

# 7

# Tennessee

# TCAP

## Grade 3 MATH

## PRACTICE TESTS

Standards-Aligned Practice with  
Review, Answer Keys, and Explanations



7 Full-Length  
Practice Tests



Standards-Aligned  
Math Practice



Detailed Answer Keys  
and Explanations



Build Confidence.  
Achieve Success.

PREPARE  
PRACTICE  
SUCCEED



$4 \times 6 = 24$



# 7 Tennessee TCAP Grade 3 Math Practice Tests

*Standards-Aligned Practice with Review, Answer Keys, and Explanations*



Seven complete 30-question practice trails for Grade 3 math:  
operations, fractions, measurement, data, area, shapes, answer keys,  
and clear explanations for every item.

**Jay Daie and Reza Nazari**



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# Welcome to the Seven Math Trails

Seven full tests, seven fresh chances, and one braver Grade 3 thinker



Read the trail. Mark the clues. Solve with care.

## To the Grade 3 Math Trail Leader

This book gives you seven complete practice trails for the Tennessee TCAP. Each trail is a full 30-question test, so students can practice accuracy, stamina, and clear explanations over time.

Tennessee has music streets, mountain overlooks, river bends, rolling farms, and lively classrooms, where careful steps matter. Strong math follows that same path: notice the question, choose a tool, show the work, and keep rhythm in the steps of a solution.

### Scout

Find what the problem is asking before you calculate.

### Solve

Pick an equation, model, array, graph, or number line.

### Prove

Check the answer and explain the thinking clearly.

**Seven-trail promise:** I will work with patience, use my scratch space wisely, and let every correction make my next test stronger.

# How to Use This Book

## A seven-trail routine for steady Grade 3 growth

Use one practice trail at a time. The goal is not to rush through more pages. The goal is to finish, check, repair, and bring a stronger habit to the next test. For Tennessee students, each trail moves through music streets, mountain overlooks, river bends, rolling farms, and lively classrooms: steady, alert, and ready for the next clue.

1. **Preview the tools.** Skim the reference page before each test.
2. **Take one test.** Work steadily and mark problems that need another look.
3. **Check the key.** Use the compact answer boxes first.
4. **Study explanations.** Read missed items and lucky guesses.
5. **Redo three problems.** Rewrite the work cleanly without copying.
6. **Name one habit.** Choose a focus such as labels, facts, fractions, or checking.
7. **Start the next trail.** Bring that habit into the next full test.

**Best review habit:** A missed problem is a trail marker. It shows where to slow down, look again, and choose a better step.



## What Is Inside?

Seven complete practice tests with review support

Part	What You Do	Why It Helps
Practice Tests 1–7	Solve seven different 30-question tests.	Build stamina and see Grade 3 skills mixed together.
Reference Materials	Review measurement and time facts before each test.	Keep common tools close without turning pages backward.
Answer Keys	Check each answer in compact boxes.	Find mistakes quickly without losing your place.
Explanations	Read why each answer works.	Turn missed items into a clear next step.
Standards Reference	See how Tennessee Grade 3 standards connect to practice.	Understand the skills behind the questions.

Each test has 26 multiple-choice questions, 1 select-all question, and 3 open-ended questions. This gives students practice with quick decisions, careful reading, and short written math answers for the Tennessee TCAP path.



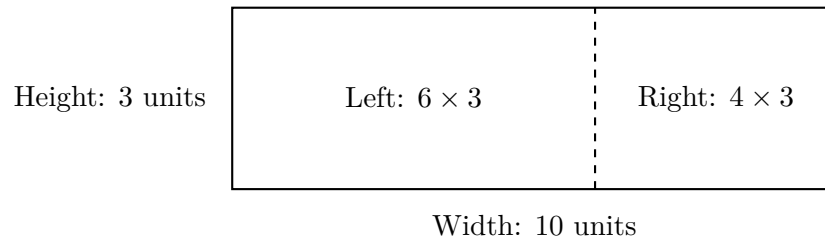
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& answers

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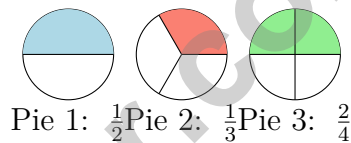
6) A rectangle is broken into two parts by a line:



Which sum of the two smaller areas gives the total area?

- A.  $3 \times (6 + 4) = 30$ 
 C.  $10 + 3 = 13$   
 B.  $(3 \times 6) + (3 \times 4) = 18 + 12 = 30$ 
 D.  $6 + 4 = 10$

7) Which two pie charts show equivalent fractions?



- A. Pies 1 and 2
  C. Pies 2 and 3  
 B. Pies 1 and 3
  D. All three pies
- 8) What is  $9 \times 30$ ?
- A. 27 (forgot to add zero)
  C. 270  
 B. 2700 (added two zeros)
  D. 39 (added instead of multiplying)
- 9) Which strategy would be MOST efficient for computing  $405 - 189$ ?
- A. Use the standard algorithm with regrouping across a zero
  C. Count up from 189 to 405 on a number line  
 B. Decompose both numbers by place value and subtract each part
  D. Round both numbers and subtract the rounded amounts



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10) Ana looks at a circle divided into 8 equal parts. One part is shaded. Ana says the shaded part is  $\frac{1}{4}$ . Is she correct? Explain why or why not.

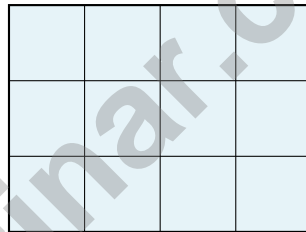
- A. Yes, because  $8 \div 2 = 4$                        C. Yes, one part is always one-fourth  
 B. No, the shaded part is  $\frac{1}{8}$                        D. No, the shaded part is  $\frac{1}{6}$

11) Ordering fractions: which list goes from smallest to largest?

- A.  $\frac{1}{8}, \frac{1}{4}, \frac{1}{2}$      C.  $\frac{1}{4}, \frac{1}{8}, \frac{1}{2}$   
 B.  $\frac{1}{2}, \frac{1}{4}, \frac{1}{8}$      D.  $\frac{1}{8}, \frac{1}{2}, \frac{1}{4}$

12) A grid shows 6 rows and 5 columns of squares. How many squares are there?

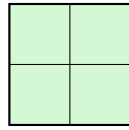
- A. 11     C. 25  
 B. 35     D. 30



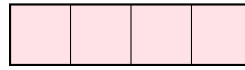
13)

How many unit squares cover the rectangle shown in the grid?

A large empty rectangular box with a thin black border, intended for the student to write the number of unit squares covering the rectangle shown in the grid above.



M



N

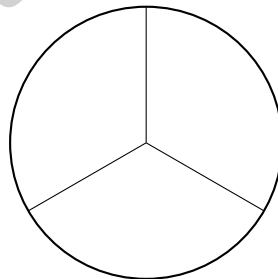
1)

Shape M is a 2-by-2 square. Shape N is a 4-by-1 rectangle. How many more unit squares does one have?

- A. Shape M has 0 more (they are equal)
- B. Shape M has 1 more
- C. Shape N has 1 more
- D. They cannot be compared

2) How many halves make one whole?

3) A circle is divided into equal parts. Each part is  $\frac{1}{3}$  of the circle. How many equal parts is the circle divided into?



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



4) A picture graph shows colored beads. Red: 5 symbols (scale: 4). Blue: 6 symbols (scale: 4). Green: 4 symbols (scale: 4). What is the total number of beads?

A. 15

C. 60

B. 48

D. 64

5) Which product is the greatest?

A.  $7 \times 40 = 280$

C.  $6 \times 50 = 300$

B.  $8 \times 30 = 240$

D.  $9 \times 20 = 180$

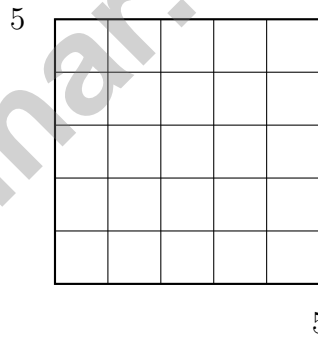
6) A shape is made of two rectangles. Rectangle 1 has area 12 sq units, and Rectangle 2 has area 15 sq units. What is the total area?

A. 15 sq units

C. 27 sq units

B. 24 sq units

D. 180 sq units



7)

This square is tiled with unit squares. How many are there?

A. 10

C. 25

B. 20

D. 55



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4) A piece of ribbon is divided into 2 equal lengths on a number line from 0 to 1. What is the unit fraction?

A.  $\frac{1}{2}$

B.  $\frac{2}{1}$

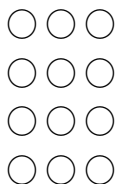
C.  $\frac{1}{1}$

D.  $\frac{1}{3}$

5) Which property of multiplication helps you solve  $8 \times 3$  by thinking about  $8 \times 2 + 8 \times 1$ ?

 A. Commutative B. Associative C. Identity D. Distributive

6)



What multiplication equation matches this picture?

A.  $3 \times 5 = 15$

B.  $7 \times 3 = 21$

C.  $3 + 4 = 7$

D.  $4 \times 3 = 12$

7) A line plot shows desk surface measurements in inches: 24,  $24\frac{1}{2}$ , 25,  $25\frac{1}{2}$ , 26. The counts are: 0 at 24 inches, 2 at  $24\frac{1}{2}$  inches, 5 at 25 inches, 1 at  $25\frac{1}{2}$  inches, and 2 at 26 inches. Which measurement appears most often?

A.  $24\frac{1}{2}$  inches

B. 25 inches

C.  $25\frac{1}{2}$  inches

D. 26 inches



## 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 D is correct.** **(3.OA.D.9)** 42 ends in 2, not 0 or 5, so it is not a multiple of 5. All others end in 0 or 5.
- Choice B is correct.** **(3.MD.A.2)** Subtract:  $280 - 250 = 30$  g.
- Choice D is correct.** **(3.NF.A.2)**  $\frac{3}{6} = \frac{1}{2}$ . Both mark the halfway point on a number line.
- Choice C is correct.** **(3.NBT.A.1)**  $6 : 19 + 26 \text{ min} = 6 : 45 \text{ PM}$ .
- Choice B is correct.** **(3.G.A.2)** When numerator = denominator, the result is always 1 whole.  $\frac{3}{3} = 1$ .
- Choice B is correct.** **(3.MD.C.5)** Add the two areas:  $3 \times 6 = 18$  and  $3 \times 4 = 12$ , total is 30 square units.
- Choice B is correct.** **(3.NF.A.3)** Pie 1 shows  $\frac{1}{2}$  (half shaded) and Pie 3 shows  $\frac{2}{4}$  (half shaded). Both represent the same amount:  $\frac{1 \times 2}{2 \times 2} = \frac{2}{4}$ .
- Choice C is correct.** **(3.NBT.A.3)** Multiply  $9 \times 3 = 27$ , then multiply by 10:  $9 \times 30 = 270$ . Add exactly one zero—not zero zeros, and not two zeros.
- Choice A is correct.** **(3.NBT.A.2)** For  $405 - 189$ , the standard algorithm with regrouping (forming 3 hundreds 9 tens from 4 hundreds 0 tens) is most direct. Count-up (C) requires many jumps; estimation (D) loses precision; place-value (B) requires tracking three separate subtractions. The algorithm minimizes errors for this problem.
- Choice B is correct.** **(3.NF.A.1)** The circle has 8 equal parts, so one shaded part is  $\frac{1}{8}$ , not  $\frac{1}{4}$ . Ana made an error by not counting the total number of equal parts.
- Choice A is correct.** **(3.NF.A.3)** All have numerator 1. Larger denominators mean smaller pieces. So eighths < fourths < halves.
- Choice D is correct.** **(3.OA.A.3)** Multiply: 6 rows  $\times$  5 columns = 30 squares.
- The correct answer is 12 unit squares.** **(3.MD.C.6)** Count rows (3) and columns (4), then multiply:  $3 \times 4 = 12$  unit squares.
- Choices A and E are correct.** **(3.G.A.2)** One horizontal and one vertical line through the center creates 4 equal rectangles. A 2 by 2 grid also makes 4 equal parts. Three uneven vertical lines do not guarantee equal parts. One diagonal line creates 2 equal triangles, and two horizontal lines create 3 parts.
- Choice D is correct.** **(3.MD.C.6)** Area =  $7 \times 5 = 35$  square inches.
- Choice D is correct.** **(3.MD.B.4)** At  $5\frac{1}{2}$ , there are zero X's. All other values have at least one X.
- Choice A is correct.** **(3.NF.A.1)** Three equal parts means each is  $\frac{1}{3}$ .
- Choice A is correct.** **(3.G.A.1)** A square is a special kind of rectangle that also has all sides equal. Every square has the properties of a rectangle (4 sides, 4 right angles), so every square is a rectangle.
- Choice A is correct.** **(3.OA.B.5)** The distributive property breaks apart the sum and multiplies each addend by 4:  $(2 + 3) \times 4 = 2 \times 4 + 3 \times 4$ .
- Choice A is correct.** **(3.NF.A.2)** From 0 to  $\frac{1}{4}$  is exactly one of the four equal parts, so it is  $\frac{1}{4}$  of the whole line.
- The correct answer is 20 square units.** **(3.MD.D)**  $4 \times 3 = 12$ ,  $2 \times 2 = 4$ , and  $2 \times 2 = 4$ , so  $12 + 4 + 4 = 20$  square units.
- Choice D is correct.** **(3.OA.A.4)** In a fact-family triangle, the top is the product. If one factor is 4 and the product is 36, then  $36 \div 4 = 9$ , so the other factor is 9.
- Choice B is correct.** **(3.MD.C.5)** Cover it with rows of unit squares:  $6 \times 4 = 24$  square units.
- Choice A is correct.** **(3.OA.D.8)** Step 1: Total stickers:  $4 \times 9 = 36$  stickers. Step 2: Share equally:  $36 \div 6 = 6$  stickers per friend.
- Choice B is correct.** **(3.MD.C.7)** Lily's area =  $6 \times 5 = 30$  sq units. Mia's area =  $7 \times 4 = 28$  sq units.  $30 > 28$ , so Lily's is larger.
- Choice A is correct.** **(3.NBT.A.1)** The ones digit is 2. Since  $2 < 5$ , round down: 472 rounds to 470.
- Choice D is correct.** **(3.OA.B.6)** The unknown factor in  $\square \times 3 = 18$  is 6. This is exactly the same as  $18 \div 3 = 6$ . Multiplication and division are inverse operations.
- The correct answer is 9.** **(3.NF.A.2)** From 0 to 3, there are 3 whole units. Each unit has 3 thirds, so  $3 \times 3 = 9$  thirds total, or  $\frac{9}{3} = 3$ .



## Hi, Math Athlete!

◇ 7 practice tests done! That's serious training. Your math muscles are strong. You are in great shape for the big test. ◇

★ **Trainers know:** muscle memory is real. The more you practice, the more your brain knows what to do without thinking. You built that muscle memory! ★

### Athlete Performance

- **Endurance:** TOP! You can finish a long test.
- **Strength:** STRONG! You handle hard problems.
- **Speed:** JUST RIGHT! You don't rush.
- **Recovery:** GOOD! You bounce back from tough questions.

**Trainer tip:** on test day, drink water, breathe deeply, and warm up with the easier questions first. Your training will carry you the rest of the way!

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 Trainer

# PRACTICE TODAY. MASTER TOMORROW.

This book is designed to help **Grade 3** students strengthen their math skills through focused practice and real progress.

- ✓ 7 full-length practice tests
- ✓ Aligned to Grade 3 standards
- ✓ Build confidence and achieve success
- ✓ Review, answer keys, and explanations



## EACH PRACTICE TEST INCLUDES:



Standards-  
Aligned  
Questions



Variety of  
Question  
Types



Real-World  
Math  
Applications



Step-by-Step  
Progress  
Tracking



Build Skills  
and Boost  
Confidence

## COVERS ALL ESSENTIAL TOPICS

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- ✓ Algebraic Thinking
- ✓ Geometry
- ✓ Measurement & Data
- ✓ Number Patterns
- ✓ Word Problems
- ✓ Ratio & Proportion
- ✓ Perimeter, Area & Volume
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