

4 Vermont VTCAP

Grade 3

MATH

PRACTICE TESTS

Standards-Aligned Practice



STANDARDS-ALIGNED

Practice to build skills and boost confidence



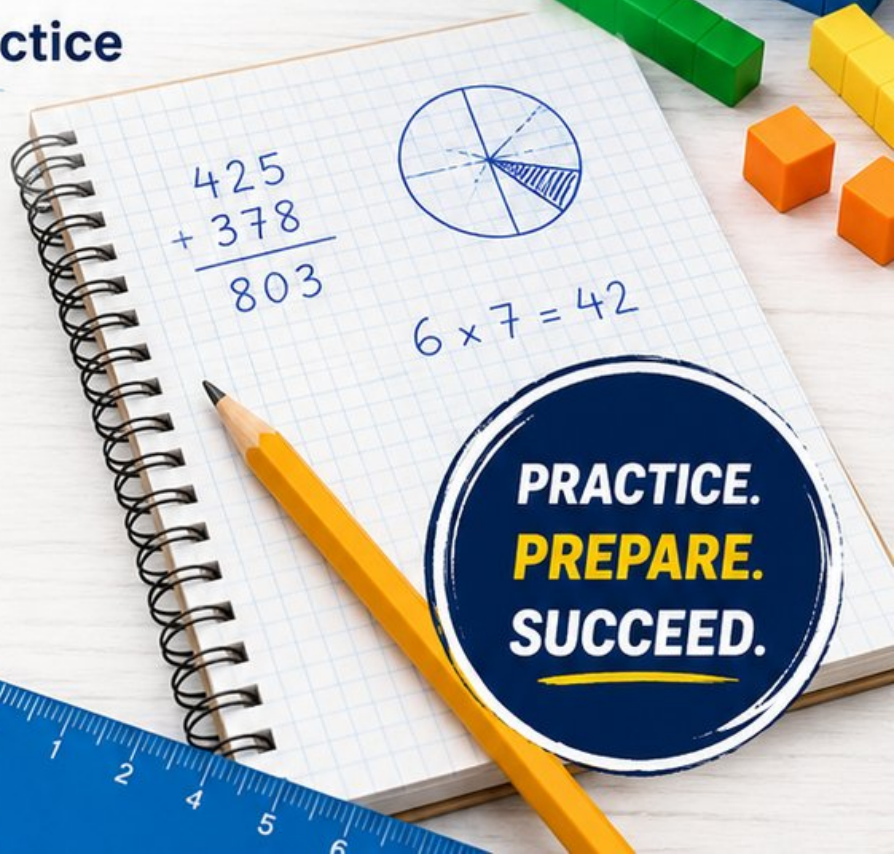
4 FULL-LENGTH TESTS

Realistic questions to prepare for test day



ANSWER KEYS & EXPLANATIONS

Detailed solutions to learn and improve



4 Vermont VTCAP Grade 3 Math Practice Tests

Standards-Aligned Review with Mixed Practice and Answer Key



Four focused 30-question missions for Grade 3 math: number facts, fractions, measurement, data, area, shapes, answer keys, and clear explanations for every item.

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Welcome to the Vermont Math Launch

Four missions, careful work, and a stronger Grade 3 thinker



Read the mission. Show the work. Check the answer. Launch again.

To the Grade 3 Mission Leader

This book is a four-mission practice launch for the Vermont VTCAP. Each test gives you a fresh chance to multiply, divide, read graphs, compare fractions, measure, find area, and explain math in a way someone else can follow.

Vermont has maple roads, green hills, and quiet trails that reward patient work. Good math uses the same habit: pause, check the details, and move forward with a steady plan.

Notice

Find the numbers, units, and question before choosing a path.

Model

Draw an array, number line, table, or quick equation.

Verify

Ask whether your answer fits the story and the unit.

Launch promise: I will slow down at the important moments, show the work I can, and use every miss as a clue for the next mission.

How to Use This Book

A four-mission routine for steady Grade 3 growth

1. Warm Up the System

Read the review pages first. Remind your brain how equal groups, fractions, clocks, graphs, and area models work.

2. Fly One Mission

Take one complete 30-question test. Keep your work neat enough that you can check it later.

3. Review the Flight

Use the answer key, then pause. A wrong answer is useful when you can name what happened.

4. Repair and Relaunch

Rework a few missed questions before starting the next test. The repair step is where the score begins to move.

A Four-Session Plan

Session 1	Take Test 1 and mark the topics that need attention.
Session 2	Take Test 2 and focus on showing every step clearly.
Session 3	Take Test 3 and watch for units, labels, and two-step problems.
Session 4	Take Test 4 and finish with calm, careful checking.

Best mission habit: After checking answers, write one sentence: “Next time I will pay attention to _____.”



Test Overview

What each Grade 3 math mission asks you to do

Each practice test has 30 questions. Across four tests, you will practice the kind of Grade 3 math thinking used on the Vermont VTCAP: reading carefully, choosing a strategy, doing accurate computation, and explaining enough work to make your answer clear.

Multiple Choice

Look for the best answer. Estimate first when you can, cross out choices that do not fit, and reread the question before you choose.

Open Response

Write the answer and show the reason. A good Grade 3 response may use a drawing, equation, table, number line, or a few clear words.

Math Ideas Inside the Four Tests

- multiplication, division, arrays, missing factors, and two-step word problems
- place value, rounding, addition, subtraction, and multiplying by tens
- unit fractions, number lines, equivalent fractions, and comparing fractions
- time, mass, liquid volume, picture graphs, bar graphs, and line plots
- area, perimeter, unit squares, rectangles, and shape categories

What strong VTCAP work looks like: the answer matches the question, the units make sense, and the work is clear enough to check.

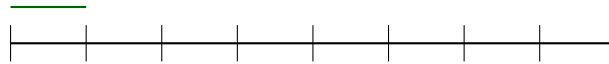


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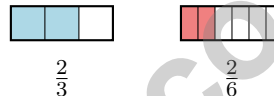
- 1) A ribbon is marked on a number line from 0 to 1 with 8 equal spaces. Mia marks the first space. What fraction of the ribbon is marked?



- A. $\frac{1}{8}$
 C. $\frac{1}{9}$
 B. $\frac{1}{7}$
 D. $\frac{2}{8}$

- 2) Sam has two chocolate bars. Bar 1 is split into 3 equal pieces. Bar 2 is split into 6 equal pieces. He eats $\frac{2}{6}$ of Bar 2. What fraction of Bar 1 equals what he ate?

- A. $\frac{2}{3}$
 C. $\frac{3}{6}$
 B. $\frac{1}{6}$
 D. $\frac{1}{3}$



3)

The bars show two fractions. Which is larger?

- A. $\frac{2}{6}$ ($6 > 3$)
 C. They are equal
 B. $\frac{2}{3}$ (shaded area is larger)
 D. Cannot tell from the bars

- 4) A room is shaped like a rectangle. It is 6 meters long and 5 meters wide. What is the area of the room?

- A. 30 sq m
 C. 11 sq m
 B. 22 sq m
 D. 36 sq m

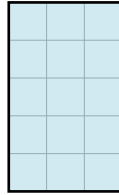
- 5) A factory packages 90 toys equally into 9 crates. They ship away 4 crates. How many toys remain?

- A. 45
 C. 55
 B. 60
 D. 50



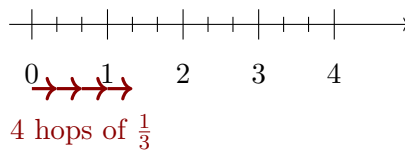
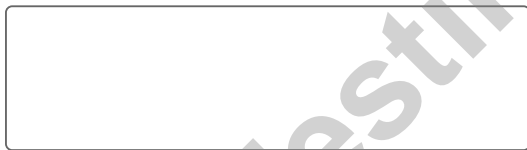
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6) This rectangle is divided into unit squares on a grid.



What is the area?

- A. 8 sq units C. 20 sq units
 B. 15 sq units D. 25 sq units
- 7) Ava’s pet kennel has room for 42 dogs. If each kennel room holds 6 dogs, how many kennel rooms does Ava need?
- A. 36 C. 8
 B. 48 D. 7
- 8) Look at the fact family: $4 \times 8 = 32$, $8 \times 4 = 32$, $32 \div 4 = 8$, and $32 \div 8 = 4$. If you know that $4 \times 8 = 32$, what is $32 \div 8$?



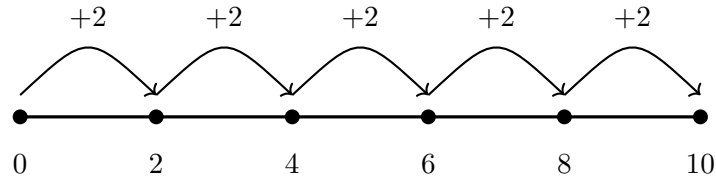
- 9)
- A frog makes 4 hops, each of size $\frac{1}{3}$, starting at 0 on a number line from 0 to 4 divided into thirds. Where does the frog end up?
- A. $\frac{3}{3}$ (at 1) C. $\frac{1}{3}$ (before 1)
 B. $\frac{4}{3}$ (between 1 and 2) D. $\frac{7}{3}$ (past 2)

10) Eli divides a cake into 6 equal pieces. What fraction is one piece?

- A. $\frac{1}{6}$
 B. $\frac{6}{1}$

- C. $\frac{5}{6}$
 D. $\frac{1}{5}$

11) Which division sentence is represented by the number line?



- A. $10 \div 5$
 B. $2 + 10$

- C. 5×2
 D. $10 \div 2$

12) Which fraction equals $\frac{1}{2}$?

- A. $\frac{2}{3}$
 B. $\frac{3}{4}$

- C. $\frac{4}{8}$
 D. $\frac{3}{8}$

13) Complete: $\square \times 8 = 56$. Then write the related division fact.

- A. $\square = 7$ and $56 \div 8 = 7$
 B. $\square = 8$ and $56 \div 7 = 8$

- C. $\square = 6$ and $56 \div 6 = 8$
 D. $\square = 9$ and $56 \div 9 = 8$

14) A farmer wants to cover two different garden areas with unit square tiles. Which two shapes can he cover perfectly without any gaps or leftover tiles?

- A. A rectangular field that is 3 units by 7 units
 B. A shape with curved, wavy edges
 C. A square garden that is 5 units on each side
 D. A shape with a triangle sticking out
 E. A shape shaped like a crescent moon



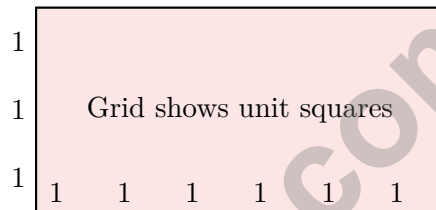
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1) What is 429 rounded to the nearest 10?

- A. 420 C. 430
 B. 429 D. 500

2) Write a fraction with numerator 3 that is larger than $\frac{3}{8}$.

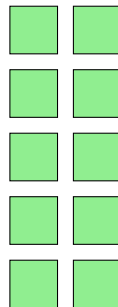
3)



The rectangle above shows 6 unit squares across and 3 unit squares down. Which multiplication statement represents this rectangle's area?

- A. $6 + 3 = 9$ C. $3 + 3 + 3 + 3 + 3 + 3 = 18$
 B. $6 \times 3 = 18$ D. $9 \times 2 = 18$

4)



How many small squares are in this array?

- A. 8 squares C. 12 squares
 B. 7 squares D. 10 squares

5) What is $56 \div 7$?

A. 7

C. 9

B. 10

D. 8

6) Mia writes this list of odd numbers: 1, 3, 5, 7, 9

What is the next odd number in the pattern?

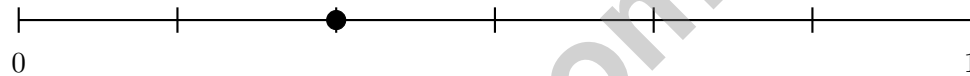
A. 10

C. 12

B. 13

D. 11

7) On this number line, the distance from 0 to 1 is divided into 6 equal parts. The point shown is at which fraction?



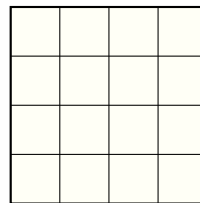
A. $\frac{1}{6}$

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

B. $\frac{2}{6}$

D. $\frac{4}{6}$

8) Mia needs to tile a floor that is 4 feet by 4 feet using 1-foot by 1-foot tiles (unit squares in feet). How many tiles does she need?



4 feet

A. 8 tiles

C. 16 tiles

B. 12 tiles

D. 20 tiles



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1) Round 589 to the nearest 100.

A. 500

C. 590

B. 580

D. 600

2) Sam divides a number line from 0 to 1 into 4 equal parts. How many parts are between 0 and the second tick mark?

A. 1

C. 3

B. 2

D. 4

3) A rectangle is divided into 3 equal parts. If $\frac{2}{3}$ is shaded, how many parts are shaded?



A. 1 part

C. 3 parts

B. 2 parts

D. 0 parts

4) Find 6×4 .

5) Mia groups coins into 9 piles of 10 coins each. Use the place-value chart to show the total.

Tens	Ones
9	0

What is the total number of coins?

A. 19

C. 910

B. 109

D. 90



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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

- Choice A is correct.** (3.NF.A.2a) One of eight equal spaces is $\frac{1}{8}$.
- Choice D is correct.** (3.NF.A.3a) $\frac{2}{6} = \frac{1}{3}$. When Sam eats $\frac{2}{6}$ of Bar 2, he ate the same amount as $\frac{1}{3}$ of Bar 1.
- Choice B is correct.** (3.NF.A.3d) Visual reasoning: same numerator (2), so both take 2 pieces. But $\frac{2}{3}$ divides the whole into 3 parts (each third is large), while $\frac{2}{6}$ divides into 6 parts (each sixth is small). Comparing shaded amounts: 2 large pieces > 2 small pieces, so $\frac{2}{3} > \frac{2}{6}$.
- Choice A is correct.** (3.MD.C.7) Area = $6 \times 5 = 30$ square meters.
- Choice D is correct.** (3.OA.D.8) Step 1: Toys per crate: $90 \div 9 = 10$ toys. Step 2: Crates remaining: $9 - 4 = 5$ crates. Total toys: $5 \times 10 = 50$ toys.
- Choice B is correct.** (3.MD.C.6) $3 \times 5 = 15$ unit squares.
- Choice D is correct.** (3.OA.A.3) Divide: $42 \div 6 = 7$ kennel rooms needed.
- The correct answer is 4.** (3.OA.A.4) In a fact family, if $4 \times 8 = 32$, then $32 \div 8 = 4$. Multiplication and division are inverse operations.
- Choice B is correct.** (3.NF.A.2b) Four hops of size $\frac{1}{3} = 4 \times \frac{1}{3} = \frac{4}{3} = 1\frac{1}{3}$. The frog lands between 1 and 2.
- Choice A is correct.** (3.NF.A.1) A cake divided into 6 equal pieces has each piece as $\frac{1}{6}$ (one-sixth).
- Choice D is correct.** (3.OA.A.2) The number line shows jumps of 2 from 0 to 10. There are 5 jumps, so it represents $10 \div 2 = 5$.
- Choice C is correct.** (3.NF.A.3b) Multiply numerator and denominator by 4: $\frac{1 \times 4}{2 \times 4} = \frac{4}{8}$.
- Choice A is correct.** (3.OA.B.6) $7 \times 8 = 56$, so the missing factor is 7. The related division is $56 \div 8 = 7$. Multiplication and division work together.
- Choices A and C are correct.** (3.MD.C.5b) Rectangles and squares with whole-number dimensions can be covered exactly by unit square tiles without gaps or leftovers. Choice A is a 3×7 rectangle = 21 tiles. Choice C is a 5×5 square = 25 tiles. Shapes with curves (B, E) or triangular points (D) cannot be covered cleanly with square tiles alone.
- Choice B is correct.** (3.MD.C.7a) 5 rows \times 2 columns = $5 \times 2 = 10$ square units. A is sum error.
- Choice B is correct.** (3.MD.C.7c) Both smaller rectangles share width 5. Heights are 2 and 4, totaling 6. The distributive property gives $5 \times (2 + 4) = 30$.
- The correct answer is 2 X's.** (3.MD.B.4) Two leaves measured exactly $2\frac{1}{4}$ inches, so there would be 2 X's above the $2\frac{1}{4}$ mark.
- Choice A is correct.** (3.NF.A.3c) Any whole number with denominator 1 equals that number. $5 = \frac{5}{1}$. Check: (B) is all fifths, (C) is a unit fraction, (D) is not whole.
- Choice A is correct.** (3.MD.B.3) Ava: $5 \times 2 = 10$. Noah: $3 \times 2 = 6$. Difference: $10 - 6 = 4$.
- Choice B is correct.** (3.MD.C.7d) Add the areas: $16 + 12 = 28$ square units.
- Choice B is correct.** (3.MD.C.5a) A 6×1 grid contains exactly 6 unit squares arranged in a row.
- Choice A is correct.** (3.NF.A.3) Each friend gets $\frac{1}{3}$, which is equivalent to $\frac{2}{6}$.
- Choice C is correct.** (3.G.A.1) A square has all 4 sides equal in length and all 4 angles are right angles (90 degrees). This makes it both a rectangle and a rhombus.
- Choice C is correct.** (3.OA.D.9) The pattern adds 3 each week: 3, 6, 9, 12. This is skip counting by 3.
- Choice D is correct.** (3.OA.B.5) $6 \times 3 = 18$. Options A, B, and C all equal 18. But $4 \times 3 + 2 = 12 + 2 = 14$, which does not equal 18.
- Choice B is correct.** (3.MD.C.5) The rectangle is 4 units wide and 3 units tall. $4 \times 3 = 12$ square units.
- Choice B is correct.** (3.MD.A.1) $3 : 45 - 12 \text{ min} = 3 : 33 \text{ PM}$.
- Choice C is correct.** (3.NF.A.2) $\frac{7}{8}$ means 7 out of 8 equal parts, which is the seventh tick mark from 0.
- The correct answer is 600.** (3.NBT.A.1) The tens digit is 1. Since $1 < 5$, round down: 614 rounds to 600.



Star Player Pep Talk

Hi, Star Player!

◇ 4 practice tests. Every one of them was a chance to grow. You took every chance. That's why you're a math star today! ◇

★ **Star players know:** confidence comes from practice. You can't fake it. You build it. You built yours over 4 tests. It's real now! ★

Star Player Stats

- **Practice:** OFF THE CHARTS!
- **Skills:** BROAD! You can do many problem types.
- **Toughness:** HIGH! You don't quit on hard problems.
- **Game Plan:** READY! You know your strategies.

Star tip: on test day, take it one play at a time. One problem. Then the next. You will earn your stars!

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

Jay Daie

Your Math Coach

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Build Skills. Achieve More.

This book gives **Grade 3** students the focused practice they need to master math concepts with confidence.

What's Inside?



Standards-Aligned Practice

Questions designed to match Grade 3 math standards.



Variety of Question Types

Build skills with multiple formats and challenges.



Real-World Applications

Engaging problems that connect math to life.



Step-by-Step Progress

Track improvement and see growth over time.



Build Skills & Boost Confidence

Strengthen understanding and perform better.

COVERS ALL ESSENTIAL TOPICS

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- ✓ Fractions & Decimals
- ✓ Algebraic Thinking
- ✓ Geometry
- ✓ Measurement & Data
- ✓ Number Patterns
- ✓ Word Problems
- ✓ Ratio & Proportion
- ✓ Perimeter, Area & Volume
- ✓ Graphing & Data Analysis
- ✓ And More!



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