

$\frac{2}{3}$

0,25



%

FULL-LENGTH

Vermont

★★★★★
Aligned to State Standards

VT CAP

MATH

Grade

5

$\frac{2}{4}$

$7 \times 8 =$



7×8

$56 \div 7$

$(a+b)^2$

PRACTICE TESTS

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



3 Full-Length Practice Tests
Aligned to State Standards



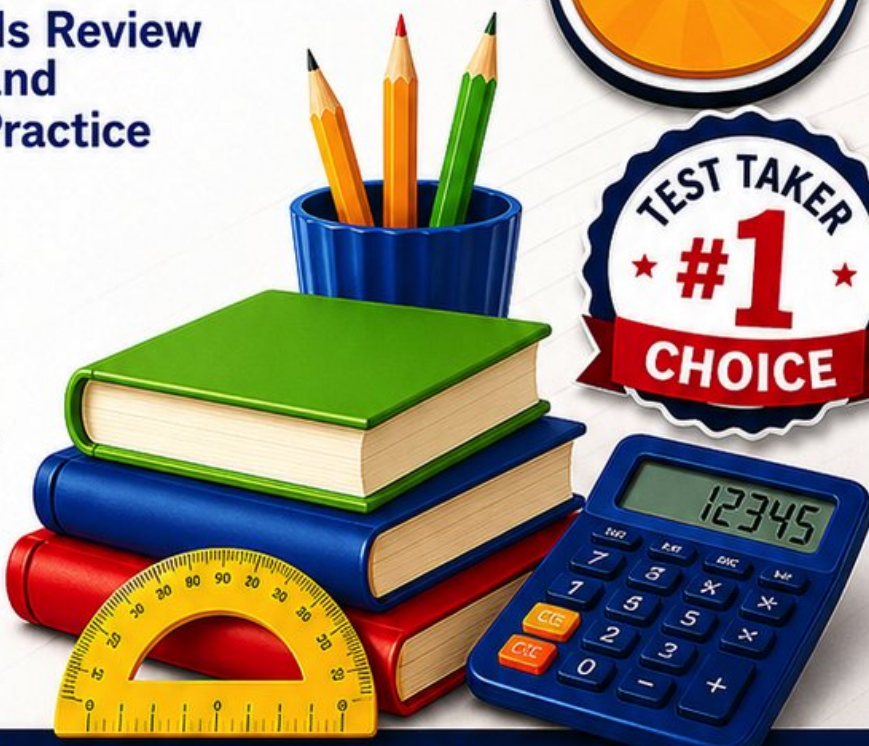
Covers All Grade 5 Math Topics
Numbers & Operations, Fractions,
Decimals, Geometry, Measurement,
Data & Problem Solving



Build Confidence
Strengthen Skills • Improve Accuracy
• Boost Test Readiness



Detailed Answer Key
Step-by-Step Explanations
for All Questions



**WRITTEN FOR
GRADE 5 STUDENTS**



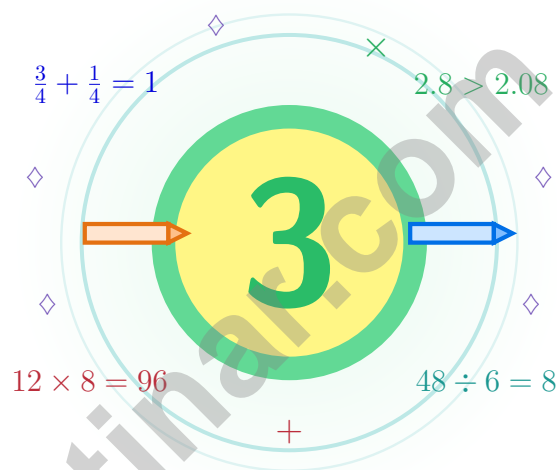
**PERFECT FOR
TEST PREP & REVIEW**



**CLASSROOM, HOME,
OR SELF-STUDY USE**

3 Vermont VTCAP Grade 5 Math Practice Tests

Green-mountain math for thinkers who walk gentle and far



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

Jay Daie and Reza Nazari



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Step Up, Vermont – Math Camp Begins

Green-mountain math for thinkers who walk gentle and far

To Every Grade 5 Problem Solver in Vermont

Math is like a Green Mountain trail – it climbs gently, rewards patience, and never asks you to sprint.

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.

Read

Read every word twice
and underline what is
being asked.

Solve

Choose the cleanest
method and show your
steps.

Reflect

Look back to find what
worked and what to fix.

A Vermont promise to yourself: I will walk through problems like a Vermont hiker – gentle pace, sharp eyes, full canteen of curiosity.

How to Get the Most Out

A simple game plan that turns practice into real progress

Step 1: Warm Up

Start with the quick review pages.
Wake up the big Grade 5 ideas before the test starts so your brain is already warmed up.

Step 2: Run

Take one full test in a calm, quiet place.
Find a calm corner, settle in, and aim for careful, honest choices before quick ones.

Step 3: Review

Score your work and circle missed questions.
Circle missed questions, sort out what went sideways, and notice which skills are calling for more attention.

Step 4: Repeat

Rework the missed questions before the next test.
Read the explanation, fix the work, and carry that lesson forward into the next test.

Your 3-Week Practice Map

Week 1	Open with Test 1 and treat it like a snapshot, not a final grade.
Week 2	Use Test 2 to attack the skills that surprised you in Test 1.
Week 3	Bring Test 3 home with calm pacing and careful checking.



Scan me

Meet the Tests

What these practice tests help Grade 5 students build

These three practice tests prepare Grade 5 students in the Green Mountain State for the Vermont VTCAP with the calm patience of a maple-grove morning. 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 VTCAP: 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

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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

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1 kilogram (kg) = 1,000 grams (g)

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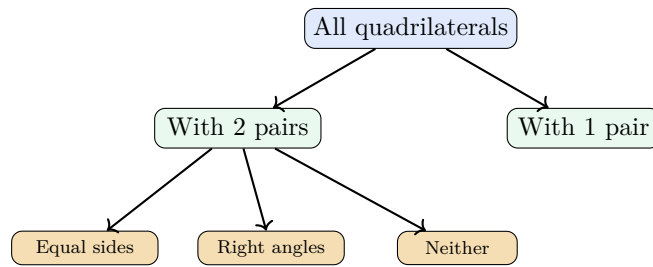
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1 day = 24 hours (hr) 1 year = 52 weeks





1)

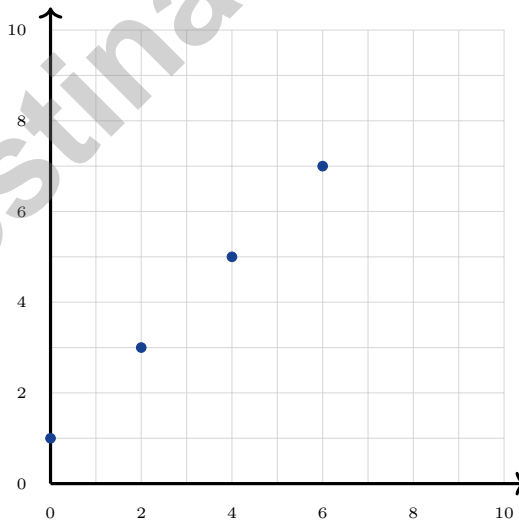
Using the diagram, which shape would be classified under "2 pairs with equal sides"?

- A. Trapezoid
- B. Quadrilateral
- C. Rectangle
- D. Rhombus or Square

2) What is $\frac{12}{15}$ in simplest form?

- A. $\frac{3}{4}$
- B. $\frac{4}{5}$
- C. $\frac{6}{7}$
- D. $\frac{2}{3}$

3) Which ordered pair is NOT in the pattern defined by the graph?



- A. (8, 9)
- B. (2, 3)
- C. (4, 5)
- D. (5, 7)



4) Which statement correctly compares two multiplications?

- A. $0.13 \times 100 > 0.13 \times 1000$
 C. $0.13 \times 10 > 1.3$
 B. $0.013 \times 100 > 1.3$
 D. $0.13 \times 100 = 13$

5)

Number	$\div 10$	$\div 100$	$\div 1,000$
356	35.6	3.56	?

What is $356 \div 1,000$?

- A. 0.356
 C. 35,600
 B. 3.56
 D. 0.035
- 6) Round 9.951 to the nearest hundredth.
- A. 9.95
 C. 10.0
 B. 9.96
 D. 9.9
- 7) Without computing, predict whether $9 \times \frac{1}{3}$ is greater than, less than, or equal to 9.
- A. Greater than 9
 C. Equal to 9
 B. Less than 9
 D. Cannot tell
- 8) A toy store receives a shipment. The shipment contains: 12 boxes of toy cars (3.2 kg each)
8 boxes of toy trucks (4.5 kg each)
What is the total weight of the entire shipment in kilograms?

Cars	Trucks
12 boxes 3.2 kg ea.	8 boxes 4.5 kg ea.

- A. 84.0 kg
 C. 80.8 kg
 B. 77.6 kg
 D. 74.4 kg



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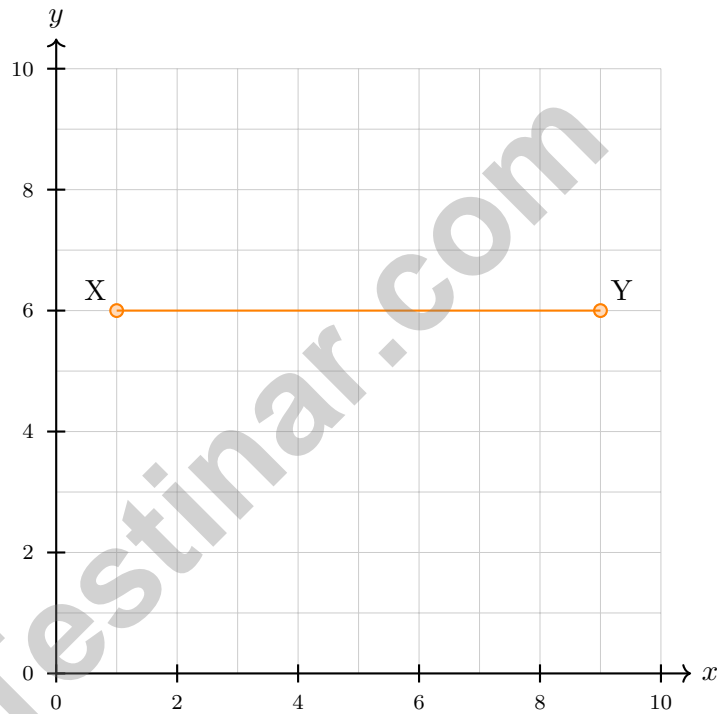
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- 1) Which expression matches a rectangular prism with length 7 units, width 3 units, and height 5 units?
- A. $7 + 3 + 5$ C. $7 \times (3 + 5)$
 B. $7 \times 3 \times 5$ D. $(7 + 3) \times 5$
- 2) Two points form a line segment. Point X is at (1, 6) and Point Y is at (9, 6). What is the length of segment XY?



- A. 6 units C. 9 units
 B. 8 units D. 10 units



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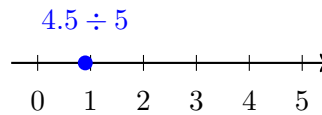
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- 1) A number line shows division. If you divide 4.5 by 5, where does the quotient fall?



- A. Between 0 and 1 C. Between 2 and 3
- B. Between 1 and 2 D. Between 4 and 5
- 2) How many ounces are in 7 pounds?
- A. 112 ounces C. 128 ounces
- B. 96 ounces D. 84 ounces
- 3) A piece of string is $\frac{3}{4}$ meter long. You use $\frac{1}{5}$ of it for a craft. What length of string do you use?
- A. $\frac{3}{20}$ meter C. $\frac{3}{5}$ meter
- B. $\frac{1}{5}$ meter D. $\frac{2}{3}$ meter
- 4) Find: $0.92 + 0.08$.

Record your answer in the space provided.

- 5) Subtract: $\frac{4}{5} - \frac{2}{3}$

- A. $\frac{2}{15}$ C. $\frac{2}{2}$
- B. $\frac{2}{8}$ D. $\frac{14}{15}$



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.

Testinar.com



Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice D is correct.** **(5.G.B.4)** Shapes with two pairs of parallel sides and equal sides are Rhombuses or Squares. A Rhombus has equal sides but not all right angles; a Square has both.
- 2) **Choice B is correct.** **(5.NF.A.2)** The GCF of 12 and 15 is 3. Divide: $\frac{12}{15} = \frac{12 \div 3}{15 \div 3} = \frac{4}{5}$.
- 3) **Choice D is correct.** **(5.G.A.2)** The second coordinate should be 1 more than the first. For (5, 7), $5 + 1 = 6$, not 7. All other points fit the rule.
- 4) **Choice D is correct.** **(5.NBT.A.2)** A is false: $0.13 \times 100 = 13 < 130 = 0.13 \times 1000$. B is true: $13 = 13$. C is false: $0.13 \times 10 = 1.3 = 1.3$ (equal, not greater). D is false: $0.013 \times 100 = 1.3 = 1.3$ (equal).
- 5) **Choice A is correct.** **(5.NBT.A.2)** Dividing by 1,000 moves the decimal 3 places left: $356 \div 1,000 = 0.356$.
- 6) **Choice A is correct.** **(5.NBT.A.4)** The hundredths place is 5. The thousandths place is 1. Since $1 < 5$, keep the hundredths digit the same. So 9.951 rounds to 9.95.
- 7) **Choice B is correct.** **(5.NF.B.5a)** Since $\frac{1}{3} < 1$, multiplying 9 by $\frac{1}{3}$ will give a result smaller than 9. No computation needed!
- 8) **Choice D is correct.** **(5.MD.A.1)** Toy cars: $12 \times 3.2 = 38.4$ kg. Toy trucks: $8 \times 4.5 = 36$ kg. Total: $38.4 + 36 = 74.4$ kg.
- 9) **The correct answer is $\frac{7}{10}$.** **(5.NF.A.1)** Rewrite $\frac{2}{5} = \frac{4}{10}$. Then $\frac{4}{10} + \frac{3}{10} = \frac{7}{10}$.
- 10) **Choice A is correct.** **(5.G.A.2)** Index 1: 2. Index 2: $2 + 3 = 5$. Index 3: $5 + 3 = 8$. Index 4: $8 + 3 = 11$.
- 11) **Choice D is correct.** **(5.NBT.B.7)** Add: $\$3.45 + \$2.28 = \$5.73$ (hundredths: $5 + 8 = 13$, regroup; tenths: $4 + 2 + 1 = 7$; dollars: $3 + 2 = 5$).
- 12) **The correct answer is 18.** **(5.NF.A.2)** Multiples of 6: 6, 12, 18, ... Multiples of 9: 9, 18, ... LCD is 18.
- 13) **Choice A is correct.** **(5.NBT.A.2)** $73 \times 10 \times 10 = 730 \times 10 = 7300$, which equals 73×100 .
- 14) **Choice D is correct.** **(5.NBT.A.2)** $5 \times 10^4 = 5 \times 10000 = 50000$ people.
- 15) **Choice A is correct.** **(5.MD.C.5a)** The base area is $10 \times 4 = 40$ square meters. Since $280 \div 40 = 7$, the height is 7 m.
- 16) **Choice A is correct.** **(5.MD.C.5)** Use the rectangular-prism volume formula: $12 \times 6 \times 8 = 576$. So the volume is 576 cubic inches.
- 17) **Choice B is correct.** **(5.OA.B.3)** Check the table: $3 \times 1 + 1 = 4$, $3 \times 2 + 1 = 7$, and $3 \times 3 + 1 = 10$.
- 18) **Choices A, B are correct.** **(5.NF.B.4)** Multiply the numerator by 3: $\frac{2}{7} \times 3 = \frac{6}{7}$. Since $\frac{6}{7}$ is just less than one whole, both A and B are true.
- 19) **Choice A is correct.** **(5.NF.B.7c)** $6 \div \frac{1}{3} = 6 \times 3 = 18$.
- 20) **The correct answer is =.** **(5.NBT.A.3b)** Trailing zero adds no value; both equal 7.2.
- 21) **Choice B is correct.** **(5.G.B.4)** The triangle has two equal angle measures, 45 degrees and 45 degrees. The sides opposite those equal angles are equal, so two sides are equal.
- 22) **Choice B is correct.** **(5.MD.C.5)** Sandwiches: $3 \times 6.50 = 19.50$ dollars. Drinks: $4 \times 2.25 = 9.00$ dollars. Subtotal: $19.50 + 9.00 = 28.50$ dollars.
- 23) **Choice A is correct.** **(5.OA.A.2)** Dividing by 2 makes the second half as large, so the first is twice the second.
- 24) **Choice B is correct.** **(5.MD.C.5a)** Volume = $18 \times 10 \times 8 = 180 \times 8 = 1440$ in³.
- 25) **The correct answer is $(7 + 8) \times 4$.** **(5.OA.A.2)** Rubric note: accept $(7 + 8) \times 4$, $4 \times (7 + 8)$, or any equivalent expression that clearly shows 7 and 8 are added first and that the resulting sum is multiplied by 4.
- 26) **The correct answer is 9348.** **(5.NBT.B.5)** $246 \times 8 = 1,968$ and $246 \times 30 = 7,380$. Sum: $1,968 + 7,380 = 9,348$.
- 27) **Choice D is correct.** **(5.NBT.B.7)** $5.4 \times 2 = 10.8$. Since 10.8 is only 0.8 away from 10 but 4.2 away from 15, it is closer to 10.
- 28) **Choice C is correct.** **(5.NF.A.1)** Convert to fourths: $2\frac{2}{4} + 1\frac{3}{4} = 3\frac{5}{4} = 4\frac{1}{4}$ m.
- 29) **Choice A is correct.** **(5.NF.B.7c)** Use total amount divided by the size of one piece. The equation is $2 \div \frac{1}{8} = n$.
- 30) **Choice C is correct.** **(5.MD.C.4)** Original: $8 \times 2 \times 2 = 32$ cubes. Double the length to 16: $16 \times 2 \times 2 = 64$ unit cubes.
- 31) **Choice C is correct.** **(5.NBT.B.6)** Area model: $50 + 16 = 66$. Check: $24 \times 66 = 1,584$.



Cheer Squad Final Pep Talk

Hey Math Superstar!

◇ 3 practice tests! That's a LOT of work, and you did it all! I'm cheering so loud right now you can probably hear me through this page. You've earned every clap, every hooray, and every smile. ◇

★ **Cheerleader truth:** confidence is built by showing up. You showed up 3 times. That's why your confidence is real today. It's not pretend. You earned it, problem by problem. ★

Cheer Squad Roll Call

- **Effort:** 100% SHOWED UP!
- **Heart:** HUGE!
- **Skill:** STRONG and growing!
- **Spirit:** BRIGHT and bold!

Cheer tip: on test day, be your own cheerleader. Whisper to yourself: "I've got this. I've practiced. I'm ready." Tiny self-cheers make a big difference.

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 Cheerleader (Go You!)

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!



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and practice materials!