

9 Colorado CMAS

GRADE 7

MATH

PRACTICE TESTS

Standards Aligned Problem Solving
For Comprehensive Assessment Programs

Program



9 PRINTED
TESTS



2 ONLINE
TESTS



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



BUILT FOR ACAP
Standards-Aligned



**STRENGTHEN
SKILLS**



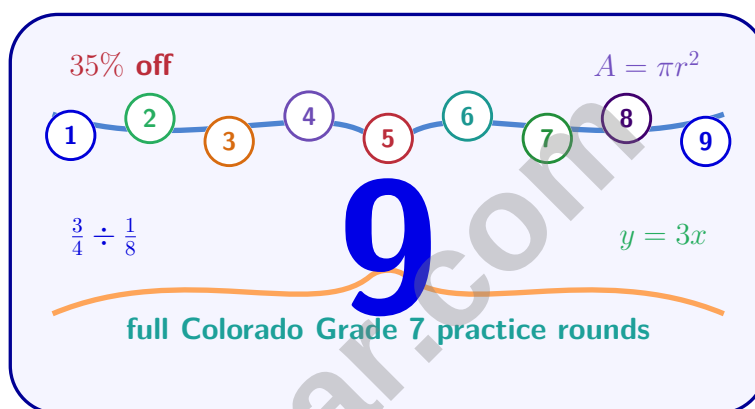
**SHARPEN
THINKING**



BE TEST-READY
Improve Performance

9 Colorado CMAS Grade 7 Math Practice Tests

Standards-Aligned Colorado Practice for Proportional Reasoning, Expressions, Geometry, Statistics, and Probability



Nine complete 40-question Grade 7 CMAS practice rounds with proportional relationships, percents, rational numbers, expressions, equations, geometry, statistics, probability, answer keys, and clear explanations for every item.

Jay Daie and Reza Nazari



Copyright ©

Testinar Inc



Published by Testinar Inc

Testinar.com

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of the author, except in the case of brief quotations embodied in critical reviews and certain other noncommercial uses permitted by copyright law, including Section 107 or 108 of the 1976 United States Copyright Act.

This publication is independently produced and has no official connection to any state, district, or national testing program.

Test names and organizational names used herein are the property of their respective trademark holders.



Copyright ©

Welcome, Colorado Grade 7 Problem Solver!

Nine focused rounds for sharper CMAS math thinking

This book gives you nine full Grade 7 CMAS math practice tests. Each round is built to help you notice structure, compare quantities, use proportional reasoning, handle rational numbers, and explain your thinking with care.

Your Colorado Practice Promise

I will read every question carefully, choose a strategy that fits, write enough work to prove my answer, and use corrections as training for the next test.

Read

Model

Verify

How to Use This Book

A nine-session plan for confident Grade 7 review

1. **Warm up with the review pages.** Notice the big ideas before starting the tests.
2. **Complete one test at a time.** Treat each 40-question round like a real practice session.
3. **Show your reasoning.** Jot a proportion, equation, diagram, number line, or quick estimate when it helps.
4. **Correct actively.** Rework missed items before reading the explanation.
5. **Choose the next target.** After each test, name one skill and one habit to improve.

Colorado review rhythm: Work a test, score it, study your misses, then come back ready for the next round with one clear goal.



What Is Inside?

Nine CMAS tests, 360 questions, and a complete review path

Part	What You Will Practice
Tests 1–3	Proportional relationships, unit rates, percents, rational-number operations, and careful reading.
Tests 4–6	Expressions, equations, inequalities, scale drawings, geometry, and multi-step problem solving.
Tests 7–9	Statistics, probability, mixed review, stamina, and choosing efficient strategies.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Grade 7 success means recognizing which idea is being tested even when the next question changes format.

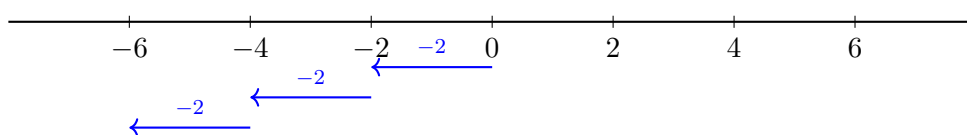


Scan me!
For more practice
& answers

Table of Contents

★ Practice Test 1	_____	14
★ Practice Test 2	_____	29
★ Practice Test 3	_____	44
★ Practice Test 4	_____	60
★ Practice Test 5	_____	74
★ Practice Test 6	_____	89
★ Practice Test 7	_____	103
★ Practice Test 8	_____	118
★ Practice Test 9	_____	131
Practice Test Answer Keys	_____	145
Practice Test Answers and Explanations	_____	151

- 1) The number line shows repeated additions. What does $3 \times (-2)$ equal?



- ☐ A. -8 ☐ C. 6
☐ B. -6 ☐ D. 8
- 2) A fitness center charges a \$30 enrollment fee and \$45 per month. What is the total cost for 6 months of membership?
- ☐ A. \$240 ☐ C. \$300
☐ B. \$270 ☐ D. \$330
- 3) The stem-and-leaf plot shows heights (in cm) of students:

Stem	Leaves
15	2, 5, 8
16	1, 3, 6, 9
17	0, 4, 7
18	2, 5

How many students are represented?

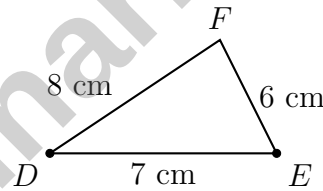
- ☐ A. 8 ☐ C. 12
☐ B. 11 ☐ D. 14
- 4) A spinner was spun 200 times with four equal sections labeled A, B, C, and D. Section A appeared 58 times. Which best describes the relationship between the experimental and theoretical probabilities for landing on A?
- ☐ A. Both are exactly 0.25. ☐ C. Experimental is 0.25; theoretical is 0.29.
☐ B. Experimental is 0.58; theoretical is 0.20. ☐ D. Experimental is 0.29; theoretical is 0.25.



- 5) Two fair number cubes are rolled. What is the probability of rolling a sum of 10 or higher? Express your answer as a simplified fraction.

- 6) Two spinners are used to simulate rolling two dice. Each spinner has 6 equal sections numbered 1–6. If each spinner is spun once in a trial, how many different outcomes are in the sample space?

7)



Triangle DEF has sides $DE = 7$ cm, $EF = 6$ cm, and $FD = 8$ cm. Is this triangle unique?

- ☐ A. No, infinitely many triangles have these side lengths
- ☐ B. Yes, SSS guarantees uniqueness
- ☐ C. No, SAS allows variation
- ☐ D. Yes, but only if we specify one angle



Scan me!
For more practice
& answers

8) Which probability represents an “unlikely” event?

☐ A. 0.05

☐ C. 0.95

☐ B. 0.5

☐ D. 0.99

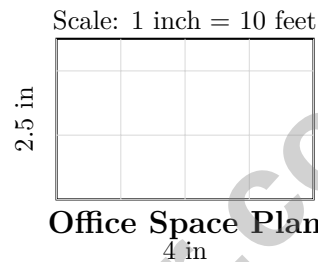
9) A shopkeeper estimated 240 customers would visit on a day, but only 200 actually came. What is the percent error?

☐ A. 40%

☐ C. 16.7%

☐ B. 83.3%

☐ D. 20%



10)

Based on the scale, what is the perimeter of the office space in feet?

☐ A. 325 feet

☐ C. 6.5 feet

☐ B. 65 feet

☐ D. 130 feet

11) A gym membership costs \$75 per month. You pay for 12 months, which totals \$900. What is 20% of the total cost?

☐ A. \$300

☐ C. \$280

☐ B. \$250

☐ D. \$180



- 1) A survey asked 150 people about their favorite ice cream flavor. The circle graph shows vanilla is 40%, chocolate is 35%, and strawberry is 25%. How many people prefer chocolate?

☐ A. 35 ☐ C. 52.5
☐ B. 40 ☐ D. 60

- 2) A rental car costs \$25 per day. Which table represents the cost for different numbers of days?

Days	1	2	3
Option A: Cost	25	50	75
Option B: Cost	26	50	74

☐ A. Option A ☐ C. Neither
☐ B. Option B ☐ D. Both

- 3) A student reads $\frac{3}{5}$ page per minute. How many pages can they read in 15 minutes?

☐ A. $\frac{1}{5}$ pages ☐ C. 18 pages
☐ B. $\frac{3}{5}$ pages ☐ D. 9 pages

- 4) A proportional relationship is given by the equation $y = 2.4x$. Which point does NOT lie on the line?

☐ A. (1, 2.4) ☐ C. (10, 24)
☐ B. (5, 12) ☐ D. (2, 5)



5) A simulation consists of rolling a die and flipping a coin, recording both results. This is the compound event. How many equally likely outcomes are in the sample space?

☐ A. 6

☐ C. 12

☐ B. 8

☐ D. 36

6) Which expression represents “the product of 5 and a number n , decreased by 7”?

☐ A. $7 - 5n$
☐ C. $5n - 7$
☐ B. $5(n - 7)$
☐ D. $5 + n - 7$

7) Compute $2\frac{1}{3} \div \frac{5}{9}$. Show all steps: convert mixed number, apply reciprocal rule, and simplify.

Step 1: $4x + 3y + 2x - y$



Group x terms Group y terms

Step 2: $(4 + 2)x + (3 - 1)y$



Step 3: $6x + 2y$

8)

Based on the steps shown, what is the error in this simplification?

☐ A. Step 3 has the wrong final answer.

☐ D. No error; the simplification is

☐ B. Step 1 grouped terms incorrectly.

correct.

☐ C. Step 2 added the wrong coefficients.


Scan me!
For more practice
& answers

+ −

.....

63

.....

× ÷

Testinar.com

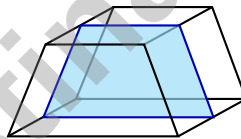
- 1) A school fundraiser invests \$5000 to earn money for field trips. At 3.6% simple interest per year, how long (in months) will it take to earn \$180?

☐ A. 6 months ☐ C. 12 months
☐ B. 9 months ☐ D. 18 months

- 2) Estimate $\sqrt{130}$ to the nearest whole number.

- 3) A model train is built using a scale of 1 : 120. If the model is 15 cm long, how long is the real train in meters?

☐ A. 1.8 m ☐ C. 18 m
☐ B. 6 m ☐ D. 180 m



trapezoid slice

4)

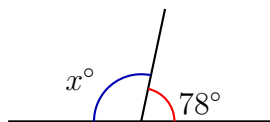
A trapezoidal prism is sliced horizontally by a plane parallel to the trapezoidal bases. What is the shape of the cross-section?

☐ A. Triangle ☐ C. Rectangle
☐ B. Trapezoid ☐ D. Pentagon



Scan me!
For more practice
& answers

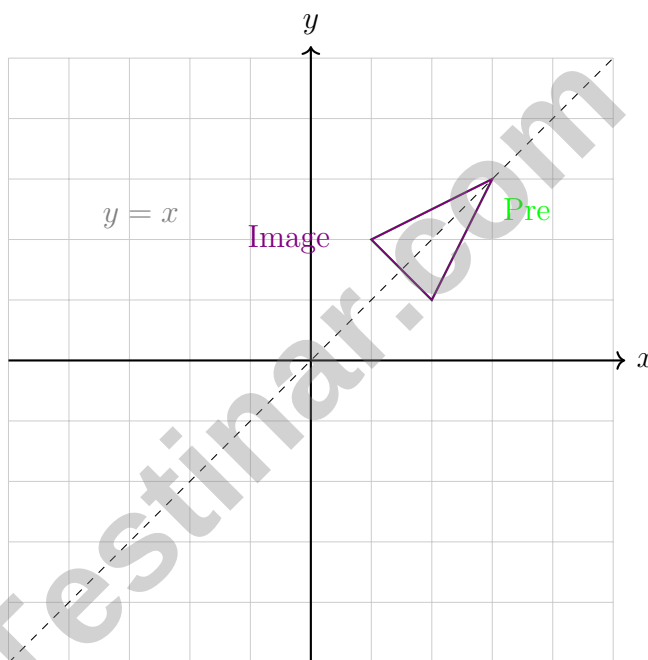
5)



Two lines intersect. One angle measures 78° . The angle adjacent to this angle is x . What is x ?

☐ A. 12°
☐ C. 102°
☐ B. 78°
☐ D. 180°

6)



The green triangle is reflected over the line $y = x$ to form the purple triangle. Which vertex of the pre-image corresponds to the vertex at $(3, 3)$ in the image?

☐ A. $(1, 2)$
☐ C. $(2, 1)$
☐ B. $(3, 3)$
☐ D. $(3, 1)$


Colorado CMAS Grade 7 Practice Test Answer Keys**How to use this section with a Grade 7 student:**

1. check the answer first and circle any item that needs another look
2. retry the problem with fresh work before reading the explanation
3. write one short lesson learned from each missed or guessed item

A strong review routine turns every correction into a sharper plan for the next Colorado CMAS practice test.



Scan me!
For more practice
& answers

Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice B is correct.** (7.NS.2) Three groups of -2 : $3 \times (-2) = -6$. The arrows move left 2 units, 3 times, landing on -6 .
- 2) **Choice C is correct.** (7.RP.3) Total cost = $30 + (45 \times 6) = 30 + 270 = \300 .
- 3) **Choice C is correct.** (7.SP.1-7.SP.4) Count all leaves: $3 + 4 + 3 + 2 = 12$ data points.
- 4) **Choice D is correct.** (7.SP.6) Experimental probability (0.29) is based on observed data and differs from theoretical probability (0.25) because of random variation. Both values are relative frequencies—ratios of favorable outcomes to total trials.
- 5) **The correct answer is $\frac{1}{6}$.** (7.SP.5-7.SP.8) Sums of 10 or higher: (4,6), (5,5), (5,6), (6,4), (6,5), (6,6) = 6 outcomes out of 36. $\frac{6}{36} = \frac{1}{6}$.
- 6) **The correct answer is 36.** (7.SP.5-7.SP.8) First spinner: 6 outcomes. Second spinner: 6 outcomes. Total: $6 \times 6 = 36$ outcomes.
- 7) **Choice B is correct.** (7.G.1-7.G.5) When all three side lengths are specified (7 cm, 6 cm, 8 cm), exactly one unique triangle (up to congruence) can be constructed. This is the SSS (Side-Side-Side) condition.
- 8) **Choice A is correct.** (7.SP.5-7.SP.8) A very small probability (close to 0) means the event is unlikely. 0.05 is the smallest value.
- 9) **Choice D is correct.** (7.RP.3) Percent error = $\frac{|240-200|}{200} \times 100\% = \frac{40}{200} \times 100\% = 20\%$.
- 10) **Choice D is correct.** (7.RP.1-7.RP.3) Actual dimensions: $4 \times 10 = 40$ feet; $2.5 \times 10 = 25$ feet. Perimeter = $2(40 + 25) = 130$ feet.
- 11) **Choice D is correct.** (7.RP.3) Total cost is $75 \times 12 = 900$ dollars. 20% of 900 is $0.20 \times 900 = 180$ dollars.
- 12) **The correct answer is 4.** (7.RP.1-7.RP.3) New length = $8 \times \frac{1}{2} = 4$ meters.
- 13) **Choice C is correct.** (7.NS.1b) Starting at -2 and jumping right to 6 means moving right by 8 units (from -2 to 0 is 2, then 0 to 6 is 6, total $2 + 6 = 8$). So $-2 + 8 = 6$.
- 14) **Choice C is correct.** (7.EE.4b) Check: $5 + 6 = 11 > 10$ ✓. The other values yield 9, 10, and 8, which do not satisfy the inequality.
- 15) **Choice D is correct.** (7.RP.1-7.RP.3) The line passes through (0,0) and (5,5), making it proportional with $k = 1$ or $y = x$.
- 16) **Choice D is correct.** (7.RP.3) On a proportional double number line, the ratio is constant: $\frac{60}{75} = \frac{4}{5}$. For 25: set up $\frac{25}{x} = \frac{75}{60}$, so $x = 20$.
- 17) **Choice A is correct.** (7.NS.1-7.NS.3) Adding two negatives: $-3.6 + (-2.4) = -(3.6 + 2.4) = -6.0$.
- 18) **Choice B is correct.** (7.EE.4a) Initial fee is \$8; each package adds \$3. Equation: $3p + 8 = 26$.
- 19) **Choice A is correct.** (7.G.1-7.G.5) The translation is: $(3, 2) + (-3, -2) = (0, 0)$.
- 20) **Choice B is correct.** (7.SP.1-7.SP.4) System A's small MAD (0.5 min) means students wait reliably 8 minutes. System B's large MAD (1.8 min) means unpredictable waits: some 6 min, some 10+ min. Consistency matters for user experience.
- 21) **The correct answer is A,B.** (7.G.4-7.G.6) A is correct: volume $V = B \times h$ for any prism. B is correct: $V = 4^3 = 64 \text{ cm}^3$. C is false: doubling height doubles volume, not triples it. D is false: a triangular prism can have larger volume than a rectangular prism depending on dimensions.
- 22) **Choice D is correct.** (7.RP.1-7.RP.3) The ratio is $\frac{2}{5} : \frac{3}{5} = 2 : 3$.
- 23) **The correct answer is 1050.** (7.SP.1-7.SP.4) $\frac{35}{140} = \frac{x}{4200}$. Reduce: $\frac{1}{4} = \frac{x}{4200} \Rightarrow x = 1050$.
- 24) **Choice C is correct.** (7.RP.3) Available = $\$3,600 - \$1,200 - \$400 - \$300 - \$200 = \$1,500$.
- 25) **Choice B is correct.** (7.NS.1-7.NS.3) $9 \times 9 = 81$, so $\sqrt{81} = 9$.
- 26) **Choice A is correct.** (7.EE.1-7.EE.2) Combine step by step: $(4b + 6b - 2b) + (7 - 12 - 1) = 8b - 6$.
- 27) **Choice A is correct.** (7.EE.1-7.EE.2) A 25% increase is $40(1 + 0.25) = 40(1.25) = 50$.
- 28) **Choice D is correct.** (7.G.1-7.G.5) Vertical angles are equal: $Q = P = 84^\circ$.



Scan me!
For more practice
& answers

Hi, Confident Learner!

◇ This high-stamina book gave you nine substantial Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. Grade 7 math can feel big because it brings together rational numbers, expressions, equations, geometry, probability, and data. ◇

★ **Remember this:** But big topics become manageable when you practice one skill at a time. That is what you have been doing with every test in this book. ★

Confidence Builders

- **Know the Goal:** Identify what the question asks.
- **Use Vocabulary:** Math words point to math actions.
- **Show Work:** Give yourself something to check.
- **Celebrate Effort:** Practice is proof that you are moving.

Grade 7 test-day tip: When reviewing, do not only mark wrong answers. Write one sentence about what you learned from each one.

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

Jay Daie

Your Confidence Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **9** full-length Math practice tests and **2** online tests to help Grade 7 students build confidence, strengthen skills, and excel on standardized assessments.

Each practice test is carefully crafted to reflect the latest standards and includes a variety of question types, realistic test conditions, and detailed answer explanations.

Perfect for classroom use, homework, test preparation, and extra practice at home.

THIS BOOK INCLUDES:

9 Full-Length Printed Tests

2 Online Practice Tests

 Detailed Answer Explanations



MORE PRACTICE. GREATER RESULTS.

Give your child the tools to build strong math skills, confidence, and a positive attitude toward learning.

WHAT YOU'LL GAIN



Stronger Math Skills

Build a solid foundation through targeted practice and review.



Better Problem Solving

Develop logical thinking and effective solution strategies.



Deeper Understanding

Reinforce key concepts with clear explanations and meaningful practice.



Test Confidence

Familiarize with test formats and improve accuracy and speed.



Achieve Success

Build confidence and perform your best on test day.

TOPICS COVERED

- ✓ Ratios & Proportions
- ✓ The Number System
- ✓ Expressions & Equations
- ✓ Geometry
- ✓ Percents & Decimals
- ✓ Statistics & Probability
- ✓ Data Analysis
- ✓ Measurement & Conversions
- ✓ Algebraic Thinking
- ✓ And More!



2 ONLINE TESTS

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



2 EXTRA ONLINE TEST ACCESS CODE IS INSIDE THE BOOK!

Don't lose it—your extra practice and success start here!



VISIT [TESTINAR.COM/MATH7](https://www.testinar.com/math7)

FOR MORE PRACTICE TESTS AND LEARNING RESOURCES.



PRACTICE
REGULARLY



STAY
FOCUSED



SOLVE
CONFIDENTLY



SUCCEED
BRIGHTLY