

4 Vermont VTCAP

GRADE
6
MATH

PRACTICE TESTS

Standards Aligned Problem Solving
For Comprehensive Assessment Programs

4

**PRINTED
TESTS**



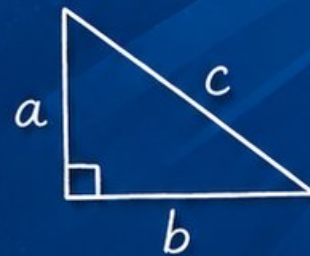
2

**ONLINE
TESTS**



- ✓ Build Confidence
- ✓ Master Key Math Skills
- ✓ Answer Explanations for Every Question
- ✓ Test-Taking Strategies That Work

$$2x + 5 = 21$$
$$x = 8$$



$$\frac{3}{4} + \frac{1}{2} = \frac{5}{4}$$

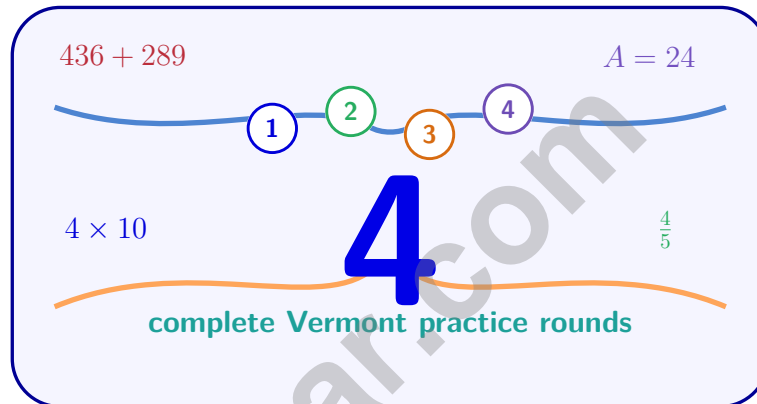


**USE THESE TWO
ADDITIONAL ONLINE
PRACTICE TESTS**

**FOR EXTRA REVIEW AFTER
THE PRINTED TESTS
IN THIS BOOK.**

4 Vermont VTCAP Grade 6 Math Practice Tests

Standards-Aligned Green-Mountain Precision for Vermont Comprehensive Assessment Program



Four complete 40-question Grade 6 practice rounds for VTCAP, built for green-mountain precision with ratios, rational numbers, expressions, equations, geometry, statistics, answer keys, and clear explanations for every item.

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Welcome, Vermont Math Explorer!

Four focused rounds using green-mountain precision

This book gives you four full Grade 6 practice tests for VTCAP. Each round uses mountain lanes, quiet classrooms, and careful number sense as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

Your Vermont Practice Promise

Keep the solution sturdy: read slowly, organize facts, and check the final answer.

Read

Plan

Check

How to Use This Book

A four-session routine for green-mountain precision

1. **Preview the skills.** Scan the quick review pages before beginning the first round.
2. **Mark confidence.** Put a small star beside problems where your plan felt strong.
3. **Work in order.** Take one 40-question test at a time in a quiet place.
4. **Plan the next round.** Use the growth log to choose one habit and one skill to practice.
5. **Correct actively.** Retry missed items before reading the full explanation.

Vermont review rhythm: Use each round like a trail marker, then review what to strengthen before the next test.



What Is Inside?

Four VTCAP tests, 160 questions, and a full review path

Part	What You Will Practice
Tests 1–2	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Tests 3–4	Skill-building and final stamina rounds with expressions, equations, geometry, data, and problem models.
Answer Pages	Compact keys and explanations that show why each answer works.

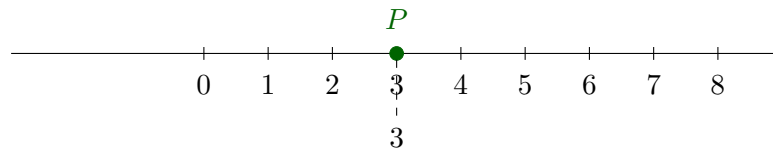
The tests are mixed on purpose. Green-mountain precision means recognizing the skill even when the next question changes topic, changes format, or asks for an explanation.



Scan me!
For more practice
& answers

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5)

Which number is less than P ? A. 5 C. 2 B. 4 D. 66) What is $-7 + 3$? A. -10 C. 4 B. -4 D. 10

7) A composite shape is made of a rectangle 10 m by 5 m joined to a parallelogram with base 10 m and height 3 m. What is the total area?

 A. 50 m^2 C. 65 m^2 B. 30 m^2 D. 80 m^2

8) In a group of 200 people, 50 are left-handed. What percent are left-handed?

9) A storage box has dimensions $2\frac{1}{2}$ m by $1\frac{1}{2}$ m by 2 m. Find its volume. A. 6 m^3 C. 9 m^3 B. 7.5 m^3 D. 12.5 m^3 

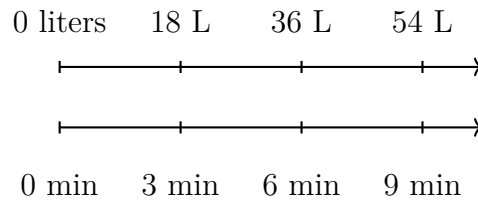
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- 10) A vertical segment goes from $(5, 2)$ to $(5, 8)$. What is its length?
- A. 4 units C. 7 units
 B. 5 units D. 6 units
- 11) A coordinate plane shows a rectangle with vertices at $(1, 2)$, $(7, 2)$, $(7, 8)$, and $(1, 8)$. What is the area of the rectangle?
- A. 30 square units C. 42 square units
 B. 48 square units D. 36 square units
- 12) A company sells 480 products in one month. If 25% of the sales were online, how many products were sold online?

- 13) If a rectangular prism has length 12 cm, width 9 cm, and height 6 cm, what is the lateral surface area (area of the 4 vertical faces, not including top and bottom)?
- A. 108 cm^2 C. 216 cm^2
 B. 180 cm^2 D. 252 cm^2
- 14) Which ordered pair is in Quadrant II?
- A. $(7, -2)$ C. $(4, 6)$
 B. $(-3, 5)$ D. $(-5, -4)$



- 1) A garden hose fills containers at a steady rate.



What is the unit rate in liters per minute?

- A. 4 L/min C. 6 L/min
 B. 5 L/min D. 9 L/min
- 2) Which is the BEST rewrite of the non-statistical question to make it statistical?
 Original: “Who is the tallest person?”
- A. Who is the tallest sixth grader in the world? C. Is the tallest person male or female?
 B. How tall is the tallest person in inches? D. What is the typical height of sixth graders in my school?
- 3) Two box plots represent Class A and Class B. Both have the same median, but Class A has a smaller box. What does this tell us about Class A?
- A. Class A has a higher average score. C. Class A has all higher scores.
 B. Class A has less variability in the middle 50% of data. D. Class A’s median is not reliable.



1) A rectangular prism has volume $\frac{80}{3}$ cm³, length $\frac{10}{3}$ cm, and width 4 cm. What is its height?

A. 1 cm

C. 3 cm

B. 4 cm

D. 2 cm

2) A car rental company charges \$25 per day. What is the cost for 4 days?

3) A garden is drawn as 8 cm long on a scale drawing. The actual garden is 16 meters long. What is the scale of the drawing in centimeters to meters?

A. 1 cm = 1 m

C. 2 cm = 1 m

B. 1 cm = 2 m

D. 8 cm = 16 m

4) A trail is $3\frac{1}{2}$ miles long. How many $\frac{3}{4}$ -mile lengths fit along the trail?

A. $2\frac{5}{8}$

C. $4\frac{2}{3}$

B. 4

D. 5

5) A recipe calls for 3.5 cups of flour. If you are making double the recipe, how much flour do you need?

A. 1.75 cups

C. 7 cups

B. 5.5 cups

D. 7.5 cups



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& answers

6) Find the LCM of 6 and 9 using prime factorization.

- A. 18 C. 36
 B. 27 D. 54

7) Which decimal is located between -1 and 0 on a number line?

- A. -1.5 C. 0.3
 B. -0.7 D. 0.8

8)

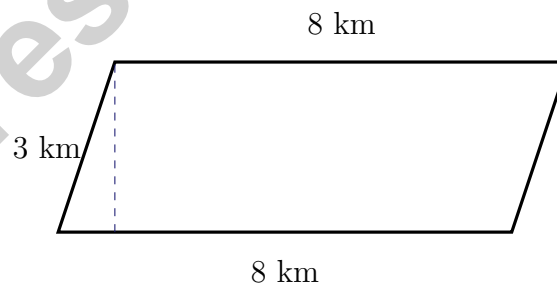
City	A	B	C	D
Temperature ($^{\circ}\text{C}$)	-5	2	-1	0

Which city is coldest?

- A. City A C. City C
 B. City B D. City D

9) What is $|-8| + |3|$?

- A. -11 C. 5
 B. -5 D. 11



10)

What is the area of this parallelogram?

- A. 11 km^2 C. 24 km^2
 B. 16 km^2 D. 64 km^2



Vermont VTCAP Practice Test Answer Keys

How to use this Vermont VTCAP answer section with a Grade 6 student:

1. check the answer first, then write one quick reason the choice is correct
2. mark questions to try again, especially the skills that feel connected to green-mountain precision
3. rework the problem before reading the full explanation, using this reminder:
Keep the solution sturdy: read slowly, organize facts, and check the final answer.

A calm Vermont correction routine turns every missed item into useful practice. Use each round like a trail marker, then review what to strengthen before the next test.



Vermont Practice Test Answers and Explanations

Review the four printed VTCAP tests with sturdy, thoughtful, and ready for the next trail habits.

Practice Test 1 Answers and Explanations

- Choice C is correct.** (6.NS.B.2) The number line shows the relationship: 0 to 4,392 on the bottom corresponds to 0 to 244 on the top. The quotient is the top label, which is 244. Verify: $18 \times 244 = 4,392$.
- Choice C is correct.** (6.NS.C.5) Absolute value is the distance from zero. Both 7 and -7 are 7 units away from zero, so $|7| = |-7| = 7$.
- Choice A is correct.** (6.NS.C.7c) Opposite numbers all have equal absolute values. $|-10| = |10| = 10$, $|-6| = |6| = 6$, $|-2| = |2| = 2$.
- Choice A is correct.** (6.NS.C.6c) On the number line, $-\frac{1}{2}$ is to the right of -1 , so it is greater. Check: $-0.5 > -1$ is true.
- Choice C is correct.** (6.NS.C.7d) $P = 3$. Since $2 < 3$, the number 2 is less than P .
- Choice B is correct.** (6.NS.B.3) Start at -7 on a number line and move 3 units right: $-7 + 3 = -4$.
- Choice D is correct.** (6.G.A.1) Rectangle area = $10 \times 5 = 50 \text{ m}^2$. Parallelogram area = $10 \times 3 = 30 \text{ m}^2$. Total = $50 + 30 = 80 \text{ m}^2$.
- The correct answer is 25%.** (6.RP.A.3c) $\frac{50}{200} = \frac{25}{100} = 25\%$ (divide both by 2).
- Choice B is correct.** (6.G.A.2) $V = 2.5 \times 1.5 \times 2 = 3.75 \times 2 = 7.5 \text{ m}^3$.
- Choice D is correct.** (6.G.A.3) For a vertical segment, subtract the y -coordinates: $8 - 2 = 6$ units.
- Choice D is correct.** (6.G.A.1) Width: $7 - 1 = 6$ units. Height: $8 - 2 = 6$ units. Area = $6 \times 6 = 36$ square units.
- The correct answer is 120.** (6.RP.A.3c) 25% of $480 = 0.25 \times 480 = 120$ products were sold online.
- Choice D is correct.** (6.G.A.4) Lateral surface area = $2LH + 2WH = 2(12)(6) + 2(9)(6) = 144 + 108 = 252 \text{ cm}^2$. (The top and bottom, each $12 \times 9 = 108 \text{ cm}^2$, are excluded.)
- Choice B is correct.** (6.NS.C.8) Quadrant II has negative x and positive y . The point $(-3, 5)$ fits this pattern.
- Choice C is correct.** (6.NS.C.8) The x -coordinates are the same, so subtract the y -coordinates: $|4 - (-2)| = |4 + 2| = 6$ units.
- Choice C is correct.** (6.EE.A.2b) Combining like terms: $(5x + 2x) + (3 - 1) = 7x + 2$. The coefficient of x in the simplified expression is 7.
- Choice B is correct.** (6.SP.B.4) A right-skewed distribution has a peak on the left and a tail extending to the right. A symmetric distribution is balanced with equal tails on both sides.
- The correct answer is The unit rate is 25 items per hour, and the y -value when $x = 1$ is 25.** (6.RP.A.3a) A is correct because $50 \div 2 = 25$ items per hour. D is correct because when $x = 1$, $y = 25$. Choice B is false for a proportional relationship, Choice C should be $y = 25x$, and Choice E is false.
- The correct answer is 9.** (6.RP.A.3) Ratio $5 : 3$ with 15 red marbles: each part is $15 \div 5 = 3$ marbles. Blue marbles: $3 \times 3 = 9$.
- Choice C is correct.** (6.SP.B.4) With 2-digit stem: stem 11 (112, 115, 118) and stem 12 (121, 124, 125). Stem 12 has 3 leaves: 1, 4, 5.
- Choice B is correct.** (6.NS.C.7d) Tax: 8% of $\$64 = 0.08 \times 64 = \5.12 . Total: $\$64 + \$5.12 = \$69.12$.
- The correct answer is 12.** (6.RP.A.3d) Multiply: $\frac{3}{4}$ pound $\times 16 \text{ oz/pound} = 12$ ounces.
- Choice D is correct.** (6.NS.C.7d) This is not proportional because the cost per notebook is not constant. For example, 1 notebook costs $\$0$, but 2 notebooks cost $\$5$, so the ratio of cost to notebooks changes.
- Choice D is correct.** (6.EE.C.9) Friend X's income: $\$500 \div 0.50 = \1000 . Friend Y's income: $\$600 \div 0.40 = \1500 . Friend Y's income ($\$1500$) is higher.
- Choice A is correct.** (6.RP.A.3) Use the scale: $2 \text{ cm} \times 5 \text{ km/cm} = 10 \text{ km}$.
- Choice B is correct.** (6.NS.A.1) Dividing by $\frac{1}{8}$ is the same as multiplying by 8. So $\frac{1}{2} \div \frac{1}{8} = \frac{1}{2} \times 8$, which simplifies to 4.



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& answers

Inventor's Workshop Note

Hi, Math Inventor!

◇ 4 practice tests. 4 chances to invent new ways to think. You tried things. You changed them. You made your math brain stronger! ◇

★ **Inventors know:** the first try isn't always the best try. Sometimes you fix it. Sometimes you start over. You did all of that! ★

Inventor's Workshop

- **Sketch Pad:** Full of ideas!
- **Toolbox:** Lots of math strategies.
- **Workbench:** Neat and organized.
- **Brave Mind:** You try new things.

Inventor tip: on test day, if your first try doesn't work, switch tools. Inventors don't get stuck on one tool. Pick the right one for the job!

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

Jay Daie

Your Math Inventor

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes 4 full-length Math practice tests and 2 online tests to help Grade 6 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:

4 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 & Rates
- ✓ Percents
- ✓ The Number System
- ✓ Statistics & Probability
- ✓ Expressions & Equations
- ✓ Data Analysis
- ✓ Geometry
- ✓ Measurement & Conversions
- ✓ Fractions & Decimals
- ✓ And More!



2 ONLINE TESTS

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



VISIT [TESTINAR.COM/MATH6](https://www.testinar.com/math6)
FOR MORE PRACTICE TESTS
AND LEARNING RESOURCES



PRACTICE
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