

8

FULL-LENGTH

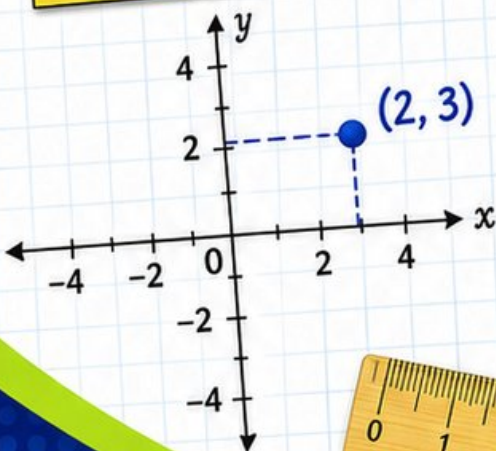
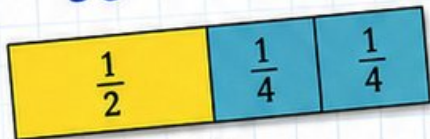
Colorado CMAS

GRADE 5

MATH PRACTICE TESTS

Mixed Practice Questions with Answer Key
for Students, Parents, and Teachers

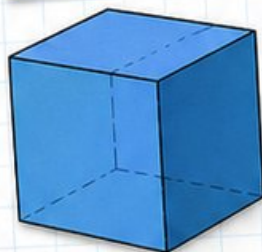
$$36 \div 4 = 9$$



$$2.4 \times 7 = 16.8$$

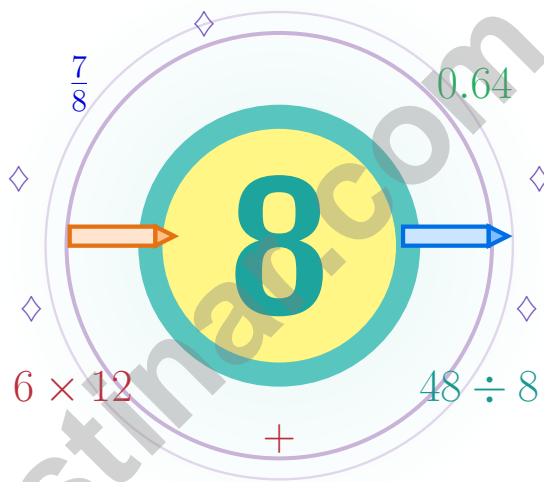
$$7 \times (12 - 5) = 49$$

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



8 Colorado CMAS Grade 5 Math Practice Tests

A eight-step trail built for steady, brave thinking



Eight full tests, a focused quick review, and helpful support that turns Grade 5 practice in The Centennial State into steady, confident growth from page one to the final check.

Jay Daie and Reza Nazari



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Welcome to the Eight-Step Practice Path, Colorado

This book is here to help you practice, reflect, and rise across eight tests

Trail Briefing for Colorado Grade 5 Math Crew

This practice book is your steady companion for eight tests, not a place to be perfect. Math problems are like Rocky Mountain switchbacks – they look steep until you find the trail, then they rise one calm step at a time.

Use these eight 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 across seven rounds.

Look

Look at the problem like a detective looks at a clue.

Test

Test your idea with one careful step at a time.

Grow

Grow stronger by reviewing exactly what tripped you up.

A strong habit for Colorado mathematicians: 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.

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How to Use This Book

A simple routine that turns practice into progress

Step 1: Read

Read the quick review pages first.
Spend a few minutes waking up your memory before the test begins.

Step 2: Try

Try one full test with full attention.
Work in a calm spot and focus on careful thinking before speed.

Step 3: Reflect

Reflect on which skills want more sunlight.
Circle missed questions and notice which topics keep showing up.

Step 4: Lift

Lift those skills before the next test.
Read the explanation, repair the work, and bring that lesson into the next test.



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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)

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Metric

1 meter (m) = 100 centimeters (cm)

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1 hour (hr) = 60 minutes (min) 1 year = 12 months

1 day = 24 hours (hr) 1 year = 52 weeks



1) Estimate the product of 23×18 by rounding each factor to the nearest ten, then multiply.

- A. 360 C. 420
 B. 380 D. 400

2) Compare 0.25 and 0.52 using place value. Which is greater?

- A. 0.25 C. Equal
 B. Cannot determine D. 0.52

3) A student made an error. Pattern M is 2, 4, 6, 8. Pattern N is actually 6, 8, 10, 12. Which rule matches Pattern N?

M	N (actual)	Check
2	6	$6 = 2 + 4$ ✓
4	8	$8 = 4 + 4$ ✓

- A. N is 3 times M C. N is twice M, then 2 more
 B. N is 4 more than M D. N is 2 more than M
- 4) Six students each walk $\frac{1}{2}$ mile during recess. How many miles do they walk in all?
- A. $\frac{5}{2}$ C. $\frac{1}{12}$
 B. 3 D. $\frac{12}{6}$

5) Which pair of numbers are equivalent?

- A. 6.200 and 6.002 C. 2.007 and 2.07
 B. 4.01 and 4.1 D. 3.5 and 3.50

6) A scientist plots temperature changes on a graph with time in hours on the x-axis and temperature on the y-axis. Point (6, 72) appears on the graph. This means the temperature was 72 degrees at which time?

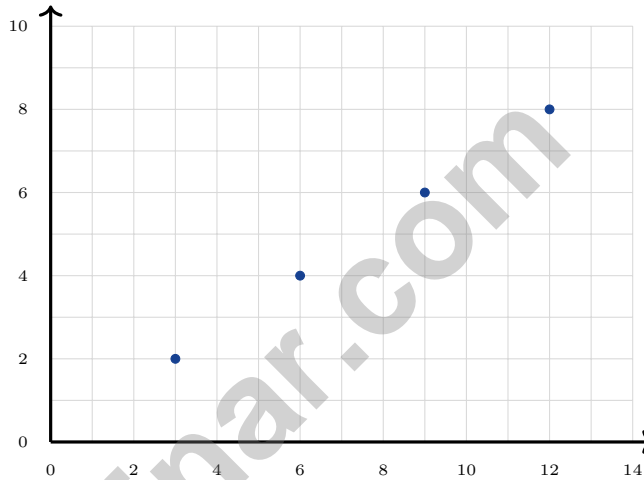
- A. 6 degrees at 72 minutes C. At 6 hours
 B. At 72 hours D. 6 minutes past



7) Which pair of triangle descriptions can occur together?

- | | |
|---|---|
| <input type="checkbox"/> A. Right and equilateral | <input type="checkbox"/> C. Right and isosceles |
| <input type="checkbox"/> B. Acute and obtuse | <input type="checkbox"/> D. Isosceles and scalene |

8) Cole graphs the pattern from Rule A: multiply position by 3, starting at position 1. This gives the sequence 3, 6, 9, 12. For the y -coordinates, he uses Rule B: multiply position by 2, starting at position 1, giving 2, 4, 6, 8. What is his third ordered pair?



- | | |
|-------------------------------------|------------------------------------|
| <input type="checkbox"/> A. (12, 8) | <input type="checkbox"/> C. (9, 6) |
| <input type="checkbox"/> B. (6, 4) | <input type="checkbox"/> D. (3, 2) |

9) How many $\frac{1}{4}$ -cup scoops are in 6 cups?

Record your answer in the space provided.



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1) What is 3×1000 ?

A. 300

B. 3000

C. 30000

D. 3300

2) Express 1,000,000,000 as a power of 10.

Record your answer in the space provided.

3) If $6 \times 9 = 54$, how many zeros does 600×900 have?

A. 3

B. 6

C. 5

D. 4

4) A sports equipment bin measures 4 feet long, 3 feet wide, and 5 feet tall. What is its volume?

A. 60 cubic feet

B. 12 cubic feet

C. 20 cubic feet

D. 15 cubic feet

5) A baker uses 2.4 cups of flour for each batch. If the baker makes 15 batches, how many cups of flour are used?

A. 36 cups

B. 34 cups

C. 32 cups

D. 38 cups



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1) A shipping container is 15 feet long, 10 feet wide, and 8 feet tall. How much space is inside?

A. 800 ft^3

B. 1000 ft^3

C. 1200 ft^3

D. 1400 ft^3

2) Error analysis: Which student made an error multiplying $7 \times \frac{2}{9}$?

Student	Work
A	$7 \times \frac{2}{9} = \frac{14}{9}$
B	$7 \times \frac{2}{9} = \frac{7 \times 2}{7 \times 9} = \frac{2}{9}$
C	$7 \times \frac{2}{9} = 1\frac{5}{9}$
D	$7 \times \frac{2}{9} = 1\frac{5}{9}$

 A. A made an error B. B made an error C. C made an error D. D made an error

3) How many right angles does a rectangle have?

Record your answer in the space provided.

4) Place-value chart for 3.915: identify the digit in the tenths place.

Ones	Tenths	Hundredths	Thousandths
3	9	1	5

 A. 3 B. 9 C. 1 D. 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.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice D is correct.** (5.NBT.B.5) Round 23 to 20 and 18 to 20. Then $20 \times 20 = 400$.
- 2) **Choice D is correct.** (5.NBT.B.5) Compare the tenths place first: 0.25 has 2 tenths and 0.52 has 5 tenths. Since $5 > 2$, we know $0.52 > 0.25$.
- 3) **Choice B is correct.** (5.OA.B.3) Each N value is 4 more than the matching M value: $2 + 4 = 6$, $4 + 4 = 8$, $6 + 4 = 10$, and $8 + 4 = 12$.
- 4) **Choice B is correct.** (5.NF.B.4) The six jumps each move $\frac{1}{2}$. Counting them lands at 3, so $6 \times \frac{1}{2} = \frac{6}{2} = 3$.
- 5) **Choice D is correct.** (5.NBT.A.1) Trailing zeros after the last non-zero digit do not change the value, so $3.5 = 3.50$. They are equivalent decimals.
- 6) **Choice C is correct.** (5.G.A.2) Time in hours is on the x-axis, so the x-coordinate (6) represents 6 hours. The temperature was 72 degrees at 6 hours.
- 7) **Choice C is correct.** (5.G.B.3) A right isosceles triangle has one 90-degree angle and two equal sides (the legs).
- 8) **Choice C is correct.** (5.G.A.2) Third position: Rule A gives $3 \times 3 = 9$; Rule B gives $3 \times 2 = 6$. Ordered pair is (9, 6).
- 9) **The correct answer is 24.** (5.NF.B.6) Each cup contains 4 fourth-cup scoops, so 6 cups contain $6 \times 4 = 24$ scoops.
- 10) **The correct answer is 0.4.** (5.NF.B.6) $5 \times 8 = 40$. Two decimal places gives $0.40 = 0.4$.
- 11) **The correct answer is 12.** (5.NBT.B.7) The least common multiple of 3 and 4 is 12.
- 12) **Choice D is correct.** (5.NF.A.2) Find each part first: Prism A is $7 \times 4 \times 4 = 112$ cubic inches, and Prism B is $6 \times 4 \times 4 = 96$ cubic inches. Because the parts do not overlap, add them: $112 + 96 = 208$ cubic inches.
- 13) **Choice A is correct.** (5.NF.B.5) Multiplying by $\frac{1}{2}$ makes a number half as large. Half of 10 is 5, so the product lands at 5.
- 14) **Choice D is correct.** (5.G.A.1) An ordered pair (x, y) shows the location of a point. The x-coordinate (3) tells how far right from the origin, and the y-coordinate (7) tells how far up. The point is at (3, 7).
- 15) **Choice A is correct.** (5.NBT.B.7) Line up decimal points and subtract place by place. $100.00 - 56.25 = 43.75$ dollars. This confirms the answer.
- 16) **Choice D is correct.** (5.MD.C.5) The base area is $8 \times 6 = 48$ square inches. Since $288 \div 48 = 6$, the height is 6 in.
- 17) **Choice D is correct.** (5.MD.C.5) 67 out of 100 squares shaded represents $\frac{67}{100} = 0.67$.
- 18) **Choice B is correct.** (5.MD.C.3) Area measures 2D flat space (square units); volume measures 3D solid space (cubic units). These are fundamentally different and use different unit types.
- 19) **Choice A is correct.** (5.G.B.4) A rectangle has four right angles. If it is not a square, it does not have four equal sides.
- 20) **Choice D is correct.** (5.NF.A.1) Borrow 1 from 3: $2\frac{11}{9} - 1\frac{7}{9} = 1\frac{4}{9}$.
- 21) **Choices A, B are correct.** (5.NF.A.2) A is true because 12 is a common denominator. B is true because $\frac{10}{12} - \frac{3}{12} = \frac{7}{12}$. C and D subtract incorrectly.
- 22) **The correct answer is 0.067.** (5.NBT.A.2) Move the decimal point two places left, adding a zero as a placeholder: $6.7 \rightarrow 0.067$.
- 23) **Choice A is correct.** (5.NBT.A.2) Common denominator is 35: $\frac{3}{5} = \frac{21}{35}$ and $\frac{2}{7} = \frac{10}{35}$. Since $21 > 10$, oil is more.
- 24) **Choice B is correct.** (5.NBT.A.2) $5,200 \div 100 = 52$. Marcus only divided by 10; Kevin divided by 1,000; Aisha did not divide.
- 25) **Choice A is correct.** (5.NBT.A.4) The tenths place is 4. Since 4 is less than 5, round down. 23.45 rounded to the nearest whole number is 23.
- 26) **Choice B is correct.** (5.NBT.B.7) Hundredths: $5 + 8 = 13$ (regroup 1 tenth); tenths: $7 + 6 + 1 = 14$ (regroup 1 one); ones: $2 + 3 + 1 = 6$. Sum is 6.43.
- 27) **Choice B is correct.** (5.NBT.B.6) $1,080 \div 15 = 72$ tickets per day. Check: $15 \times 72 = 1,080$.
- 28) **The correct answer is 9.** (5.NBT.B.6) Move the decimal point three places right: $0.009 \rightarrow 9$.
- 29) **Choice D is correct.** (5.NBT.A.2) Volume = $11 \times 11 \times 11 = 1331$ cubic centimeters.
- 30) **Choice B is correct.** (5.G.B.3) A rhombus has all four sides equal in length. It does not have to have four right angles, and it has two pairs of parallel sides.



Dear Hero of This Story,

◇ Once upon a time, there was a brave Grade 5 student who decided to take 8 practice tests. At first, the problems were tough. But the student kept showing up, kept trying, and kept learning. Slowly, the tough problems became easier. The student's confidence grew. By the time the 8th test was finished, that student had become the hero of their own math story. That student is you. ◇

★ **Storytellers know:** every great story has a hard middle. The hard middle is where the hero grows. You've lived your hard middle, and now your story is heading toward a strong ending: a confident test day. ★

Your Hero's Toolkit

- **Brave Heart:** You face hard problems instead of running.
- **Sharp Mind:** You think carefully before you act.
- **Steady Hand:** You write neatly and check your work.
- **Kind Spirit:** You're patient with yourself when you make mistakes.

Storyteller's tip: when you sit down on test day, remember the hero you've become. The chapters before this moment have made you stronger. Now, write your best chapter yet.

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 Storyteller (The Best Pages Are Ahead)

$45 \div 5 = ?$

PRACTICE TODAY.

$\frac{3}{5} + \frac{1}{10} = ?$



ACHIEVE TOMORROW!



$3^2 + 4^2 = 25$

This book includes **8** full-length **Grade 5** math practice tests to help students master essential skills, build confidence, and achieve success. Each test is carefully designed to reflect real math standards and cover a variety of question types with detailed answer explanations.

$7x - 4 = 17$

$1\frac{1}{2} + 2\frac{1}{3} = ?$

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