.MD.C.5 Use the rectangular-prism volume formula: $11 \times 5 \times 8 = 440$. So the volume is 440 cubic centimeters.
9) **The correct answer is 6.** 5.NBT.A.3 In 4.06, the 6 is in the hundredths place.
10) **Choice B is correct.** 5.NBT.A.2 The basic fact is $7 \times 8 = 56$. The factors 700 and 80 have three zeros total, so the product is 56,000.
11) **Choice D is correct.** 5.MD.C.5 The known length and height make groups of $15 \times 9 = 135$ cubic centimeters. Since $540 \div 135 = 4$, the width is 4 cm.
12) **Choice C is correct.** 5.G.B.4 A pentagon is a polygon with 5 sides. It is not a quadrilateral because it does not have 4 sides.
13) **Choice C is correct.** 5.NF.B.6 Divide a whole number by a unit fraction: $3 \div \frac{1}{2} = 3 \times 2 = 6$ glasses.
14) **Choice B is correct.** 5.NF.B.4 $\frac{1}{6} \times \frac{1}{2} = \frac{1}{12}$ (unit-fraction product).
15) **Choice B is correct.** 5.MD.C.5 Choose the operation from the story, then keep the unit with the answer. Multiply: $2.25 \times 160 = 360$ liters. This confirms the answer.
16) **Choice B is correct.** 5.MD.A.1 Total paved: $12.5 + 14.75 = 27.25$ km. Remaining: $50 - 27.25 = 22.75$ km.
17) **Choice C is correct.** 5.MD.C.3 A swimming pool is very large. Cubic meters is an appropriate unit. Cubic millimeters and centimeters are too small; cubic inches are also small.
18) **Choice A is correct.** 5.G.A.1 Width (left/right): $8 - 2 = 6$ units; Height (top/bottom): $6 - 2 = 4$ units. Perimeter $= 6 + 4 + 6 + 4 = 20$ units.
19) **Choice C is correct.** 5.G.A.2 Third pair: X-value is 5 (position 3 in 1, 3, 5, 7), Y-value is 6 (position 3 in 2, 4, 6, 8).
20) **Choices A, B are correct.** 5.NBT.A.1 In 0.666, the left 6 is in the tenths place, the middle 6 is in the hundredths place, and the right 6 is in the thousandths place. A tenth is 10 times a hundredth, and a hundredth is 10 times a thousandth, so A and B are true.
21) **Choice A is correct.** 5.OA.A.2 The first expression divides by 5 and then adds 10. The second expression divides 45 by a larger divisor, $5 + 10$, so it is much smaller.
22) **Choice B is correct.** 5.NF.B.6 Splitting $\frac{1}{6}$ into 2 equal parts means $\frac{1}{6} \div 2 = \frac{1}{12}$. Each small part is $\frac{1}{12}$ of the whole.
23) **Choice C is correct.** 5.NBT.A.2 $5.08 \times 1{,}000 = 5{,}080$. The digits shift three places to greater place values.
24) **Choice C is correct.** 5.MD.C.4 Volume $= 6 \times 2 \times 2 = 24$ unit cubes.
25) **Choice A is correct.** 5.MD.C.5 The overlap region is $\frac{2}{3} \times \frac{3}{4} = \frac{6}{12} = \frac{1}{2}$ of the whole.
26) **Choice A is correct.** 5.MD.A.1 Convert all to meters: 5,000 mm = 5 m, 50 m = 50 m, 0.5 km = 500 m, and 600 cm = 6 m. The smallest is 5,000 mm, which is 5 m.
27) **Choice A is correct.** 5.G.A.2 Use input 2 in the rule. Compute $6 \times 2 = 12$, then add 1 to get 13.
28) **Choice A is correct.** 5.NF.B.4 $2\frac{1}{3} = \frac{7}{3}$ and $3\frac{1}{2} = \frac{7}{2}$. Multiply: $\frac{7}{3} \times \frac{7}{2} = \frac{49}{6} = 8\frac{1}{6}$ square feet.
29) **Choice C is correct.** 5.OA.B.3 Subtract 10 each time: 100, 90, 80, 70, 60, 50, 40, 30.
30) **Choice C is correct.** 5.G.B.3 The two top angles, angles 3 and 4, are wider than right angles, so they are obtuse. The two bottom angles are smaller than right angles.
31) **The correct answer is 21.** 5.NF.B.5 Since $\frac{6}{7} < 1$, multiplying 21 by $\frac{6}{7}$ gives a value less than 21. So 21 is larger.

Welcome, Brave Explorer!

◇ Phenomenal expedition! You've successfully navigated through 3 mathematical territories, exploring every concept and discovering new strategies along the way! You've mapped out the landscape of Grade 5 math with the courage of a true adventurer. Each problem was uncharted territory, and you charted it with skill and determination! ◇

⋆ **Wisdom from veteran explorers:** the most rewarding journeys are the ones that challenge you most. Through 3 comprehensive practice tests, you've climbed mathematical mountains, crossed conceptual rivers, and discovered solutions in places you didn't know existed. Your exploration skills are strong, your map is detailed, and you're ready for any test-day adventure! ⋆

Explorer's Achievement Map

- **Territory Covered:** You've explored every major mathematical concept thoroughly!
- **Navigation Skills:** You can find your way through any problem with multiple solution paths!
- **Equipment Mastered:** You know exactly which strategies to use in different situations!
- **Expedition Ready:** You're fully prepared for the ultimate test day adventure!

Important explorer wisdom: experienced adventurers always review their maps before important journeys. Take a few moments before test day to mentally review your successful strategies. Visualize yourself confidently tackling each type of problem. You've already proven you can handle the expedition!

If you'd like to share your experience or have questions, please email me at reza@testinar.com. I'd love to hear from you!

Reza Nazari & Jay Daie
Your Math Teacher and Test-Day Coach

Build Skills. Boost Confidence. Excel on the Grade 5 Math Test.

Help your child succeed with confidence! This book includes **3 full-length Grade 5 Math practice tests** aligned to state standards. With a focus on essential skills, problem solving, and test readiness, it's the perfect resource for classroom, home, or on-the-go practice.

WHAT'S INSIDE:

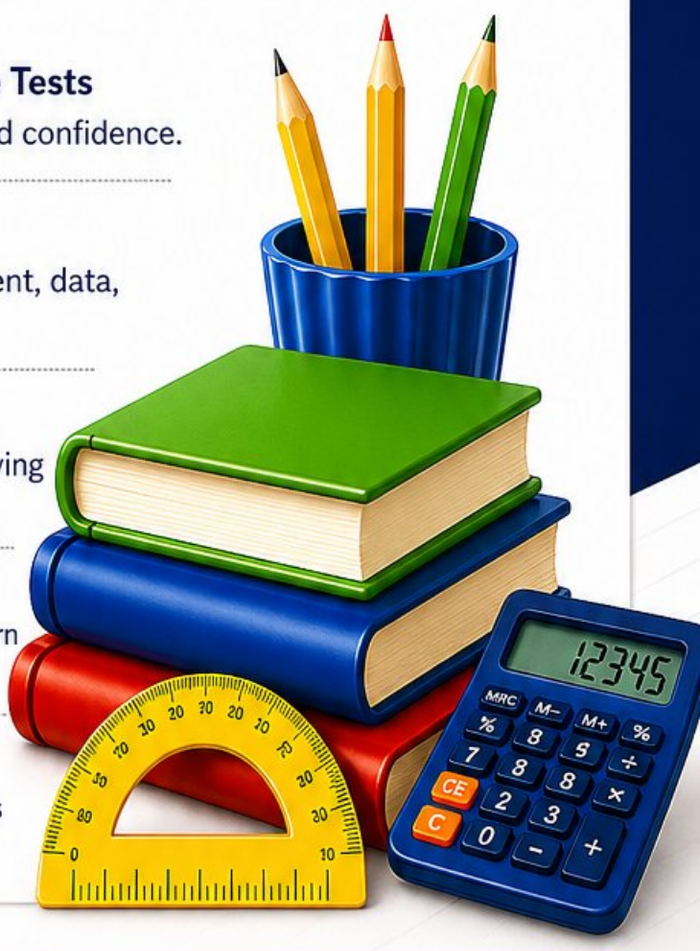
3 Full-Length Grade 5 Math Practice Tests
Realistic test format to build familiarity and confidence.

Covers All Essential Math Topics
Fractions, decimals, geometry, measurement, data, number operations, and more.

Build Strong Math Skills
Strengthen understanding and problem-solving through varied question types.

Detailed Answer Key
Step-by-step explanations to help your child learn from mistakes and improve.

Track Progress & Improve
Use score trackers to identify strengths and focus on areas that need more practice.



The Smarter Way to Prepare!

Consistent practice builds stronger skills, sharper thinking, and test-day success.

- ✓ Reinforce classroom learning
- ✓ Improve accuracy and speed
- ✓ Reduce test anxiety
- ✓ Achieve your best score!

Visit **testinar.com/math5** for more Grade 5 math resources and practice materials!