

7

North Carolina

EOG

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 North Carolina EOG 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 North Carolina EOG. Each trail is a full 30-question test, so students can practice accuracy, stamina, and clear explanations over time.

North Carolina has mountain trails, coastal sounds, pine forests, research labs, and active classrooms, where careful steps matter. Strong math follows that same path: notice the question, choose a tool, show the work, and match each problem with the right model.

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 North Carolina students, each trail moves through mountain trails, coastal sounds, pine forests, research labs, and active 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 North Carolina 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 North Carolina EOG path.

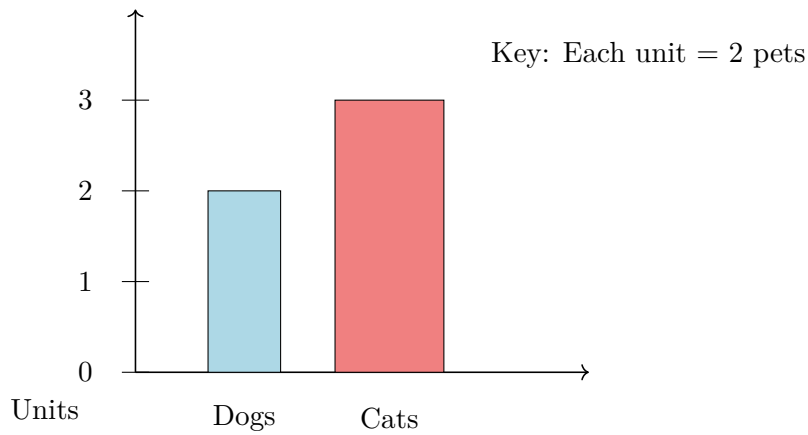


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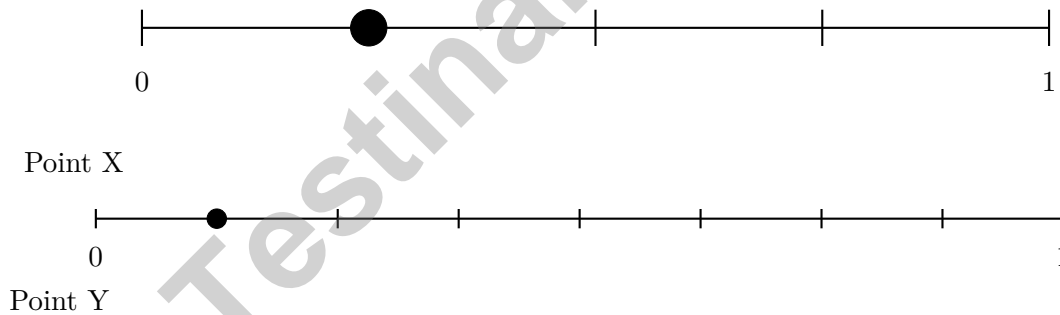
★ Practice Test 1	_____	14
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1) Look at the bar graph. What is the height of each bar in units?



- A. Dogs is 3 units, Cats is 2 units.
- B. Dogs is 2 units, Cats is 3 units.
- C. Dogs is 2 units, Cats is 2 units.
- D. Dogs is 1 unit, Cats is 4 units.

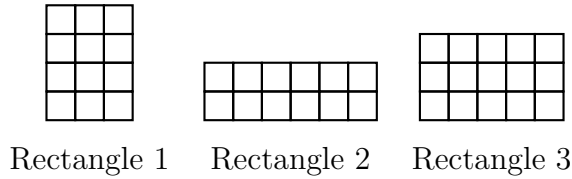
2) A number line from 0 to 1 has two unlabeled points. Point X is at the first tick of a 4-part line. Point Y is at the first tick of an 8-part line. Which is farther from 0?



- A. Point X
- B. Point Y
- C. They are equidistant
- D. Cannot be determined



3) Three rectangles are shown. Which two rectangles have the same area? (Hint: Count the unit squares in your head or on paper.)



- | | |
|--|--|
| <input type="checkbox"/> A. Rectangles 1 and 2 | <input type="checkbox"/> C. Rectangles 2 and 3 |
| <input type="checkbox"/> B. Rectangles 1 and 3 | <input type="checkbox"/> D. All three have different areas |

4) Which picture shows 12 items divided equally into 4 groups?

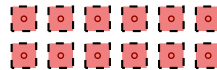
- A. Four groups of two



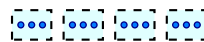
- B. Three groups of four



- C. Twelve groups of one



- D. Four groups of three

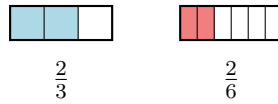


5) Sam divides a number line from 0 to 1 into 4 equal parts. How many parts are between 0 and the second tick mark?

- | | |
|-------------------------------|-------------------------------|
| <input type="checkbox"/> A. 1 | <input type="checkbox"/> C. 3 |
| <input type="checkbox"/> B. 2 | <input type="checkbox"/> D. 4 |



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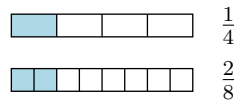


6)

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

7) Look at the fraction bars. Which bars show equivalent fractions?



- A. Yes, they are equivalent
 C. The bars cannot be compared
 B. No, they are not equivalent
 D. They show a ratio, not a fraction

8) Mia gives 3 friends 8 stickers each. How many stickers does she give in all?

- A. 11 stickers (adds $3 + 8$)
 C. 21 stickers (off by one group: 3×7)
 B. 17 stickers (counts partial: $8 + 8 + 1$)
 D. 24 stickers

9) Sam has 6 boxes of crayons. Each box has 10 crayons. How many crayons does Sam have in total?

1) Two different rectangles both have areas of 16 square units. Which pair of dimensions is NOT possible?

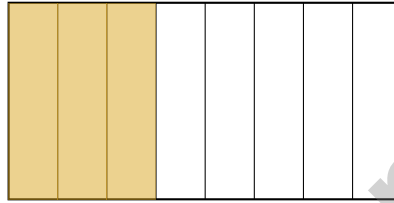
A. 4×4

C. 3×5

B. 2×8

D. 1×16

2) A rectangle is divided into 8 equal parts. Noah shades $\frac{3}{8}$ of the rectangle. How many parts does he shade?

 A. 2 parts C. 4 parts B. 3 parts D. 5 parts

3) A picture graph shows balloons. Each balloon is 1 balloon. Ty has 7 balloons, Sam has 4 balloons. How many balloons do they have altogether?

 A. 3 C. 11 B. 7 D. 12

4) Eli shares 24 pencils equally among 3 friends. How many pencils does each friend get?

 A. 8 C. 6 B. 7 D. 4

- 5) Ava has a rectangular piece of paper. The length is 7 inches and the width is 2 inches. What is the area?

- A. 9 sq in C. 12 sq in
 B. 14 sq in D. 18 sq in

- 6) How many minutes after 6 : 15 is 6 : 35?

- 7) Look at the skip-count number line. It shows counting by 3s. What number is missing?



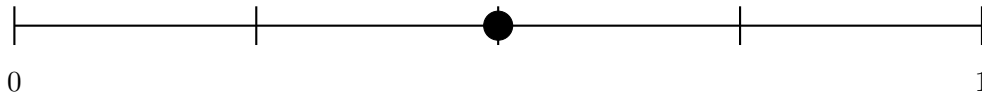
What is 3×3 ?

- A. 6 C. 12
 B. 15 D. 9
- 8) Lily tiles a wall with unit squares (1 foot by 1 foot). The wall is 8 feet wide and 2 feet tall. How many tiles does she need?
- A. 10 tiles C. 14 tiles
 B. 12 tiles D. 16 tiles



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- 1) A number line shows 0 to 1 divided into 4 equal parts. The marked dot is closest to which fraction?

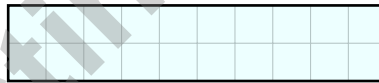


- A. $\frac{1}{4}$
 C. $\frac{3}{4}$
 B. $\frac{2}{4}$
 D. $\frac{4}{4}$
- 2) Lily sees a number line divided into sixths. She marks $\frac{6}{6}$. Where is her mark?

- A. At 0
 C. At 1
 B. Beyond 6
 D. At 6
- 3) What is 3×8 ?

- A. 24
 C. 30
 B. 28
 D. 32

- 4) This grid shows a rectangle made of unit squares.

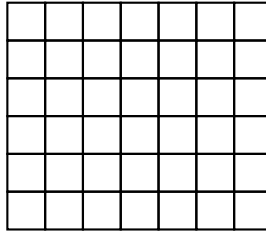


What is the total area in square units?

- A. 12 sq units
 C. 20 sq units
 B. 18 sq units
 D. 24 sq units



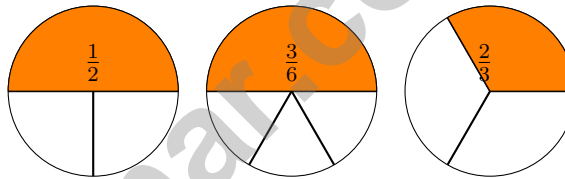
5) A teacher shows this grid to her class:



She tells students: "There are 8 unit squares along the top and 6 unit squares down the side. So the area is $8 + 6 = 14$ square units." Is the teacher correct?

- A. Yes, because $8 + 6 = 14$
 C. No, the area is 14 unit squares
 B. No, the area is 48 unit squares
 D. Yes, adding the sides gives the area

6) Look at the pie charts. Which fraction does NOT match the group?



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



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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

- 1) **Choice B is correct.** **(NC.3.MD.3)** Read the height of each bar on the vertical axis by counting the grid lines.
- 2) **Choice A is correct.** **(NC.3.NF.3)** Point X is at $\frac{1}{4}$, while Point Y is at $\frac{1}{8}$. Since $\frac{1}{4} = \frac{2}{8}$, Point X is farther from 0.
- 3) **Choice A is correct.** **(NC.3.MD.5)** Rectangle 1: 3 columns and 4 rows = $3 + 3 + 3 + 3 = 12$ unit squares. Rectangle 2: 6 columns and 2 rows = $6 + 6 = 12$ unit squares. Rectangle 3: 5 columns and 3 rows = $5 + 5 + 5 = 15$ unit squares. Rectangles 1 and 2 both have an area of 12 square units.
- 4) **Choice D is correct.** **(NC.3.NF.1)** $12 \div 4 = 3$. The picture shows 4 equal groups, each with 3 items.
- 5) **Choice B is correct.** **(NC.3.NBT.3)** The second tick is two of the four equal parts from 0.
- 6) **Choice B is correct.** **(NC.3.NF.4)** 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 $\frac{2}{3} > \frac{2}{6}$.
- 7) **Choice A is correct.** **(NC.3.NF.3)** Both bars show the same shaded length. $\frac{1}{4} = \frac{2}{8}$ because $\frac{1 \times 2}{4 \times 2} = \frac{2}{8}$.
- 8) **Choice D is correct.** **(NC.3.OA.1)** 3 friends with 8 stickers each means 3 groups of 8. So $3 \times 8 = 24$ stickers in all.
- 9) **The correct answer is 60.** **(NC.3.NBT.3)** 6 boxes of 10 crayons = $6 \times 10 = 60$ crayons.
- 10) **Choice D is correct.** **(NC.3.OA.8)** Step 1: Desks in rows: $4 \times 6 = 24$ desks. Step 2: Add more: $24 + 8 = 32$ desks total.
- 11) **The correct answer is $\frac{1}{2}$.** **(NC.3.NF.4)** $\frac{3}{6}$ equals half of a whole, so the equivalent fraction is $\frac{1}{2}$.
- 12) **Choice A is correct.** **(NC.3.NBT.3)** 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.
- 13) **Choice A is correct.** **(NC.3.MD.5)** Area = $8 \times 4 = 32$ square centimeters.
- 14) **Choice A is correct.** **(NC.3.MD.5)** Area = width \times height = $11 \times 9 = 99$ square inches.
- 15) **Choice D is correct.** **(NC.3.OA.8)** Divide: $32 \div 4 = 8$ cookies per friend.
- 16) **Choice D is correct.** **(NC.3.OA.6)** The fact family for $7 \times 8 = 56$ includes both $56 \div 7 = 8$ and $56 \div 8 = 7$.
- 17) **Choices B and C are correct.** **(NC.3.OA.3)** Choices B and C both equal 2000 mL. Choice A (2 kg) is mass, not volume. Choice D (2000 g) is mass. Choice E ($750 + 750 = 1500$ mL) is less than 2000 mL.
- 18) **Choice A is correct.** **(NC.3.G.1)** A rectangle has two pairs of parallel sides: the top and bottom sides are parallel, and the left and right sides are parallel to each other.
- 19) **Choice B is correct.** **(NC.3.MD.5)** At $12\frac{1}{2}$, there are 4 X's. All other lengths have fewer.
- 20) **Choice D is correct.** **(NC.3.NBT.3)** The tens digit is 7. Since $7 \geq 5$, round up: 475 rounds to 500.
- 21) **Choice C is correct.** **(NC.3.MD.5)** The rectangle is $4 \times 3 = 12$ unit squares.
- 22) **Choice B is correct.** **(NC.3.MD.1)** The minute hand on 3 means 15 minutes. The hour hand between 11 and 12 means the hour is 11. So the time is 11 : 15.
- 23) **Choice A is correct.** **(NC.3.MD.5)** Total is $8 \times 5 = 40$. One part is $8 \times 3 = 24$. Other part is $40 - 24 = 16$, which is 8×2 .
- 24) **Choice D is correct.** **(NC.3.OA.6)** Divide: $54 \div 6 = 9$. Each part is 9. Check: $6 \times 9 = 54$.
- 25) **Choice A is correct.** **(NC.3.NF.1)** The denominator (bottom number) tells us how many equal parts the whole is divided into. For example, in $\frac{1}{4}$, the 4 means the whole is divided into 4 equal parts.
- 26) **Choice A is correct.** **(NC.3.NBT.3)** $(2 \times 5) \times 3$ makes 10 first because $2 \times 5 = 10$. Then $10 \times 3 = 30$.
- 27) **The correct answer is 36 square units.** **(NC.3.NF.4)** Count the square units by rows: $6 \times 6 = 36$ square units.
- 28) **Choice C is correct.** **(NC.3.MD.5)** One part: $10 \times 2 = 20$ sq units. Other part: $4 \times 3 = 12$ sq units. Total: $20 + 12 = 32$ sq units.
- 29) **Choice D is correct.** **(NC.3.NF.3)** $\frac{3}{1} = 3$ wholes. Any number divided by 1 equals itself.
- 30) **Choice A is correct.** **(NC.3.MD.7)** The pattern shows 1, 2, 3, 4, so the next number is 5.



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A Note From Your Math Friend

Hi, Math Star!

◇ Wow! You finished 7 full practice tests. That is a LOT of math problems. You worked hard, and your brain got stronger every time. ◇

★ **Here is a big idea:** mistakes are okay! Every time you got something wrong, you got smarter. Through 7 tests, you learned that trying is the most important thing. ★

Look What You Did!

- **Hard Worker:** You did not give up!
- **Smart Thinker:** You used your math tools.
- **Brave Learner:** You tried hard problems.
- **Test Ready:** You feel proud and prepared.

Big tip for test day: take your time. Read each problem twice. Show your work. Check your answer. You can do this!

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

Jay Daie

Your Math Friend

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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

- ✓ Whole Numbers & Operations
- ✓ Fractions & Decimals
- ✓ Algebraic Thinking
- ✓ Geometry
- ✓ Measurement & Data
- ✓ Number Patterns
- ✓ Word Problems
- ✓ Ratio & Proportion
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- ✓ Graphing & Data Analysis
- ✓ And More!



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