

FULL-LENGTH

8

North Carolina

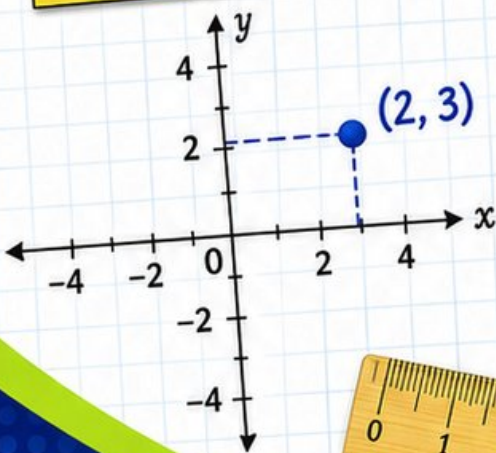
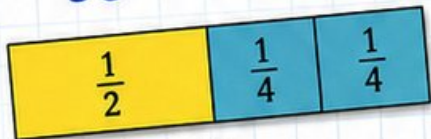
EOG

GRADE 5

MATH PRACTICE TESTS

Mixed Practice Questions with Answer Key  
for Students, Parents, and Teachers

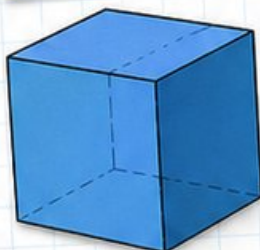
$$36 \div 4 = 9$$



$$2.4 \times 7 = 16.8$$

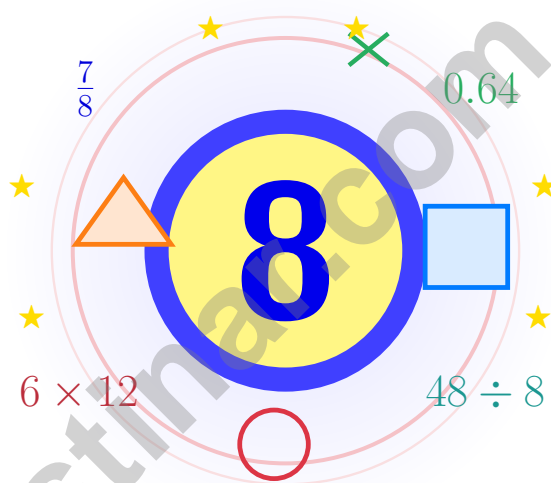
$$7 \times (12 - 5) = 49$$

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



# 8 North Carolina EOG Grade 5 Math Practice Tests

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



Eight full tests, a focused quick review, and helpful support that turns Grade 5 practice in The Tar Heel State into steady, confident growth from page one to the final check.

**Jay Daie and Reza Nazari**



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# Eight-Step Math Adventure, North Carolina

Seven chances to grow your math mind one careful step at a time

## North Carolina Grade 5: This Trail Is for You

This practice book is your steady companion for eight tests, not a place to be perfect. Math practice is like the Outer Banks shoreline – it shifts with every wave, but the careful walker still finds the path.

Use these eight tests like stepping-stones. Take one test at a time, check your answers honestly, and notice which skills need more attention. Small improvements add up across seven rounds.

### Notice

Notice the numbers, units, and any tricky words.

### Sketch

Sketch a picture, table, or quick number line.

### Confirm

Confirm your answer with an estimate or check.

**A strong habit for North Carolina mathematicians:** read carefully, estimate when it helps, show your steps, and keep going even when a question feels tricky. That is how steady math confidence is built.

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# Seven Steps, One Routine

A simple routine that turns practice into progress

## Step 1: Plan

**Plan a quiet hour for one full test.**  
Spend a few minutes waking up your memory before the test begins.

## Step 2: Practice

**Take the test with calm focus.**  
Work in a calm spot and focus on careful thinking before speed.

## Step 3: Inspect

**Inspect every answer like a careful builder.**  
Circle missed questions and notice which topics keep showing up.

## Step 4: Adjust

**Adjust what needs adjusting for the next test.**  
Read the explanation, repair the work, and bring that lesson into the next test.



# Table of Contents

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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

1 foot (ft) = 12 inches (in.)

1 yard (yd) = 3 feet (ft)

1 yard (yd) = 36 inches (in.)

#### Metric

1 meter (m) = 100 centimeters (cm)

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### CAPACITY

#### Customary

1 cup (c) = 8 fluid ounces (fl oz)

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### TIME

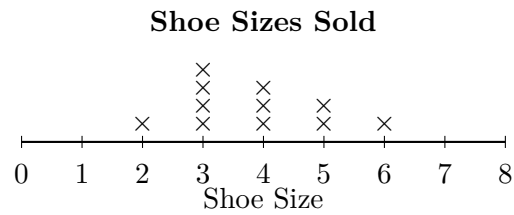
1 minute (min) = 60 seconds (sec)    1 week = 7 days

1 hour (hr) = 60 minutes (min)    1 year = 12 months

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



- 1) The line plot shows the number of shoes various sizes sold at a store:



What is the most popular shoe size?

- A. 2
- B. 3
- C. 4
- D. 5
- 2) Which number is greatest: 0.76, 0.9, or 0.84?

*Record your answer in the space provided.*

- 3) Which shows a correct way to multiply  $\frac{1}{3} \times \frac{2}{5}$ ?

- A.  $\frac{1+2}{3+5} = \frac{3}{8}$
- B.  $\frac{1 \times 2}{3+5} = \frac{2}{8}$
- C.  $\frac{1 \times 2}{3 \times 5} = \frac{2}{15}$
- D.  $\frac{1+2}{3 \times 5} = \frac{3}{15}$





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1) A toy chest measures 9 meters long, 7 meters wide, and 8 meters tall. What is its volume?

- A. 63 cubic meters  
 B. 72 cubic meters

- C. 56 cubic meters  
 D. 504 cubic meters

2) Evaluate:  $[15 + (8 \div 4)] \times 2$

- A. 17  
 B. 30

- C. 34  
 D. 46

3) A recipe calls for  $1\frac{3}{8}$  cups of milk and  $2\frac{7}{10}$  cups of water. Estimate the total liquid.

- A. 3 cups  
 B. 4 cups

- C. 5 cups  
 D. 6 cups

4) Convert: 5 km = ? m.

*Record your answer in the space provided.*

5) A plant's height was 15.5 cm on day 1 and 12.73 cm on day 30. What was the change in height?

- A. 2.77 cm  
 B. 2.67 cm

- C. 3.23 cm  
 D. 2.87 cm

6) In the number 12.754, the digit 5 is in which place?

- A. Ones  
 B. Tenths

- C. Hundredths  
 D. Thousandths



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- 1) A video game store counts inventory. Game A: 50, 100, 150, 200. Game B: 10, 20, 30, 40. Write the relationship between A and B.

Game B	Game A
10	50
20	100
30	150
40	200

- A.  $A = 2 \times B + 30$
- B.  $A = B + 40$
- C.  $A = B - 40$
- D.  $A = 5 \times B$
- 2) Add:  $2.57 + 3.49 = ?$
- A. 6.04
- B. 6.05
- C. 6.06
- D. 6.15
- 3) A baking recipe requires 250 milliliters of milk, but the measuring cup only shows liters. What is 250 mL in liters?
- A. 0.025 L
- B. 0.25 L
- C. 2.5 L
- D. 25 L
- 4) How many ounces are in 45 pounds?
- A. 360 ounces
- B. 540 ounces
- C. 720 ounces
- D. 900 ounces
- 5) A painter needs 32 gallons of paint for a job. If she reduces the job to  $\frac{3}{4}$  of its original size, how much paint does she need?
- A. 8 gallons
- B. 16 gallons
- C. 24 gallons
- D. 32 gallons



## Grade 5 Mathematics Reference Materials

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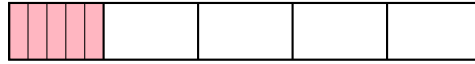
1 hour (hr) = 60 minutes (min)    1 year = 12 months

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1) What is  $\frac{1}{5} \div 5$ ?

1 whole split into fifths



shaded  $\frac{1}{5}$  split into 5

- A.  $\frac{1}{25}$ 
 C.  $\frac{1}{10}$   
 B.  $\frac{5}{1}$ 
 D. 1

2) For the points (1, 2), (2, 4), (3, 6), each Y value is how many times X?

*Record your answer in the space provided.*

3) Which pair of fractions sums to closest to  $\frac{1}{2}$ ?

- A.  $\frac{1}{3} + \frac{1}{7}$ 
 C.  $\frac{1}{5} + \frac{1}{5}$   
 B.  $\frac{1}{4} + \frac{1}{4}$ 
 D.  $\frac{2}{7} + \frac{1}{8}$

4) What is the place-value word form of 4.05?

- A. Four point zero five
  C. Four and five hundredths  
 B. Four tenths and five
  D. Four and five tenths

5) A rope is  $\frac{9}{10}$  meter long. A craftsman uses  $\frac{2}{3}$  of the rope for a project. How long is the piece used? Give the answer in simplest form.

- A.  $\frac{6}{13}$  meter
  C.  $\frac{3}{5}$  meter  
 B.  $\frac{18}{13}$  meter
  D.  $\frac{2}{5}$  meter



## 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) Count the X marks above each shoe size. Size 3 has 4 X marks, which is more than any other size.
- The correct answer is 0.9.** (NC.5.NBT.3) Compare the tenths first: 0.9 has 9 tenths, 0.84 has 8 tenths, and 0.76 has 7 tenths. The greatest is 0.9.
- Choice C is correct.** (NC.5.NBT.3) To multiply fractions, multiply the numerators and multiply the denominators:  $\frac{1}{3} \times \frac{2}{5} = \frac{1 \times 2}{3 \times 5} = \frac{2}{15}$ .
- Choice D is correct.** (NC.5.G.3) The two sides with tick marks are equal, making this an isosceles triangle.
- Choice C is correct.** (NC.5.MD.4) The base area is 24 square inches and the height is 3 inches, so the prism has 3 layers of 24 cubic inches.  $24 \times 3 = 72$  cubic inches.
- Choice C is correct.** (NC.5.MD.4) Large volume:  $15 \times 10 \times 8 = 1200 \text{ cm}^3$ . Small volume:  $12 \times 8 \times 5 = 480 \text{ cm}^3$ . Difference:  $1200 - 480 = 720 \text{ cm}^3$ .
- Choice D is correct.** (NC.5.NBT.1) Dividing by 100 moves the decimal point two places to the left.  $1,800 \div 100 = 18$ .
- Choice C is correct.** (NC.5.NBT.1)  $2.5 \times 8 = 20$ . Multiply:  $25 \times 8 = 200$ , then place decimal one place from right:  $20.0 = 20$  yards.
- The correct answer is (4, 1).** (NC.5.G.1) Start with (0, 0). After one step, A is 4 and B is 1, giving (4, 1).
- The correct answer is 12.** (NC.5.G.1) Use division:  $216 \div 18 = 12$ . Each box has 12 seed packets.
- Choice D is correct.** (NC.5.NBT.6) Pattern J is twice Pattern W:  $3 \times 2 = 6$ ,  $6 \times 2 = 12$ ,  $9 \times 2 = 18$ ,  $12 \times 2 = 24$ .
- Choice A is correct.** (NC.5.MD.4) Bottom: 9 cubes. Second layer: 6 cubes. Total:  $9 + 6 = 15$  unit cubes.
- Choice B is correct.** (NC.5.NBT.1)  $2.7 \times 100 = 270$  (move decimal 2 places right). Student Y is correct.
- Choice B is correct.** (NC.5.MD.4) Find each part first: Prism A is  $9 \times 4 \times 3 = 108$  cubic inches, and Prism B is  $6 \times 4 \times 5 = 120$  cubic inches. Because the parts do not overlap, add them:  $108 + 120 = 228$  cubic inches.
- Choice C is correct.** (NC.5.OA.2) Evaluate inside the parentheses first:  $15 - 7 = 8$ . Then  $8 \times 3 = 24$ , so choice C has a value of 24.
- Choice A is correct.** (NC.5.OA.2)  $V = 14 \times 3 \times 6 = 42 \times 6 = 252 \text{ in}^3$ .
- Choice B is correct.** (NC.5.NBT.1) The nonzero parts make  $5 \times 2 = 10$ , which adds one zero of its own. Together with the two factor zeros, the product is 1,000 with 3 zeros.
- Choice D is correct.** (NC.5.NBT.5) The words “twice the sum” mean group  $6 + 4$  first and multiply by 2. Then “subtract 8” places  $-8$  at the end.
- Choices A, B are correct.** (NC.5.NF.1) A is true because sixths are a common denominator. B is true because  $4\frac{1}{6} - 1\frac{4}{6} = 2\frac{3}{6} = 2\frac{1}{2}$ . C and D miscalculate.
- Choice A is correct.** (NC.5.G.1) All four sides are equal: each side is  $8 - 2 = 6$  units long. All angles are right angles. This is a square.
- Choice A is correct.** (NC.5.NF.1)  $\frac{1}{3} = \frac{3}{9}$ .  $\frac{7}{9} - \frac{3}{9} = \frac{4}{9}$  meter.
- Choice A is correct.** (NC.5.NBT.1) Move the decimal 1 place left:  $1.9 \div 10 = 0.19$ .
- Choice C is correct.** (NC.5.NBT.1)  $\frac{1}{3} \div 5 = \frac{1}{3} \times \frac{1}{5} = \frac{1}{15}$ .
- The correct answer is 6.** (NC.5.MD.4) The known length and height make groups of  $6 \times 4 = 24$  cubic centimeters. Since  $144 \div 24 = 6$ , the width is 6 cm.
- Choice D is correct.** (NC.5.MD.4) With LCD 10:  $\frac{1}{2} = \frac{5}{10}$ ,  $\frac{2}{5} = \frac{4}{10}$ ,  $\frac{3}{10} = \frac{3}{10}$ . Order:  $\frac{3}{10} < \frac{4}{10} < \frac{5}{10}$ .
- Choice C is correct.** (NC.5.G.1) The next Rule A value is 5 and the next Rule B value is 10, so the next ordered pair is (5, 10).
- Choice B is correct.** (NC.5.NF.1)  $\frac{2 \times 3}{5 \times 3} = \frac{6}{15}$ .
- Choice B is correct.** (NC.5.G.1) Both stores have the same y-coordinate (8), so they are on a horizontal line. The distance is  $10 - 6 = 4$  units.
- Choice C is correct.** (NC.5.G.1) One repeat moves from (0, 0) to (2, 3). A second repeat adds another 2 to x and another 3 to y, giving (4, 6).



### Personal Trainer Wrap-Up

#### Math Athlete, Listen Up!

◇ 8 practice tests done. That's serious training. Your math muscles are strong, your endurance is high, and your reflexes (recognizing problem types) are quick. You're in great shape for the big test. ◇

★ **Trainer's wisdom:** muscle memory is real, even in math. The more you do something, the more your brain knows how to do it without thinking. You've built that muscle memory over 8 tests. Now it's automatic. ★

#### Athlete's Performance Card

- **Endurance:** TOP-TIER! You can finish a long test without burnout.
- **Strength:** STRONG! You handle multi-step problems with power.
- **Speed:** SHARP! You move efficiently from question to question.
- **Recovery:** GREAT! You bounce back fast from tough questions.

**Trainer's tip:** on test day, hydrate, breathe deeply, and warm up with the easier questions first. Build your rhythm. Your training will carry you the rest of the way.

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 Trainer (You're In Great Shape)

$45 \div 5 = ?$

# PRACTICE TODAY.

$\frac{3}{5} + \frac{1}{10} = ?$



## ACHIEVE TOMORROW!



$3^2 + 4^2 = 25$

This book includes **8** full-length **Grade 5** math practice tests to help students master essential skills, build confidence, and achieve success. Each test is carefully designed to reflect real math standards and cover a variety of question types with detailed answer explanations.

$7x - 4 = 17$

$1\frac{1}{2} + 2\frac{1}{3} = ?$

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### REALISTIC PRACTICE

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