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# 10 Vermont VTCAP




## GRADE 3

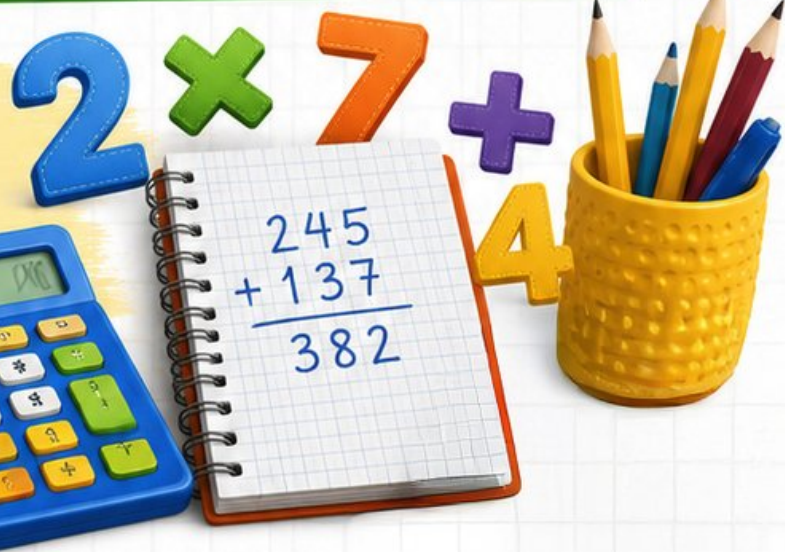
# MATH



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## PRACTICE TESTS

- ✓ Complete Standards Review
  - ✓ Skill Practice
  - ✓ Word Problems and Answer Key
- 



★ ★ ★  
**PREPARE  
PRACTICE  
SUCCEED!**  
★ ★ ★



Aligned to  
Grade 3 Math  
Standards



Build Confidence  
and Master  
Math Skills



Test-Taking  
Practice for  
Success



Answer Key  
for Easy  
Review

# 10 Vermont VTCAP Grade 3 Math Practice Tests

*Standards-Aligned Review with Mixed Practice and Answer Key*



Ten complete 30-question Grade 3 practice rounds for VTCAP, built around green hills, maple paths, and careful unit labels, with answer keys and clear explanations for every item.

**Jay Daie and Reza Nazari**



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# Welcome, Vermont Math Explorer!

Ten steady rounds on the Green Mountain math route

This book gives you ten full Grade 3 practice tests for VTCAP. Each round uses green hills, maple paths, and careful unit labels to keep practice memorable while you read carefully, choose a strategy, show work, and check the answer.

## Vermont Practice Promise

I will slow down for the question, circle what matters, solve one step at a time, and use mistakes as clues for getting stronger.

Read

Plan

Check

# How to Use This Book

A ten-session routine for Vermont VTCAP review

1. **Preview the skills.** Read the quick review pages before the first test.
2. **Take one test at a time.** Treat each round like a stop on the Green Mountain math route.
3. **Mark your confidence.** Put a small star beside problems you solved with a strong plan.
4. **Check, then retry.** For missed questions, try the problem again before reading the explanation.
5. **Track your next move.** Use the growth log to name one habit and one skill for the next test.

**Good rhythm:** Test one day, correct carefully the next day, then return for the next round when your corrections feel clear.



## What Is Inside?

Ten tests, 300 questions, and a full VTCAP review path

| Part         | What You Will Practice  |
|--------------|---|
| Tests 1–3    | Warm-up rounds for reading carefully, choosing operations, and using models.          |
| Tests 4–6    | Skill-building rounds with fractions, measurement, area, data, and two-step problems. |
| Tests 7–9    | Stamina rounds for mixed review, neat work, and flexible strategies.                  |
| Test 10      | Final round to show growth across the whole Vermont book.                             |
| Answer Pages | Compact keys and explanations that show why each answer works.                        |

The tests are mixed on purpose. Real test readiness means recognizing the skill even when the next question changes topic.



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& answers

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1) What is  $7 \times 7$ ?

A. 42

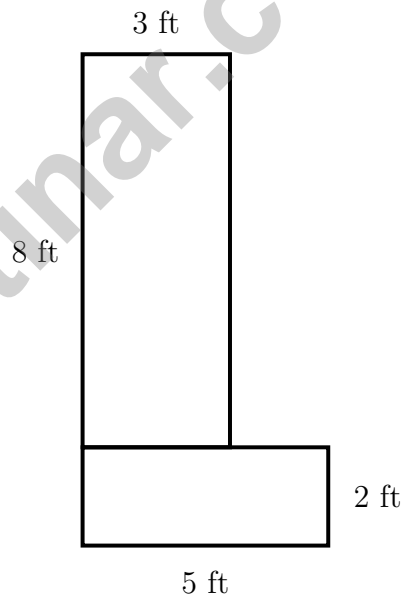
C. 56

B. 63

D. 49

2) A garden is 9 meters long and 3 meters wide. Show how you would count all the unit squares. Write a number sentence (like  $3 + 3 + 3 + \dots$ ).

3) An L-shaped garden is divided into two rectangles by a dashed line. The vertical part is 3 ft by 8 ft. The horizontal part is 5 ft by 2 ft. What is the total area?



A. 10 sq ft

C. 34 sq ft

B. 24 sq ft

D. 240 sq ft



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- 4) How many odd numbers are in the pattern 4, 8, 12, 16, 20, 24, 28? Explain why.

**Missing Addend:**  $? + 189 = 506$

5)

| Hundreds | Tens | Ones |
|----------|------|------|
| ?        | ?    | ?    |
| +        | +    | +    |
| 1        | 8    | 9    |
| 5        | 0    | 6    |

What is the missing addend?

- A. 317                       C. 406  
 B. 307                       D. 395
- 6) A rectangular game board is 5 inches long and 4 inches wide. What is the area of the game board?

- 7) Which statement is true?

- A.  $\frac{14}{7} = 1$                        C.  $\frac{14}{7} = 7$   
 B.  $\frac{14}{7} = 2$                        D.  $\frac{14}{7} = 14$



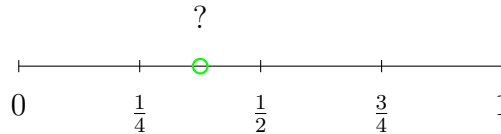
- 8) What is 916 rounded to the nearest 100?
- A. 900                       C. 916  
 B. 910                       D. 1000
- 9) A student drew four shapes: a square, a rhombus, a rectangle, and a trapezoid. How many of these shapes are always parallelograms?
- A. 1                               C. 3  
 B. 2                               D. 4
- 10) A line plot shows bookmark widths in inches:  $1, 1\frac{1}{2}, 2, 2\frac{1}{2}$ . There are three bookmarks at 1 inch, one at  $1\frac{1}{2}$  inches, and four at 2 inches. How many bookmarks are  $2\frac{1}{2}$  inches wide if the total is 11 bookmarks?
- A. 2                               C. 4  
 B. 3                               D. 5
- 11) A bar graph shows coins saved by students. Pilar has 6 units (scale: 5 coins per unit), Quinn has 4 units (scale: 5 coins per unit). How many more coins did Pilar save?
- A. 2 coins                       C. 10 coins  
 B. 6 coins                       D. 50 coins
- 12) A rectangle has area 20 square feet. Its length is 5 feet. What is its width?
- A. 3 feet                       C. 5 feet  
 B. 4 feet                       D. 15 feet



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1) Which pair of rectangles MUST have the same area?

- A. A rectangle 2 units by 6 units, and a rectangle 3 units by 4 units
  C. A rectangle 4 units by 5 units, and a rectangle 5 units by 4 units  
 B. A rectangle 5 units by 2 units, and a rectangle 4 units by 3 units
  D. A rectangle 6 units by 2 units, and a rectangle 2 units by 5 units



2)

The green dot is halfway between  $\frac{1}{4}$  and  $\frac{1}{2}$ . Which is true?

- A. The dot =  $\frac{1}{4}$ 
 C.  $\frac{1}{4} < \text{the dot} < \frac{1}{2}$   
 B. The dot  $> \frac{1}{2}$  and  $< \frac{3}{4}$ 
 D. The dot =  $\frac{1}{2}$

3) What is  $9 \times 8$ ?

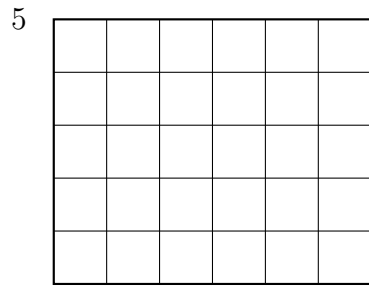
- A. 63
  C. 72  
 B. 70
  D. 80

4) Which statement correctly compares a square and a rectangle?

- A. Every rectangle is a square
  C. They are never related  
 B. Every square is a rectangle
  D. A square has no parallel sides



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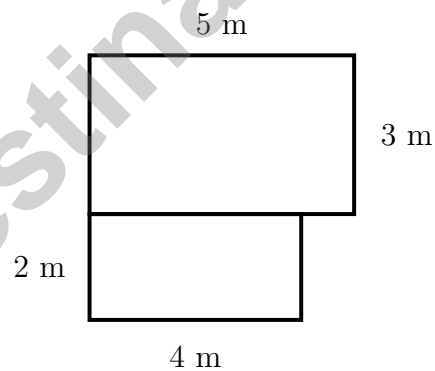


5)

A playground is covered with square tiles. It is 6 tiles wide and 5 tiles long. How many tiles are there?

 A. 22 C. 11 B. 30 D. 65

6) An L-shaped garden is divided into two rectangles. The top rectangle has length 5 m and width 3 m. The bottom rectangle has length 4 m and width 2 m. What is the total area of the garden?

 A. 14 sq m C. 38 sq m B. 23 sq m D. 120 sq m



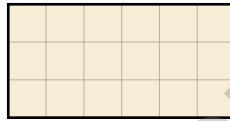
Shape A

1)

How many right angles does this shape have?

 A. 2 C. 4 B. 3 D. 6

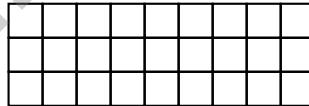
2) This grid shows a shape made of unit squares.



The area is how many square units?

 A. 18 sq units C. 9 sq units B. 15 sq units D. 20 sq units

3) Eli's rectangular carpet is 9 units long and 3 units wide. Here is the grid:



Count all the unit squares. What is the area?

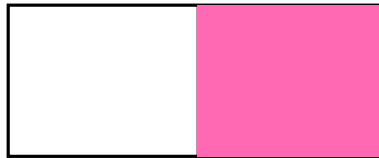
 A. 12 sq units (just the edge) C. 27 sq units B. 18 sq units D. 36 sq units

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4) A rectangle is 6 units long and 8 units wide. Which shows its area broken into two smaller rectangles?

- A.  $6 \times 8 = 6 \times (3+5) = (6 \times 3) + (6 \times 5)$      C.  $6 + 8 = 14$   
 B.  $6 \times 8 = 48$      D.  $6 + 8 + 6 + 8 = 28$

5) A rectangle has 2 equal parts. One part is shaded.



What fraction does the shaded part show?

- A.  $\frac{1}{3}$      C.  $\frac{1}{2}$   
 B.  $\frac{2}{1}$      D.  $\frac{2}{2}$
- 6) What is  $63 \div 9$ ?
- A. 6     C. 8  
 B. 9     D. 7
- 7) The theater has 8 rows of seats. Each row has 30 seats. How many seats are in the theater?
- A. 38     C. 240  
 B. 83     D. 2400



## Practice Test Answer Keys

**How to use this section with a Grade 3 student:**

1. check the answer first
2. mark questions to try again
3. rework the problem before reading the full explanation

**A calm correction routine turns every missed item into useful practice.**

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## Practice Test Answers and Explanations

### Practice Test 1 Answers and Explanations

- 1) **Choice D is correct.** **(3.OA.C.7)**  $7 \times 7 = 49$ . Seven groups of 7 equals 49.
- 2) **The correct answer is 27 sq m.** **(3.MD.C.6)** Accept any counting strategy (row-add or column-add). Students should show repeated addition or skip-counting.
- 3) **Choice C is correct.** **(3.MD.C.7d)** Vertical part:  $3 \times 8 = 24$  sq ft. Horizontal part:  $5 \times 2 = 10$  sq ft. Total:  $24 + 10 = 34$  sq ft.
- 4) **The correct answer is 0.** **(3.OA.D.9)** All numbers in this pattern are even because we're multiplying 4 (an even number) by 1, 2, 3, etc. Since 4 is even, every multiple of 4 is even. There are no odd numbers.
- 5) **Choice A is correct.** **(3.NBT.A.2)** Subtract to find the missing addend:  $506 - 189 = 317$ . Check:  $317 + 189 = 506$ .
- 6) **The correct answer is 20 square inches.** **(3.MD.C.7b)** Area = length  $\times$  width, so  $5 \times 4 = 20$  square inches.
- 7) **Choice B is correct.** **(3.NF.A.3c)** 14 sevenths divided by 7 sevenths per whole =  $14 \div 7 = 2$  wholes.
- 8) **Choice A is correct.** **(3.NBT.A.1)** The tens digit is 1. Since  $1 < 5$ , round down: 916 rounds to 900.
- 9) **Choice C is correct.** **(3.G.A.1)** A square, rhombus, and rectangle are all parallelograms (opposite sides parallel and equal). A trapezoid has only one pair of parallel sides, so it is not a parallelogram.
- 10) **Choice B is correct.** **(3.MD.B.4)** Add known values:  $3 + 1 + 4 = 8$ . Subtract from total:  $11 - 8 = 3$  bookmarks at  $2\frac{1}{2}$  inches.
- 11) **Choice C is correct.** **(3.MD.B.3)** Pilar:  $6 \times 5 = 30$  coins. Quinn:  $4 \times 5 = 20$  coins. Difference:  $30 - 20 = 10$  coins.
- 12) **Choice B is correct.** **(3.MD.C.7)** Area = length  $\times$  width. So  $20 = 5 \times$  width. Width =  $20 \div 5 = 4$  feet.
- 13) **Choices B and E are correct.** **(3.OA.B.5)** This problem shows the associative property. When you group factors differently, like  $(4 \times 6) \times 2$  or  $4 \times (6 \times 2)$ , you still get the same product. Option B states the name correctly, and E restates what associative means. A is commutative (switching order), C is distributive (breaking apart a sum), and D relates to multiplying by 1.
- 14) **Choice A is correct.** **(3.NF.A.1)** The rectangle is divided into 3 equal sections with 1 shaded. This is one unit fraction of  $\frac{1}{3}$  (one-third).
- 15) **Choice D is correct.** **(3.OA.A.1)**  $3 \times 6 = 18$  (three groups of six). James added  $3 + 6 = 9$  instead of multiplying.
- 16) **Choice B is correct.** **(3.MD.C.5)** Multiply length by width:  $9 \times 2 = 18$  square feet.
- 17) **Choice C is correct.** **(3.NF.A.3)**  $\frac{3}{4}$  and  $\frac{6}{8}$  both equal three-fourths of a whole.
- 18) **Choice B is correct.** **(3.NF.A.2)**  $\frac{3}{6}$  and  $\frac{1}{2}$  mark the same point: the middle of the line.
- 19) **Choice C is correct.** **(3.G.A.2)** If one part is  $\frac{1}{4}$  of the pizza, the pizza is divided into 4 equal parts.
- 20) **Choice A is correct.** **(3.MD.C.5a)** The rectangle is 4 by 2, so it has 8 unit squares total. A vertical line through the middle divides it into two 2-by-2 sections of 4 each.
- 21) **Choice B is correct.** **(3.NF.A.3a)**  $\frac{1}{4} = \frac{2}{8}$ . Both represent one-quarter of the bottle (see the shaded regions are equal).
- 22) **Choice D is correct.** **(3.OA.A.3)** First multiply to find total buttons:  $4 \text{ bags} \times 6 \text{ buttons per bag} = 24$  buttons. Then divide by buttons per bracelet:  $24 \div 8 = 3$  bracelets.
- 23) **Choice A is correct.** **(3.MD.A.1)** The minute hand points just past 1 (at 6 minutes), and the hour hand is just past 8.
- 24) **Choice D is correct.** **(3.OA.A.2)**  $24 \div 6 = 4$ . Divide the total students by the number of teams.
- 25) **Choice C is correct.** **(3.MD.C.5b)** Count one row of unit squares: 6 squares. Check:  $4 \text{ rows} \times 6 \text{ per row} = 24$  total. So there are 6 unit squares in each row.
- 26) **Choice B is correct.** **(3.MD.C.7c)**  $(4 \times 6) + (4 \times 2) = 24 + 8 = 32$ . Both rectangles share width 4, so the total width is  $6 + 2 = 8$ .
- 27) **Choice C is correct.** **(3.MD.C.7a)** Square tiling:  $5 \times 5 = 25$  square units.
- 28) **Choice B is correct.** **(3.NF.A.2b)**  $\frac{12}{6} = 2$ . Eli lands exactly at the whole number 2.
- 29) **Choice D is correct.** **(3.OA.B.6)**  $54 \div 6 = \square$  means  $\square \times 6 = 54$ . Since  $9 \times 6 = 54$ , the answer is 9.
- 30) **Choice B is correct.** **(3.MD.A.2)** Read the marking on the measuring cup: 200 mL.



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## Hi, Brave Explorer!

◇ What a trip! You explored 10 full tests. You went to many math places: multiplication, fractions, area, time, and more. ◇

★ **Smart explorers know:** every trip teaches something. Through 10 tests, you learned a lot. You are a stronger math explorer now. ★

### Your Explorer Tools

- **Map Reading:** You read problems carefully.
- **Trail Skills:** You take steps in the right order.
- **Backpack:** You have many math tools.
- **Brave Heart:** You explore even hard problems.

**Explorer tip:** on test day, use the tools you packed. You have the skills. You are ready!

If you want to share something or ask a question, please email me at [jay@testinar.com](mailto:jay@testinar.com).

**Jay Daie**

Your Math Trail Guide

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