

# 4

**COMPLETE**

# North Carolina

# EOG

Grade

# MATH

# 5

## PRACTICE TESTS

Standards-Based Test Prep with  
Mixed Review, Word Problems,  
and **Full Answer Key**



- ✓ **4 COMPLETE PRACTICE TESTS**  
Built to reflect the test format and rigor



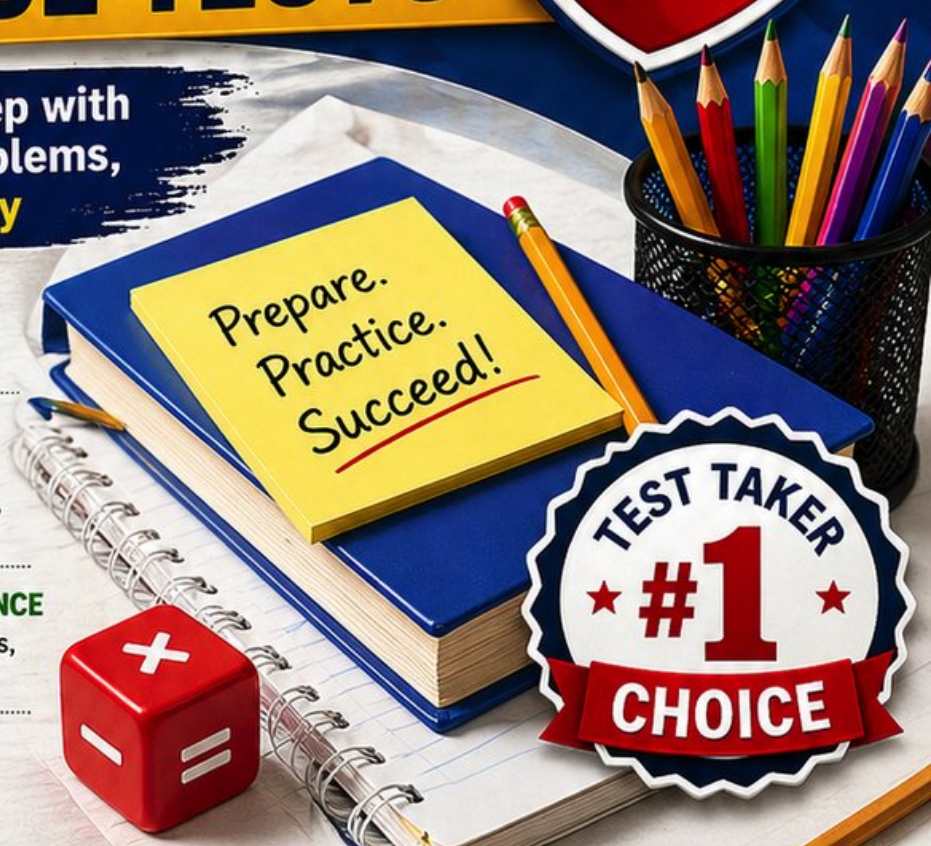
- ✓ **COVERS ALL ESSENTIAL TOPICS**  
Numbers & Operations, Fractions, Decimals, Geometry, Measurement, Data & Probability, and more



- ✓ **STRENGTHEN SKILLS & CONFIDENCE**  
Mixed review, challenging questions, and strategic practice



- ✓ **FULL ANSWER KEY INCLUDED**  
Detailed explanations for every question



**BUILD STRONG  
MATH SKILLS  
& TEST READINESS**



**IMPROVE ACCURACY,  
SPEED, AND  
PROBLEM SOLVING**



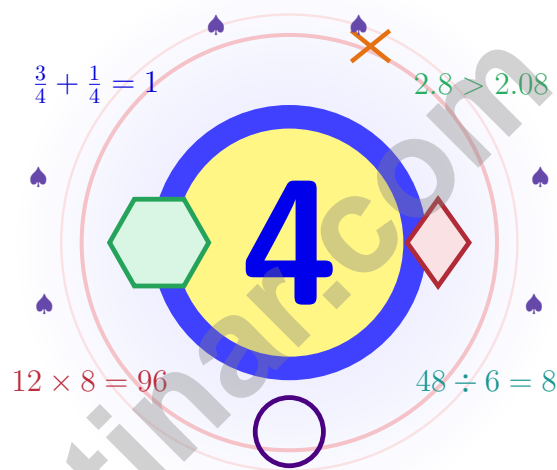
**PERFECT FOR  
CLASSROOM,  
HOME, OR  
SELF-STUDY**



**ALIGNED TO  
NORTH CAROLINA  
STATE STANDARDS  
(EOG)**

# 4 North Carolina EOG Grade 5 Math Practice Tests

*Four full tests and a coach's voice on every page*



Four full tests, a smart quick review, mission-style strategy pages,  
and student-tested support that help Grade 5 mathematicians from  
The Tar Heel State build calm, careful, confident habits.

**Jay Daie and Reza Nazari**



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# Suit Up, North Carolina – Four-Test Mission

Four full practice tests and the habits that carry you to the real one

## To North Carolina Students Who Love a Puzzle

This book gives you four chances to read closely, solve carefully, and level up your math thinking. Math practice is like the Outer Banks shoreline – it shifts with every wave, but the careful walker still finds the path.

You do not need to feel perfect before you begin. You just need to stay curious, use strategies, and learn from every correction. That is how confident mathematicians are built.

### Read Slow

Read each word twice and underline what is asked.

### Choose Smart

Pick the operation, model, or sketch that fits.

### Grow

Use missed questions as clues for what to learn next.

**A strong mission habit for North Carolina:** keep your work neat, estimate when it helps, label units carefully, and never let one hard question decide your mood for the whole page.

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# How This Book Wants to Help

A four-step routine that turns practice into real improvement

## Step 1: Warm Up

**Sharpen your math brain with the quick review.**

Wake up the big Grade 5 ideas before the test starts so your brain is already warmed up.

## Step 2: Mission Run

**Take a full practice test in a calm spot.**

Find a calm corner, settle in, and aim for careful, honest choices before quick ones.

## Step 3: Debrief

**Score honestly and circle missed questions.**

Circle missed questions, sort out what went sideways, and notice which skills are calling for attention.

## Step 4: Repair Kit

**Fix the missed work and lock the lesson in.**

Read the explanation, fix the work, and carry that lesson into the very next test.



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## Grade 5 Mathematics Reference Materials

### PERIMETER AND AREA

Perimeter of Rectangle	$P = 2l + 2w$ or $P = 2(l + w)$
Area of Rectangle	$A = l \times w$
Area of Triangle	$A = \frac{1}{2} \times b \times h$
Volume of Rectangular Prism	$V = l \times w \times h$

### LENGTH

Customary	Metric
1 foot (ft) = 12 inches (in.)	1 meter (m) = 100 centimeters (cm)
1 yard (yd) = 3 feet (ft)	1 centimeter (cm) = 10 millimeters (mm)
1 yard (yd) = 36 inches (in.)	1 kilometer (km) = 1,000 meters (m)

### CAPACITY

Customary	Metric
1 cup (c) = 8 fluid ounces (fl oz)	1 liter (L) = 1,000 milliliters (mL)
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1 quart (qt) = 2 pints (pt)	
1 gallon (gal) = 4 quarts (qt)	

### WEIGHT AND MASS

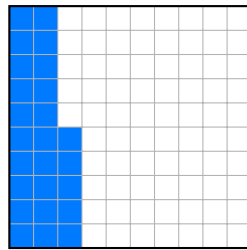
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1 pound (lb) = 16 ounces (oz)	1 kilogram (kg) = 1,000 grams (g)
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### TIME

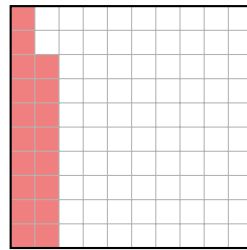
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1 day = 24 hours (hr)	1 year = 52 weeks



1) A hundredths grid visual for adding:



Grid 1: 0.25



Grid 2: 0.18

$$0.25 + 0.18 = ?$$

What is the sum?

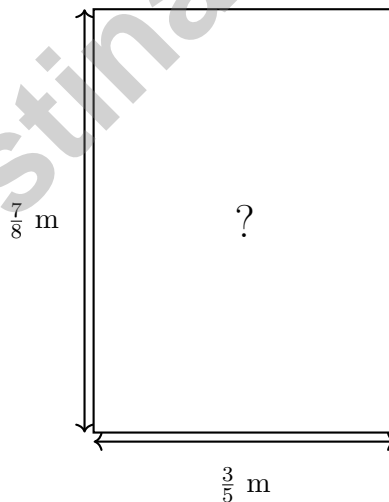
A. 0.33

B. 0.43

C. 0.53

D. 1.43

2) A rectangular picture frame is  $\frac{7}{8}$  meter tall and  $\frac{3}{5}$  meter wide. What is the area of the frame?



A.  $\frac{21}{40}$  m<sup>2</sup>

B.  $\frac{10}{13}$  m<sup>2</sup>

C.  $\frac{1}{2}$  m<sup>2</sup>

D. 1 m<sup>2</sup>



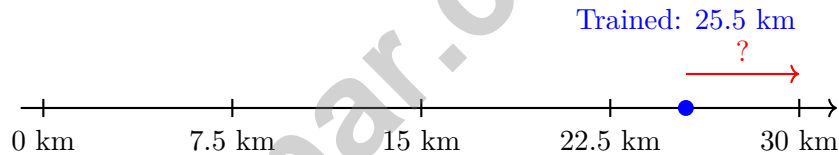
3)

Shape	Sides	Must have all sides equal?	All 90°?
Square	4	✓	✓
Rectangle	4	–	✓
Rhombus	4	✓	–

A student says a rectangle is always a square. Use properties to explain why this is FALSE.

- A. Rectangles have right angles but not all sides are necessarily equal.
- C. Squares cannot have right angles.
- B. Rectangles only have two sides.
- D. Rectangles are never quadrilaterals.

4) An athlete trains for a race. Monday: 8.5 km, Tuesday: 9.2 km, Wednesday: 7.8 km. If the race distance is 30 km, how many more kilometers must be trained?



- A. 2.5 km
- C. 4.5 km
- B. 3.5 km
- D. 5.5 km

5) A bus trip costs  $\$2\frac{1}{2}$  per person. What is the total cost for 5 people?

- A.  $\$12\frac{1}{2}$
- C.  $\$17\frac{1}{2}$
- B.  $\$15$
- D.  $\$10$

6) What is  $83.5 \div 100$ ?

- A. 0.835
- C. 8,350
- B. 8.35
- D. 0.00835



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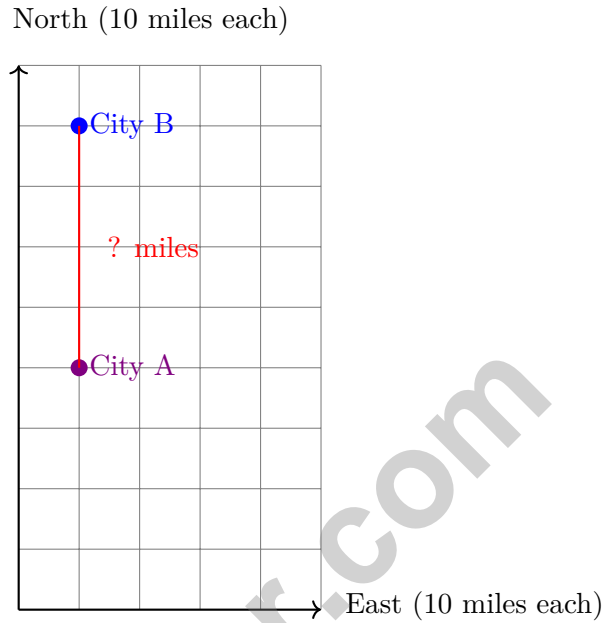
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- 1) Two cities on a map are located at (1, 4) and (1, 8). If each grid square represents 10 miles, what is the distance between the cities?



- A. 20 miles                       C. 40 miles  
 B. 30 miles                       D. 50 miles

- 2) Block Pattern:



Fig 1



Fig 2

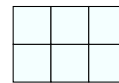


Fig 3

How many blocks are in Figure 12?

- A. 20                                       C. 24  
 B. 22                                       D. 26



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1) Which of these equals 6,000?

A.  $6 \times 100$

B.  $60 \times 10$

C.  $300 \times 20$

D.  $600 \times 100$

2) Maya buys ribbon for \$3.45 and buttons for \$2.28. How much does she spend in total?

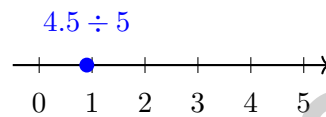
A. \$5.62

B. \$6.73

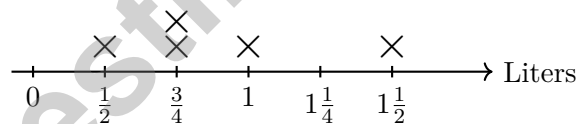
C. \$5.83

D. \$5.73

3) A number line shows division. If you divide 4.5 by 5, where does the quotient fall?

 A. Between 0 and 1 B. Between 1 and 2 C. Between 2 and 3 D. Between 4 and 5

4) The line plot shows liquid measurements, in liters. What is the total amount of liquid shown?



*Record your answer in the space provided.*



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1) A recipe uses  $\frac{3}{4}$  cup of oats for one batch. How many cups are needed for 6 batches?

A.  $4\frac{1}{2}$  cups

B.  $3\frac{3}{4}$  cups

C.  $2\frac{1}{2}$  cups

D.  $\frac{9}{4}$  cups

2)

Original	Divide by	Result
205.7	100	?

What is the result?

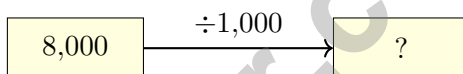
A. 20.57

B. 2.057

C. 0.205

D. 2057

3) Show the division with a place-value arrow diagram:



What is  $8,000 \div 1,000$ ?

A. 800

B. 80

C. 8

D. 0.8

4) An aquarium shaped like a rectangular prism has a volume of  $360 \text{ m}^3$ , and its base is 9 m by 8 m. How deep is the aquarium?

A. 4 m

B. 5 m

C. 6 m

D. 7 m



## Practice Test Answer Keys

### How to use this section:

1. check your answer
2. circle missed questions
3. rework them before reading the explanation

**Good correction habits build strong scores.**

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## Practice Test Answers and Explanations

### Practice Test 1 Answers and Explanations

- Choice B is correct.** (NC.5.NF.1) Grid 1 has 25 shaded (0.25); Grid 2 has 18 shaded (0.18). Total:  $25 + 18 = 43$  shaded squares = 0.43.
- Choice A is correct.** (NC.5.NF.4) Area =  $\frac{7}{8} \times \frac{3}{5} = \frac{21}{40}$  m<sup>2</sup>.
- Choice A is correct.** (NC.5.G.3) A rectangle is defined by having all right angles and opposite sides equal. A square must have all right angles AND all four sides equal. Not all rectangles have all equal sides.
- Choice C is correct.** (NC.5.NBT.7) Total trained:  $8.5 + 9.2 + 7.8 = 25.5$  km. Remaining:  $30 - 25.5 = 4.5$  km.
- Choice A is correct.** (NC.5.NF.4)  $2\frac{1}{2} \times 5 = \frac{5}{2} \times 5 = \frac{25}{2} = 12\frac{1}{2}$  dollars.
- Choice A is correct.** (NC.5.NBT.1) When dividing by 100, move the decimal point 2 places to the left:  $83.5 \rightarrow 8.35 \rightarrow 0.835$ . So  $83.5 \div 100 = 0.835$ .
- Choice B is correct.** (NC.5.NF.7) The model counts sixth-size jumps across 4 whole units. So the matching division equation is  $4 \div \frac{1}{6} = ?$ .
- Choice D is correct.** (NC.5.NF.7) At 15 min: 2 students, at 30 min: 3 students, at 45 min: 3 students, and at 60 min: 1 student. Total:  $(15 \times 2) + (30 \times 3) + (45 \times 3) + (60 \times 1) = 315$  minutes.
- Choice A is correct.** (NC.5.G.3) Two equal sides make the triangle isosceles. One right angle makes it a right triangle, so the name is right isosceles triangle.
- Choice B is correct.** (NC.5.NF.4)  $\frac{2}{3} \times \frac{3}{5} = \frac{6}{15} = \frac{2}{5}$  gallon.
- Choice D is correct.** (NC.5.NF.7) Use total amount divided by the size of one piece. The equation is  $6 \div \frac{1}{5} = n$ .
- Choice A is correct.** (NC.5.NBT.1) The hundredths digit is 4. The thousandths digit is 3. Since  $3 < 5$ , keep 4. So 0.543 rounds to 0.54.
- Choice B is correct.** (NC.5.NF.1) Borrow 1 from 4:  $3\frac{4}{3} - 1\frac{2}{3} = 2\frac{2}{3}$ . Cannot subtract  $\frac{2}{3}$  from  $\frac{1}{3}$ , so regroup.
- Choice A is correct.** (NC.5.G.1) In an ordered pair  $(x, y)$ , the first number tells how far to move right, and the second number tells how far to move up.
- The correct answer is (4, 20).** (NC.5.G.1) The 4th term of Pattern A is 4, and the 4th term of Pattern B is 20. So the ordered pair is  $(4, 20)$ .
- Choice B is correct.** (NC.5.NBT.1) The nonzero parts make  $2 \times 2 = 4$ . The two factors have four zeros total, so the product is 40,000.
- Choice C is correct.** (NC.5.NF.4)  $2 \times \frac{5}{8} = \frac{10}{8} = 1\frac{1}{4}$  pounds.
- Choice C is correct.** (NC.5.OA.2) The parentheses come first, so  $15 \div 3 = 5$ . After that, add 7:  $5 + 7 = 12$ .
- Choices A, D are correct.** (NC.5.OA.3) Pattern Q adds twice as much as Pattern P, so matching terms in Q are double the terms in P, and Q grows faster. B is false after one step, and C is false at the 3rd term.
- The correct answer is  $23\frac{1}{2}$  in.** (NC.5.NF.1) Add the lengths represented by the line plot:  $2 \times 3\frac{1}{2} = 7$ ,  $3 \times 4 = 12$ , and  $1 \times 4\frac{1}{2} = 4\frac{1}{2}$ . The total is  $7 + 12 + 4\frac{1}{2} = 23\frac{1}{2}$  inches.
- The correct answer is 4.** (NC.5.G.1) Each Y value is 4 times the matching X value:  $4 \div 1 = 4$ ,  $8 \div 2 = 4$ , and so on.
- Choice C is correct.** (NC.5.NF.1) Picture A shows  $\frac{1}{2}$  shaded (one half). Picture B shows  $\frac{2}{4}$  shaded (two fourths). Both equal the same amount because  $\frac{1}{2} = \frac{2}{4}$ .
- Choice C is correct.** (NC.5.MD.4) The lower prism has volume 108 cubic centimeters, and the upper prism has volume 96 cubic centimeters. Add them to get 204 cubic centimeters.
- Choice C is correct.** (NC.5.NF.1) Add whole parts:  $3 + 1 = 4$ . Add fractions:  $\frac{1}{4} + \frac{3}{4} = 1$ . Total:  $4 + 1 = 5$ .
- Choice C is correct.** (NC.5.NBT.1) In 15.375, the decimal digits are: 3 (tenths), 7 (hundredths), 5 (thousandths). The digit in the hundredths place is 7.
- Choice D is correct.** (NC.5.NBT.1)  $36 \times 10^6 = 36 \times 1000000 = 36000000$  units.
- Choice A is correct.** (NC.5.NBT.5) First double the grouped amount  $(6 + 4)$ , which is  $2 \times (6 + 4)$ . The words "subtracted from 25" mean place that doubled amount after 25—.
- Choice D is correct.** (NC.5.NF.4)  $8 \times \frac{3}{8} = 3$  slices. The scaling factor  $\frac{3}{8}$  is less than 1, so the result is smaller than 8.



## Dear Hero of This Story,

◇ Once upon a time, there was a brave Grade 5 student who decided to take 4 practice tests. At first, the problems were tough. But the student kept showing up, kept trying, and kept learning. Slowly, the tough problems became easier. The student's confidence grew. By the time the 4<sup>th</sup> test was finished, that student had become the hero of their own math story. That student is you. ◇

★ **Storytellers know:** every great story has a hard middle. The hard middle is where the hero grows. You've lived your hard middle, and now your story is heading toward a strong ending: a confident test day. ★

### Your Hero's Toolkit

- **Brave Heart:** You face hard problems instead of running.
- **Sharp Mind:** You think carefully before you act.
- **Steady Hand:** You write neatly and check your work.
- **Kind Spirit:** You're patient with yourself when you make mistakes.

**Storyteller's tip:** when you sit down on test day, remember the hero you've become. The chapters before this moment have made you stronger. Now, write your best chapter yet.

If you'd like to share your experience or have questions, please email me at [reza@testinar.com](mailto:reza@testinar.com). I'd love to hear from you!

**Reza Nazari & Jay Daie**

Your Math Storyteller (The Best Pages Are Ahead)

# 4 COMPLETE TESTS. CONFIDENCE. SUCCESS.



Give your child the practice and confidence they need to excel in **Grade 5 Math**. This book includes **4 full-length** practice tests designed to build skills, improve test readiness, and help students reach their full potential.

## WHAT'S INSIDE:



### 4 COMPLETE PRACTICE TESTS

Full-length tests that reflect real test format and rigor.



### COVERS ALL GRADE 5 TOPICS

Numbers & Operations, Fractions, Decimals, Geometry, Measurement, Data & Probability, and more.



### MIXED REVIEW & WORD PROBLEMS

Build problem-solving skills with mixed review questions and real-world word problems.



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Step-by-step explanations for every question to help students learn and improve.



### BUILD CONFIDENCE & IMPROVE SCORES

Practice consistently, reduce test anxiety, and achieve your best score!



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**Strengthen**  
Math Skills



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Accuracy  
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