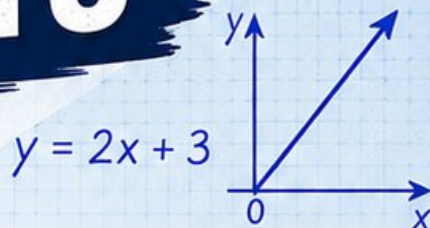


3 Vermont VTCAP

GRADE
6
MATH

PRACTICE TESTS

Standards Aligned Problem Solving
For Comprehensive Assessment Programs



$$\frac{3}{5} + \frac{2}{10} = \frac{8}{10} = \frac{4}{5}$$

$36\% \text{ of } 150 = ?$



3 | PRINTED
TESTS



2 | ONLINE
TESTS



Build
Confidence



Master Key
Math Skills



Answer Explanations
for Every Question



Test-Taking
Strategies That Work

3 Vermont VTCAP Grade 6 Math Practice Tests

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

$436 + 289$ $A = 24$

1 2 3

3×10 $\frac{3}{4}$

3

complete Vermont practice rounds

Three 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.

Jay Daie and Reza Nazari



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Welcome, Vermont Math Explorer!

Three focused rounds using green-mountain precision

This book gives you three 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 three-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?

Three VTCAP tests, 120 questions, and a full review path

Part	What You Will Practice
Tests 1–2	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Test 3	Final stamina round for expressions, equations, geometry, data, problem models, and mixed review.
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

Table of Contents

★ Practice Test 1	_____	14
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Practice Test Answer Keys	_____	62
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1) Which expression has exactly 4 terms?

A. $2a + 5$

B. $3x + 2y + 4z + 1$

C. $6m$

D. $7p + 3q$

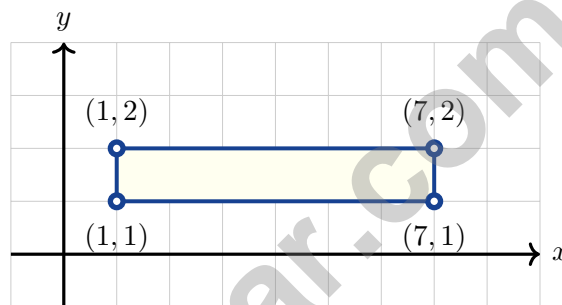
2) What are the coordinates of the origin?

A. $(1, 1)$

B. $(0, 0)$

C. $(-1, -1)$

D. $(0, 1)$



3)

What is the length of the top side of this rectangle from $(1, 2)$ to $(7, 2)$?

A. 4 units

B. 5 units

C. 6 units

D. 7 units



6) Which decimal is equivalent to 37.5%?

A. 0.0375

C. 3.75

B. 0.375

D. 37.5

7) A recipe calls for \$12 worth of ingredients. The ingredients are on sale for 25% off. How much will the ingredients cost?


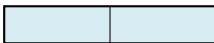
A. \$3

C. \$9

B. \$6

D. \$12

8) A paint color requires red and blue in a ratio of 3 : 2. If you use 9 cans of red paint, how many cans of blue paint do you need?

Red:  9 cans
Blue:  ? cans

A. 4 cans

C. 8 cans

B. 6 cans

D. 10 cans

9) A scientist measures a sample as 750 millimeters. How many centimeters is this? (Use 1 centimeter = 10 millimeters.)

A. 7.5 cm

C. 750 cm

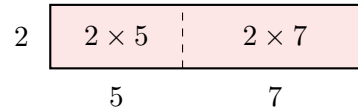
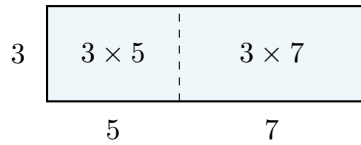
B. 75 cm

D. 7500 cm

10) A recipe calls for flour and sugar in a 5 : 2 ratio. If the recipe uses 10 cups of flour, how many cups of sugar are needed?

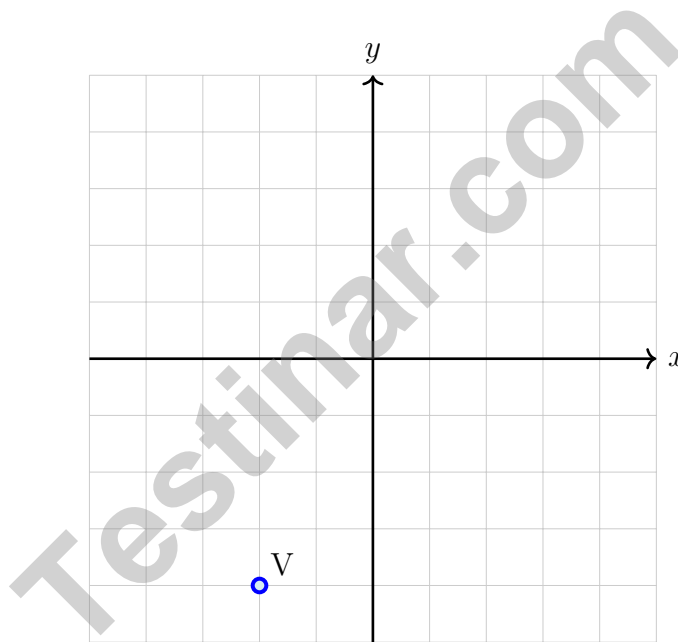


1) Two area models are shown below. What is the **sum** of both total areas shown (every small rectangle)?



- A. $3(5 + 7) + 2(5 + 7) = 60$
- B. $3(5 + 7) - 2(5 + 7) = 12$
- C. $3 \cdot 5 + 2 \cdot 7 = 29$
- D. $(3 + 2)(5 \times 7) = 175$

2)



Point V is at $(-2, -4)$. It is reflected over the x -axis. What are the coordinates of V' ?

- A. $(-2, 4)$
- B. $(2, -4)$
- C. $(2, 4)$
- D. $(-2, -4)$



3) A circle has an approximate area of 78.5 cm^2 . If $\pi \approx 3.14$, what is the radius?

- A. 5 cm C. 12.5 cm
 B. 10 cm D. 25 cm

4) A wooden crate has dimensions $5\frac{1}{2}$ m, 2 m, and 4 m. What is its volume in cubic meters?

5) Three vertices of a rectangle are at (2, 3), (8, 3), and (8, 9). What is the area of this rectangle?

6) A student asks: “Do sixth graders prefer soccer or basketball?”

This is a statistical question. What is the population?

- A. Soccer players C. All sixth graders
 B. Basketball players D. Students who answered the survey

7) A store manager wants to know the “typical” shoe size sold. Which measure of center would be most useful?

- A. Mean C. Mode
 B. Median D. Range



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1) A coach records vertical jump heights (in inches) for basketball players:

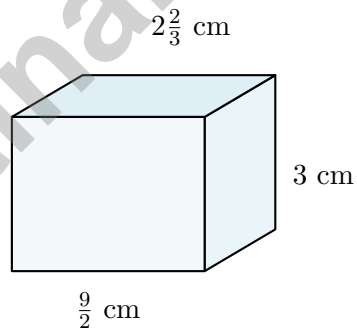
Stem	Leaf
1	8, 9
2	1, 3, 4, 6, 8, 9
3	0, 2, 5

How many players jumped at least 24 inches?

- A. 3 C. 6
 B. 5 D. 7

2) A parallelogram has a base of 8 m and a height of 5 m. What is its area?

- A. 13 m² C. 40 m²
 B. 26 m² D. 80 m²



3)

What is the volume?

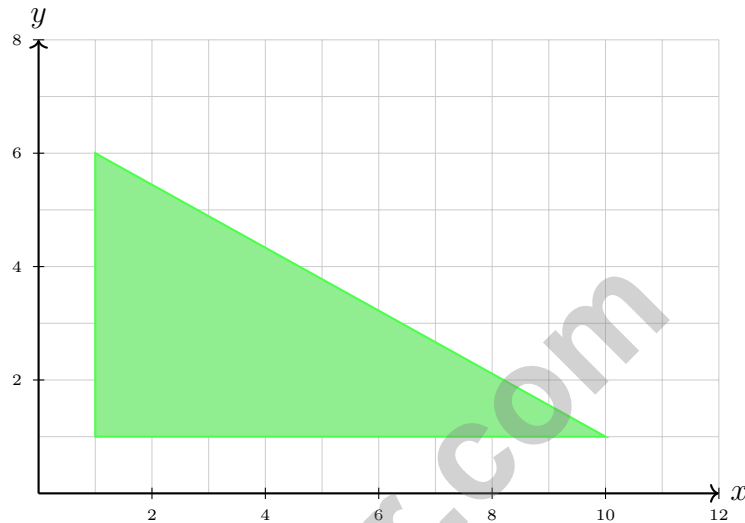
- A. 14 cm³ C. 36 cm³
 B. 18 cm³ D. 54 cm³



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& answers

4) A rectangle has area 24 square units and length 8 units. What is its perimeter?

- A. 22 units C. 16 units
 B. 20 units D. 24 units



5)

Find the area of the right triangle with vertices at $(1, 1)$, $(10, 1)$, and $(1, 6)$.

- A. 20 square units C. 25 square units
 B. 22.5 square units D. 27 square units

6) A net for a rectangular prism has the following labeled rectangles: two 3×4 rectangles, two 3×5 rectangles, and two 4×5 rectangles. What are the dimensions of the rectangular prism?

- A. $3 \times 4 \times 5$ C. $4 \times 4 \times 5$
 B. $3 \times 5 \times 5$ D. $3 \times 3 \times 5$



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

Practice Test 1 Answers and Explanations

- 1) **Choice B is correct.** **(6.EE.A.2b)** Counting each separated term: $3x$, $2y$, $4z$, and 1 gives 4 terms.
- 2) **Choice B is correct.** **(6.NS.C.8)** The origin is the intersection of the x -axis and y -axis, located at the coordinates $(0, 0)$.
- 3) **Choice C is correct.** **(6.NS.C.8)** Same y -coordinate (2): $|7 - 1| = 6$ units.
- 4) **Choice C is correct.** **(6.SP.B.4)** Total frequency: $1 + 4 + 6 + 3 + 1 = 15$. The median is the 8th value. Counting: $1 + 4 = 5$ (at 15 msg); continuing to 20 msg gives $5 + 6 = 11$. The 8th value is in the 20 message group.
- 5) **Choice C is correct.** **(6.RP.A.3a)** Look at the y -axis label: each tick on the dollars axis stands for \$10. The point $(1, 1)$ means 1 hour and $1 \times 10 = \$10$, so the rate is \$10 per hour.
- 6) **Choice B is correct.** **(6.RP.A.3c)** $37.5\% = \frac{37.5}{100} = 0.375$.
- 7) **Choice C is correct.** **(6.RP.A.3c)** 25% of $\$12 = 0.25 \times 12 = \3 . New cost is $\$12 - \$3 = \$9$.
- 8) **Choice B is correct.** **(6.RP.A.3)** Ratio 3 : 2 with red = 9 cans: each part is $9 \div 3 = 3$ cans. Blue paint: $2 \times 3 = 6$ cans.
- 9) **Choice B is correct.** **(6.RP.A.3d)** Divide: $750 \div 10 = 75$ cm.
- 10) **The correct answer is 4.** **(6.RP.A.3)** Flour is the 5-part amount. Since $10 \div 5 = 2$, each part is 2 cups, and sugar is 2 parts: $2 \times 2 = 4$ cups.
- 11) **Choice C is correct.** **(6.NS.C.7d)** Discount: 25% of $\$80 = \20 . Sale price: $\$80 - \$20 = \$60$.
- 12) **Choice B is correct.** **(6.NS.C.7d)** Option A has a constant ratio: $7/1 = 7$, $21/3 = 7$, and $35/5 = 7$. Option B does not: $2/1 = 2$, $4/3 \approx 1.33$, and $6/5 = 1.2$, so Option B is non-proportional.
- 13) **Choice B is correct.** **(6.EE.C.9)** The ratio is $\frac{15}{100} = 0.15 = 15\%$.
- 14) **Choice C is correct.** **(6.RP.A.3)** Multiply: $7 \times 2 = 14$ feet.
- 15) **Choice B is correct.** **(6.NS.A.1)** You are counting how many $\frac{1}{4}$ -cup servings fit inside 2 cups—that's a division problem: $2 \div \frac{1}{4}$. Rewrite as 2×4 , which equals 8 servings.
- 16) **Choice B is correct.** **(6.NS.B.2)** $6,300 \div 48 = 131$ remainder 12. So 131 shelves are filled completely.
- 17) **Choice D is correct.** **(6.NS.B.3)** Reading the chart: 5 ones, 4 tenths, 8 hundredths gives 5.48.
- 18) **Choice A is correct.** **(6.NS.B.4)** Factors of 26: 1, 2, 13, 26. Factors of 39: 1, 3, 13, 39. Common factors: 1, 13. GCF is 13.
- 19) **Choice C is correct.** **(6.NS.B.4)** Factors of 32: 1, 2, 4, 8, 16, 32. Factors of 48: 1, 2, 3, 4, 6, 8, 12, 16, 24, 48. Common factors: 1, 2, 4, 8, 16. GCF is 16.
- 20) **Choice C is correct.** **(6.NS.C.5)** Ordering from least to greatest: $-8 < -3 < 0$. Choice C is the only set in correct order.
- 21) **Choice A is correct.** **(6.NS.C.7c)** The opposite of a negative number is its positive version. The opposite of -15 is 15.
- 22) **The correct answer is 4 : 6 = 2 : 3 (dividing by 2) and 4 : 6 = 8 : 12 (multiplying by 2)..** **(6.RP.A.1)** Nice checking: Choice A works because $4 : 6$ simplifies to $2 : 3$, and Choice B works because multiplying both parts of $4 : 6$ by 2 gives $8 : 12$. The other choices change the relationship.
- 23) **The correct answer is 9 dollars per book.** **(6.RP.A.3d)** Divide the total cost by the number of books: $45 \div 5 = 9$ dollars per book.
- 24) **Choice B is correct.** **(6.NS.C.6c)** Absolute values: $|-2.3| = 2.3$, $|-4.1| = 4.1$, $|3.9| = 3.9$, $|1.8| = 1.8$. The greatest is 4.1.
- 25) **Choice A is correct.** **(6.NS.C.7d)** Negatives come before positives. $-\frac{1}{3} < -\frac{1}{6}$ and $\frac{1}{6} < \frac{1}{3}$.
- 26) **The correct answer is 30 mph.** **(6.RP.A.3b)** $45 \div \frac{3}{2} = 45 \times \frac{2}{3} = 30$ miles per hour.



Scan me!
For more practice
& answers

Cheer Squad Final Pep Talk

Hi, Math Star!

◇ 3 practice tests! That's a LOT of work, and you did it ALL. I am cheering so loud right now. You earned every clap and every cheer! ◇

★ **Cheerleader truth:** confidence is built by showing up. You showed up 3 times. That's real confidence. It is not pretend! ★

Cheer Roll Call

- **Effort:** 100% YOU SHOWED UP!
- **Heart:** BIG!
- **Skills:** STRONG and growing!
- **Spirit:** BRIGHT!

Cheer tip: on test day, be your own cheerleader. Whisper to yourself: "I can do this. I practiced." Tiny cheers make a big difference!

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

Jay Daie

Your Math Cheerleader

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes 3 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.

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-  Detailed Answer Explanations

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Better Problem Solving

Develop logical thinking and effective solution strategies.



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Reinforce key concepts with clear explanations and meaningful practice.



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Achieve Success

Build confidence and perform your best on test day.

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- ✓ Geometry
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- ✓ Measurement & Conversions
- ✓ And More!



2 ONLINE TESTS

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



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