

5 FULL-LENGTH Colorado CMAS

GRADE 5 MATH

★ PRACTICE TESTS ★



5 FULL-LENGTH
PRACTICE TESTS



COMPLETE
STANDARDS
REVIEW



SKILL PRACTICE,
WORD PROBLEMS,
AND MORE!

$$\frac{3}{4} + \frac{2}{4} = \frac{5}{4}$$



$$12 \times 3 = 36$$



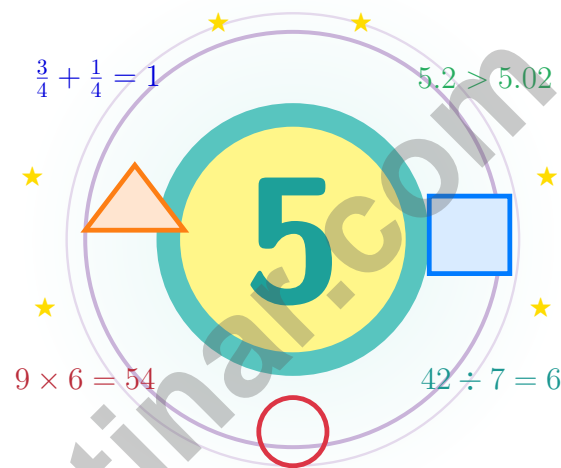
$$\frac{7}{10} = 0.7$$



BUILT FOR SUCCESS. DESIGNED TO HELP EVERY STUDENT.

5 Colorado CMAS Grade 5 Math Practice Tests

A five-checkpoint trail built for steady, brave thinking



Five full tests, a friendly quick review, smart strategy pages, and student-tested support that turn Grade 5 practice in The Centennial State into a steady quest of real growth.

Jay Daie and Reza Nazari



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Colorado Mathematicians, the Quest Awaits

A five-checkpoint trail built for steady, brave thinking

An Invitation to Grade 5 in Colorado

This book is your practice zone, not a place to be perfect. Each of the five tests gives you a chance to notice clues, choose a strategy, check your thinking, and come back stronger for the next round. 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 right away. Some will make you slow down, draw, estimate, or retry. That is excellent news. It means your math brain is doing real work.

Spot Clues

Notice the numbers, units, and tricky words.

Make a Plan

Choose the strategy or model that fits.

Bounce Back

Mistakes show you exactly where to grow next.

A strong quest habit for Colorado: slow down, write neatly, estimate before you solve, and keep going even when a problem looks tricky at first. That is exactly how confident math students are built.

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Scan me



A Simple Path Through Five Tests

A simple routine that turns five tests into real growth

Step 1: Warm Up

Sharpen your math brain with the quick review.

Wake up important ideas before you begin so your brain is ready to use them.

Step 2: Quest Run

Take a full practice test in a calm spot.

Find a quiet space, work carefully, and let accuracy matter more than speed.

Step 3: Debrief

Score honestly and circle missed questions.

Circle missed questions and look for patterns. Which skill or habit needs another try?

Step 4: Repair Kit

Fix the missed work and lock the lesson in.

Read the explanation, repair the work, and carry 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)

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)

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WEIGHT AND MASS

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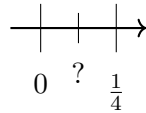


6) Complete the pattern: $1.2 \times 10 = 12$, $1.2 \times 100 = 120$, $1.2 \times 1000 = ?$

- A. 12
 B. 120

- C. 1200
 D. 12000

7) A number line shows the interval from 0 to $\frac{1}{4}$ marked as a single unit. This interval is divided into 2 equal parts. What number marks the first division?



- A. $\frac{1}{2}$
 B. $\frac{1}{8}$

- C. $\frac{1}{6}$
 D. $\frac{1}{4}$

8) A science teacher pours 3,600 mL of solution equally into 1,000 tiny sample vials for a class experiment. How many milliliters does each vial hold?

- A. 0.36 mL
 B. 3.6 mL

- C. 36 mL
 D. 360 mL

9) Find: 3.6×5 .

Record your answer in the space provided.



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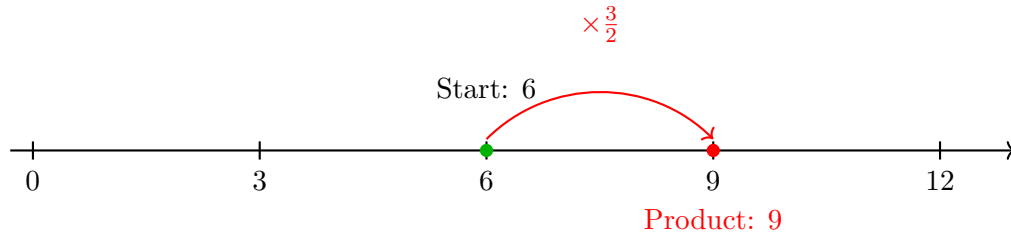
1) What is the missing factor? $____ \times 3\frac{1}{2} = 10\frac{1}{2}$

A. 5

C. 4

B. 3

D. 2



2)

On the number line, 6 is scaled by $\frac{3}{2}$. Where does the product land?

A. At 3

C. At 9

B. At 6

D. At 12

3) Two students find $3\frac{2}{5} - 1\frac{4}{5}$. Which approach is correct?

Student X: "Borrow 1 from 3 to get $2\frac{7}{5} - 1\frac{4}{5} = 1\frac{3}{5}$."

Student Y: "Convert: $\frac{17}{5} - \frac{9}{5} = \frac{8}{5} = 1\frac{3}{5}$."

A. Only X is correct

C. Neither is correct

B. Only Y is correct

D. Both are correct



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1) A student incorrectly added $\frac{1}{3} + \frac{1}{4}$ and got $\frac{2}{7}$. What is the correct answer?

A. $\frac{7}{12}$

 B. $\frac{2}{7}$ (the student is correct)

C. $\frac{2}{12}$

D. $\frac{1}{12}$

2) A student lists pairs from the rule “multiply the input by 4, then subtract 2.” Which pair does NOT belong?

 A. (1, 2) B. (2, 6) C. (3, 10) D. (4, 15)

3) How many ounces are in 6 pounds? Use the conversion: 1 pound = 16 ounces.

Pounds	Ounces
1	16
3	48
6	?

 A. 80 ounces B. 120 ounces C. 112 ounces D. 96 ounces

4) A rectangular container has base area 72 cm^2 and volume 432 cm^3 . What is the height?

 A. 5 cm B. 8 cm C. 7 cm D. 6 cm

5) A clothing store has a shirt priced at \$35.99. With a \$5.00 coupon and an additional \$3.60 sale discount, what is the final price?

 A. \$24.59 B. \$27.39 C. \$28.79 D. \$30.89

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1) What number belongs in the blank so the equation is true?

$$(\square + 2) \times 3 = 15$$

A. 2

C. 5

B. 3

D. 6

2) Which statement about missing parentheses in $6 + 2 \times 3 - 1$ is true?

Statement
1. The expression equals 16 without parentheses
2. Adding parentheses around $(6 + 2)$ changes the answer
3. Parentheses around 2×3 do not change the answer

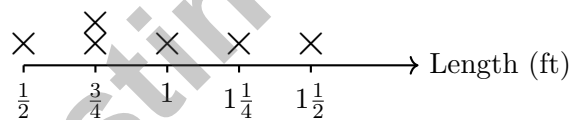
A. All statements are true

C. Statements 1 and 2 are true; 3 is false

B. Statements 2 and 3 are true; 1 is false

D. All statements are false

3) The line plot shows lengths of wire pieces, in feet:



What is the total length of the pieces that are at least 1 foot long?

A. $2\frac{1}{4}$ feet

C. $4\frac{1}{4}$ feet

B. $3\frac{3}{4}$ feet

D. 5 feet



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.MD.C.5)** Subtract the sales and returns from the total cost: $4,850 - 3,200 - 450 = 1,200$. So \$1,200 is still not covered.
- 2) **Choice C is correct.** **(5.NF.A.2)** $\frac{1}{4} = \frac{3}{12}$. $\frac{11}{12} - \frac{3}{12} = \frac{8}{12} = \frac{2}{3}$.
- 3) **Choice D is correct.** **(5.MD.C.4)** The base area is $18 \times 7 = 126$ square centimeters. Since $630 \div 126 = 5$, the height is 5 cm.
- 4) **Choice B is correct.** **(5.G.B.3)** The tick marks show two pairs of equal sides next to each other, which is a key property of a kite.
- 5) **Choice C is correct.** **(5.NF.A.2)** $4\frac{2}{3} \approx 5$ and $5\frac{1}{4} \approx 5$. So $4\frac{2}{3} + 5\frac{1}{4} \approx 5 + 5 = 10$.
- 6) **Choice C is correct.** **(5.NBT.A.2)** Following the pattern, $1.2 \times 1000 = 1200$ (move decimal 3 places right).
- 7) **Choice B is correct.** **(5.NF.B.7)** The point is halfway from 0 to $\frac{1}{4}$. Half of $\frac{1}{4}$ is $\frac{1}{8}$, so the first division is $\frac{1}{8}$.
- 8) **Choice B is correct.** **(5.NBT.A.2)** Divide the total by the number of vials: $3,600 \div 1,000 = 3.6$ mL per vial.
- 9) **The correct answer is 18.** **(5.NBT.B.7)** $36 \times 5 = 180$. Place the decimal one digit from the right: $18.0 = 18$.
- 10) **Choice C is correct.** **(5.G.A.1)** A point directly above Point A has the same x-coordinate but a larger y-coordinate. Of the choices, only (3, 9) has $x = 3$ and a y-value greater than 5.
- 11) **Choice A is correct.** **(5.G.A.2)** Pattern A gives the x-values 0, 5, 10, ... and Pattern B gives the y-values 0, 2, 4, ... The ordered pairs are (0, 0), (5, 2), and (10, 4).
- 12) **Choice C is correct.** **(5.NF.A.1)** Add whole parts: $2 + 1 = 3$. Add fractions: $\frac{2}{3} + \frac{1}{3} = 1$. Total: $3 + 1 = 4$.
- 13) **The correct answer is 4.** **(5.G.B.4)** A square is a quadrilateral, a rectangle, a rhombus, and a parallelogram.
- 14) **Choice B is correct.** **(5.MD.B.2)** Count the X marks above each length. The length $\frac{3}{8}$ foot has 3 X marks, more than any other length.
- 15) **The correct answer is $(20 - 6) \div 7$.** **(5.OA.A.2)** The phrase "then divide by 7" applies to the result of $20 - 6$, so use $(20 - 6) \div 7$.
- 16) **Choice C is correct.** **(5.OA.A.1)** Division comes first: $18 \div 6 = 3$. Now the expression is $3 + 3 - 1$, which equals 5.
- 17) **The correct answer is 7.5 m.** **(5.MD.A.1)** $750 \div 100 = 7.5$ m. Since 100 centimeters make 1 meter, divide centimeters by 100.
- 18) **Choice A is correct.** **(5.G.B.3)** Each side has three tick marks, indicating all three sides are equal in length, making this equilateral.
- 19) **Choices A, B are correct.** **(5.NF.B.5)** Multiplying by a factor less than 1 makes a number smaller, while multiplying by a factor greater than 1 makes it larger. Choices C and D reverse that scaling rule.
- 20) **Choice D is correct.** **(5.MD.A.1)** One gallon has 16 cups. $14 \times 16 = 224$ cups, and the extra cup makes $224 + 1 = 225$ cups.
- 21) **Choice A is correct.** **(5.NBT.B.7)** $8.75 - 2.36 = 6.39$ inches. Requires borrowing from tenths.
- 22) **Choice B is correct.** **(5.MD.C.4)** P: $10 \times 5 \times 4 = 200$. Q: $8 \times 6 \times 4 = 192$ (less than 200). R: 225. S: 210. Only Q is less than 200.
- 23) **Choice A is correct.** **(5.NBT.B.5)** $36 \times 15 = 36 \times (10 + 5) = 360 + 180 = 540$. Marcus's answer is correct.
- 24) **Choice D is correct.** **(5.MD.C.5)** The base area is $15 \times 6 = 90$ square inches. Since $450 \div 90 = 5$, the height is 5 in.
- 25) **Choice B is correct.** **(5.NF.A.2)** Grid A: $\frac{20}{100} = \frac{1}{5}$. Grid B: $\frac{40}{100} = \frac{2}{5}$.
- 26) **Choice A is correct.** **(5.G.A.2)** Subtract 2 from each input to get the output: $2 - 2 = 0$, $3 - 2 = 1$, $4 - 2 = 2$, and $5 - 2 = 3$.
- 27) **Choice B is correct.** **(5.G.A.2)** Moving 5 units to the right adds 5 to the x-coordinate: $3 + 5 = 8$. The y-coordinate stays the same, so the new coordinates are (8, 3).
- 28) **Choice B is correct.** **(5.NBT.B.7)** $0.53 > 0.35$ because 5 tenths $>$ 3 tenths. The plant grew more in week 2.
- 29) **Choice D is correct.** **(5.NF.A.2)** Finding a common denominator requires rewriting **each** fraction separately: $\frac{3}{8} = \frac{9}{24}$ and $\frac{5}{6} = \frac{20}{24}$. The student combined the two original fractions into one fraction, so the result does not show equivalent forms of both fractions.



Hey there, Mathematical Inventor!

★ Brilliant innovation session! You've engineered solutions to five complete practice tests, designing creative approaches and building mathematical machines in your mind like a master inventor! Every problem you solved required you to design a solution strategy, test different approaches, and refine your methods. That's exactly what inventors do and you've become exceptionally skilled at it! ★

◇ **Here's what successful inventors understand:** the first prototype rarely works perfectly. Great inventors test, adjust, redesign, and improve until they create something remarkable. You've practiced that exact process through these five tests! Each mistake taught you to refine your approach, and now you have a toolbox full of reliable mathematical inventions ready to use! ◇

Inventor's Workshop: Your Creations

- **Problem-Solving Blueprints:** You've designed reliable methods for every problem type!
- **Strategic Prototypes:** You test multiple approaches to find the most efficient solution!
- **Quality Testing:** You verify your answers to ensure accuracy before submitting!
- **Continuous Improvement:** You learn from feedback and consistently enhance your skills!

Remember this inventor's principle: preparation is the foundation of innovation! Five complete practice tests represent substantial preparation. You've tested your mathematical machines repeatedly, and they work beautifully. Test day is your opportunity to demonstrate your inventions to the world. Trust your engineering!

Want to patent a particularly clever solution method? Share your mathematical inventions at reza@testinar.com. I celebrate innovative thinking!

Reza Nazari & Jay Daie

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Strengthen key math skills through a wide variety of practice questions.



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