

4

North Carolina EOG

Grade 3

MATH

PRACTICE TESTS

Standards-Aligned Practice



STANDARDS-ALIGNED

Practice to build skills and boost confidence



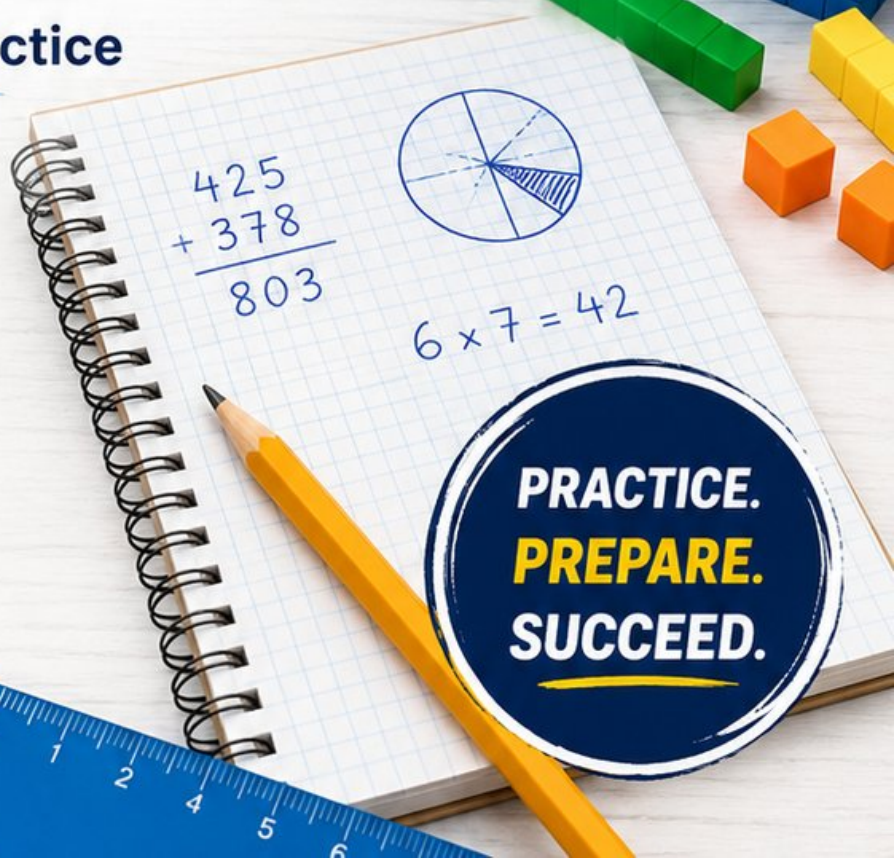
4 FULL-LENGTH TESTS

Realistic questions to prepare for test day



ANSWER KEYS & EXPLANATIONS

Detailed solutions to learn and improve



4 North Carolina EOG 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.

Jay Daie and Reza Nazari



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Welcome to the North Carolina 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 North Carolina EOG. 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.

North Carolina has mountain roads, coastal islands, and classroom trails from start to finish. 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 North Carolina EOG: 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 EOG work looks like: the answer matches the question, the units make sense, and the work is clear enough to check.

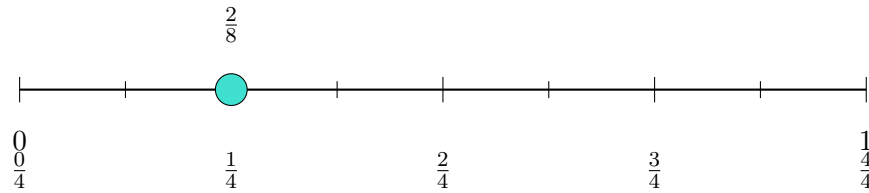


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- 1) Which fraction is equivalent to $\frac{1}{4}$?

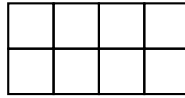


- A. $\frac{2}{8}$
 C. $\frac{1}{3}$
 B. $\frac{3}{8}$
 D. $\frac{2}{4}$
- 2) A tile floor has area 18 square feet. Which dimensions could make this area?
- A. 2 ft and 8 ft
 C. 4 ft and 5 ft
 B. 3 ft and 6 ft
 D. 4 ft and 6 ft
- 3) How many unit squares (1 in. \times 1 in.) cover a 3 in. by 6 in. rectangle?
- A. 9 unit squares
 C. 18 unit squares
 B. 12 unit squares
 D. 24 unit squares
- 4) A toy store organizes action figures into display cases. Each case has 3 rows with 5 figures in each row. The store has 2 display cases. How many figures are on display altogether?
- A. 30
 C. 8
 B. 15
 D. 10
- 5) Which expanded number sentence uses the distributive property?
- A. $2 \times (6 + 4) = 2 \times 6 + 4 = 16$
 C. $2 \times (6 + 4) = 2 + 6 + 4 = 12$
 B. Neither is correct
 D. $2 \times (6 + 4) = 2 \times 6 + 2 \times 4 = 12 + 8 = 20$



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- 10) Here is a shape made of unit squares arranged in a grid. The shape has 8 unit squares. What is the area?



- A. 4 sq units C. 12 sq units
 B. 8 sq units D. 16 sq units
- 11) A baker puts 6 cookies on each plate. If there are 8 plates, how many cookies are there?
- A. 56 C. 42
 B. 54 D. 48
- 12) What is the missing number? $\square \times 8 = 48$
- A. 5 C. 7
 B. 8 D. 6
- 13) Look at the two rectangles. Do they show equivalent fractions?

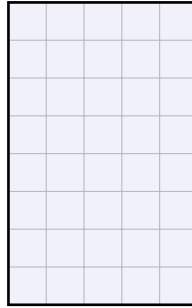
Rectangle 1: $\frac{3}{4}$ Rectangle 2: $\frac{6}{8}$

- A. Yes, they are equivalent C. It is unclear
 B. No, they are not equivalent D. No, Rectangle 1 is larger



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- 1) On a grid, a rectangle covers 8 rows and 5 columns of unit squares.



What is the area?

- A. 13 sq units C. 35 sq units
 B. 26 sq units D. 40 sq units

- 2) Which fraction names the SAME point as $\frac{4}{80}$ on the number line from 0 to 1?



- A. $\frac{1}{8}$ C. $\frac{3}{80}$
 B. $\frac{2}{4}$ D. $\frac{5}{80}$

- 3) Noah has 24 pencils to put in 3 boxes equally. How many pencils go in each box?

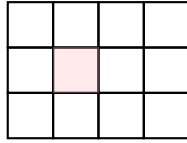
- A. 6 pencils C. 8 pencils
 B. 7 pencils D. 9 pencils

- 4) A square has side length 6 meters. What is its perimeter?



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5) Look at this shape made of unit squares. One square is shaded pink to help you see it:



How many distinct unit squares cover the shape?

- A. 11 unit squares
- B. 12 unit squares
- C. 13 unit squares
- D. 24 unit squares
- 6) $354 + 186 = ?$
- A. 540
- B. 539
- C. 549
- D. 550
- 7) What is 6×4 ?

- 8) A square piece of fabric has sides of 8 inches. What is its area?
- A. 16 square inches
- B. 32 square inches
- C. 56 square inches
- D. 64 square inches



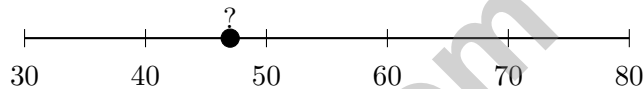
1) What is true about finding the area of a composite shape?

- A. Add the areas of the non-overlapping rectangles
- B. Add the perimeters of all parts
- C. Multiply the longest side by the widest side
- D. Divide the shape into overlapping rectangles

2) What is 7×7 ?

- A. 42
- B. 63
- C. 56
- D. 49

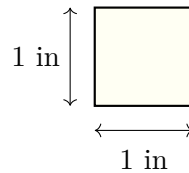
3)



Look at the number line. The number shown is between 40 and 50. To which number should it round?

- A. 40
- B. 45
- C. 50
- D. 60

4) Which measurement describes a unit square in inches?



- A. Side length 2 inches, area 2 square inches
- B. Side length 1 inch, area 1 square inch
- C. Side length 1 inch, area 2 square inches
- D. Side length 2 inches, area 4 square inches

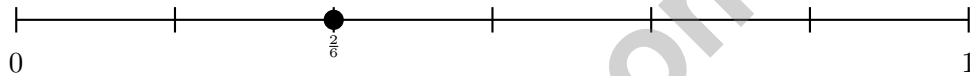


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5) $308 + 175 = ?$

 A. 483 B. 484 C. 475 D. 493

6) Write one multiplication equation for an array with 3 rows and 6 columns.

7) On a 6-part number line, $\frac{2}{6}$ is between which two fractions? A. Between 0 and $\frac{1}{6}$ B. Between $\frac{1}{6}$ and $\frac{3}{6}$ C. Between $\frac{3}{6}$ and $\frac{4}{6}$ D. Between $\frac{5}{6}$ and 1

8) Sam is paving a patio with unit square stepping stones. The patio is 4 units by 7 units. How many stones does he need?

 A. 22 stones B. 11 stones C. 56 stones D. 28 stones

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 A is correct.** **(3.NF.A.3)** $\frac{1}{4}$ and $\frac{2}{8}$ both show one-quarter of a whole.
- 2) **Choice B is correct.** **(3.MD.C.6)** $3 \times 6 = 18$ sq ft. The other choices do not equal 18.
- 3) **Choice C is correct.** **(3.MD.C.5a)** A 3 in. \times 6 in. rectangle contains $3 \times 6 = 18$ unit squares of 1 in. each.
- 4) **Choice A is correct.** **(3.OA.A.3)** First find figures per case: 3 rows \times 5 figures per row = 15 figures per case. Then multiply by number of cases: $15 \times 2 = 30$ figures altogether.
- 5) **Choice D is correct.** **(3.OA.B.5)** The distributive property multiplies 2 by each addend: $2 \times 6 + 2 \times 4 = 12 + 8 = 20$.
- 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 C is correct.** **(3.MD.C.7c)** $2 \times (9 + 1) = 2 \times 10 = 20$ or $(2 \times 9) + (2 \times 1) = 18 + 2 = 20$.
- 8) **Choice C is correct.** **(3.MD.A.2)** Convert to mL: Monday = 2000 mL, Tuesday = 1500 mL, Wednesday = 2500 mL. Wednesday is most.
- 9) **Choice C is correct.** **(3.NBT.A.3)** Multiply $8 \times 6 = 48$, then multiply by 10: $8 \times 60 = 480$. The chart shows 4 hundreds, 8 tens, and 0 ones.
- 10) **Choice B is correct.** **(3.MD.C.5b)** Counting the 8 unit squares in the grid gives an area of 8 square units.
- 11) **Choice D is correct.** **(3.OA.A.4)** Multiply: $6 \times 8 = 48$ cookies.
- 12) **Choice D is correct.** **(3.OA.B.6)** Finding the missing factor: $6 \times 8 = 48$. This is the same as asking $48 \div 8 = \square$. We think: what times 8 makes 48? The answer is 6 because $6 \times 8 = 48$.
- 13) **Choice A is correct.** **(3.NF.A.3b)** Both rectangles show the same shaded area. $\frac{3}{4} = \frac{6}{8}$ because $\frac{3 \times 2}{4 \times 2} = \frac{6}{8}$.
- 14) **Choice A is correct.** **(3.OA.A.2)** $10 \div 2 = 5$. The picture shows 10 items split into 2 equal groups of 5 each.
- 15) **Choice D is correct.** **(3.OA.A.1)** The array shows 2 columns and 5 rows of small squares. So $2 \times 5 = 10$ or $5 \times 2 = 10$.
- 16) **Choices A and C are correct.** **(3.NF.A.3c)** When numerator = denominator, the fraction always equals 1 whole. (B) $\frac{3}{1} = 3$, not 1. (D) and (E) are less than 1.
- 17) **Choice B is correct.** **(3.NF.A.2)** Count: Start at tick 1 ($\frac{1}{4}$), move 2 ticks right ($1+2=3$). Land at tick 3, which is $\frac{3}{4}$.
- 18) **Choice C is correct.** **(3.MD.C.7)** $3 \times 5 = 15$ square units. Choice A gives 18, B gives 16, and D gives 16.
- 19) **The correct answer is 700.** **(3.NBT.A.1)** The tens digit is 2. Since $2 < 5$, round down: 728 rounds to 700.
- 20) **Choice C is correct.** **(3.MD.C.7a)** Wide rectangle: $8 \times 3 = 24$ square units.
- 21) **The correct answer is trapezoid.** **(3.G.A.1)** There are many quadrilaterals beyond rectangles, squares, and rhombuses. A trapezoid (with one pair of parallel sides) is one example. Students may also draw an irregular quadrilateral with no parallel sides.
- 22) **Choice C is correct.** **(3.MD.B.4)** The mode is the value with the most X's. At $16\frac{1}{2}$, there are 3 X's, which is more than any other value.
- 23) **Choice B is correct.** **(3.NF.A.3d)** Four fourths is one whole. Four sixths is less than one whole. So $\frac{4}{4} > \frac{4}{6}$.
- 24) **Choice C is correct.** **(3.MD.C.7d)** Left: $6 \times 5 = 30$ sq ft. Right: $4 \times 3 = 12$ sq ft. Total: $30 + 12 = 42$ sq ft.
- 25) **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).
- 26) **Choice D is correct.** **(3.OA.D.9)** The cost goes up by \$5 each time. Five toys cost $5 \times 5 = \$25$.
- 27) **Choice C is correct.** **(3.OA.D.8)** Step 1: Students per bus originally: $72 \div 8 = 9$ students. Step 2: The 6 new students join one bus, so that bus has $9 + 6 = 15$ students.
- 28) **Choice A is correct.** **(3.NF.A.2b)** Four hops of $\frac{1}{4}$ each = $4 \times \frac{1}{4} = 1$. The frog lands at 1.
- 29) **Choice B is correct.** **(3.MD.C.5)** Multiply length by width: $8 \times 3 = 24$ tiles.
- 30) **Choice C is correct.** **(3.MD.B.3)** Rio: $8 \times 3 = 24$. Alex: $5 \times 3 = 15$. Fewer: $24 - 15 = 9$.

Practice Test 2 Answers and Explanations



Hi, Brave Explorer!

◇ What a trip! You explored 4 full tests. You went to many math places: multiplication, fractions, area, time, and more. ◇

★ **Smart explorers know:** every trip teaches something. Through 4 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.

Jay Daie

Your Math Trail Guide

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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.

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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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