

# 7

# Ohio

# OST

## 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



# 7 Ohio OST 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 Ohio OST. Each trail is a full 30-question test, so students can practice accuracy, stamina, and clear explanations over time.

Ohio has river towns, lake shores, space history, farm counties, and careful classroom routines, where careful steps matter. Strong math follows that same path: notice the question, choose a tool, show the work, and check facts, units, and reasonableness.

### 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 Ohio students, each trail moves through river towns, lake shores, space history, farm counties, and careful classroom routines: 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 Ohio 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 Ohio OST path.



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& answers

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1) Which fraction equals  $\frac{2}{4}$ ?

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

B.  $\frac{2}{3}$

C.  $\frac{3}{4}$

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

2) A school has 72 students going on a field trip. They are divided equally into 8 buses. Then 6 more students join one bus. How many students are on that bus now?

A. 9

B. 10

C. 15

D. 24

3) A bakery made some cupcakes. It sold 312 cupcakes and has 188 left. How many cupcakes did the bakery make?

A. 500

B. 510

C. 490

D. 520

4) Which problem equals 350? Check each one.

A.  $5 \times 70 = (5 \times 7) \times 10 = 35 \times 10 = 350$

✓

C.  $5 \times 50 = (5 \times 5) \times 10 = 25 \times 10 = 250$

D.  $7 \times 70 = (7 \times 7) \times 10 = 49 \times 10 = 490$

B.  $7 \times 40 = (7 \times 4) \times 10 = 28 \times 10 = 280$

5) How many vertices (corners) does a quadrilateral have?

A. 2

B. 3

C. 6

D. 4

6) A rectangular piece of fabric is 10 feet long and 2 feet wide. What is the total area of the fabric?

A. 12 sq ft

B. 20 sq ft

C. 24 sq ft

D. 5 sq ft



7) A bar graph shows coins saved by students. Pilar has 6 units (scale: 5 coins per unit), Quinn has 4 units (scale: 5 coins per unit). How many more coins did Pilar save?

- A. 2 coins
- B. 6 coins
- C. 10 coins
- D. 50 coins

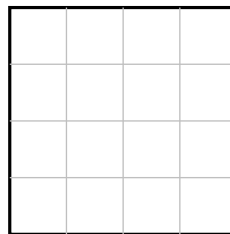
8) Noah has  $\frac{12}{2}$  sheets of paper. How many whole sheets does he have?

9) Which description does NOT clearly show equal groups for multiplication?

- A. Four groups of three objects each
- B. Two rows of nine stars each
- C. Six columns of two dots each
- D. Counting by ones from 0 to 10

10) Sam’s swim practice starts at 4 : 30 PM and ends at 5 : 42 PM. How many minutes is the practice?

- A. 60 minutes
- B. 70 minutes
- C. 72 minutes
- D. 75 minutes



4 units

11) 4 units

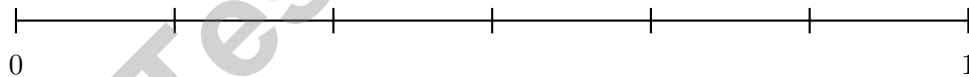
What is the area of this square?

- A. 8 sq units
- B. 16 sq units
- C. 12 sq units
- D. 20 sq units



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- 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) A floor tile is 1 inch by 1 inch. A floor has 8 rows and 6 tiles in each row. What is the area?
- A. 14 sq in                       C. 28 sq in  
 B. 48 sq in                       D. 64 sq in
- 14) Which number sentence is false?
- A.  $2 \times 9 = 9 \times 2$                        C.  $8 \times 6 = 7 \times 6 + 1$   
 B.  $(2 \times 3) \times 3 = 2 \times (3 \times 3)$                        D.  $4 \times (2 + 3) = 4 \times 2 + 4 \times 3$
- 15) Ava covers a rectangular board with unit square tiles. The board is 7 units long and 7 units wide. How many tiles does she need?
- A. 14 tiles                       C. 42 tiles  
 B. 28 tiles                       D. 49 tiles
- 16) On this number line, mark the position of  $\frac{1}{6}$  from 0 to 1.



- A. At the first tick                       C. At the fourth tick  
 B. At the third tick                       D. At the fifth tick

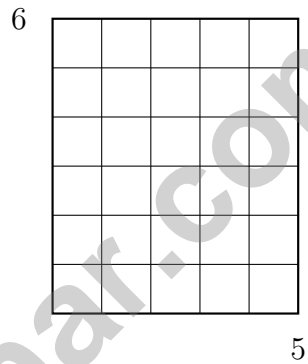


1) What is a “unit square”?

- A. A square with side length 1 unit, used to cover and measure area with no gaps or overlaps
- B. Any square of any size
- C. A square drawn on a number line
- D. A rectangle that is 2 units by 1 unit

2) Which is NOT equivalent to  $\frac{1}{2}$ ?

- A.  $\frac{2}{4}$
- B.  $\frac{3}{6}$
- C.  $\frac{2}{6}$
- D.  $\frac{4}{8}$



3)

What is the area of this tiled rectangle?

- A. 11
- B. 20
- C. 30
- D. 56

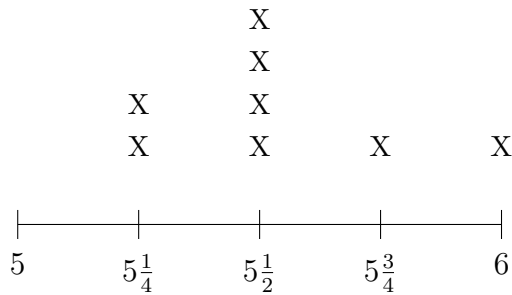
4) Ben draws two bars. Bar 1 is divided into 4 equal parts with 2 parts shaded. Bar 2 is divided into 8 equal parts with 4 parts shaded. The bars are the same length. Are the shaded regions the same size?

- A. No, Bar 1 is larger.
- B. Cannot tell without measuring.
- C. No, Bar 2 is larger.
- D. Yes, they are the same size.



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5) A line plot shows shell widths in centimeters:  $5, 5\frac{1}{4}, 5\frac{1}{2}, 5\frac{3}{4}, 6$ .

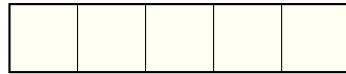


Which width has the most shells?

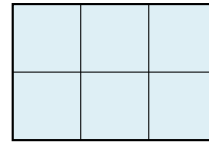
- A.  $5\frac{1}{4}$  cm                       C.  $5\frac{3}{4}$  cm  
 B.  $5\frac{1}{2}$  cm                       D. 6 cm
- 6) Ben has a chocolate bar. He divides it into 3 equal pieces. What fraction is each piece?
- A.  $\frac{2}{3}$                                        C.  $\frac{3}{1}$   
 B.  $\frac{1}{3}$                                        D.  $\frac{1}{2}$
- 7) A rectangle is covered by 6 unit squares in each row and has 4 rows. What is its area?

1) A square has side length 4 cm. What is the area of the square?

- A. 8 sq cm                       C. 16 sq cm  
 B. 12 sq cm                     D. 20 sq cm



A:  $5 \times 1$



B:  $3 \times 2$

2)

Which rectangle has an area of 6 unit squares?

- A. Rectangle A                       C. Both have the same area  
 B. Rectangle B                       D. Neither has an area of 6

3) A sheet of paper is folded to make 2 equal halves. What unit fraction is one half?

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

4) A picture graph shows insects in a garden. Ants: 7 icons (scale: 4 per icon). Bees: 3 icons (scale: 4 per icon). What is the total?

- A. 28                                       C. 40  
 B. 32                                       D. 44

5) Look at the fraction bars. Are  $\frac{3}{6}$  and  $\frac{1}{2}$  equivalent?



- A. Yes, both show half                       C. No,  $\frac{1}{2}$  is larger  
 B. No,  $\frac{3}{6}$  is larger                         D. Cannot tell from the bars



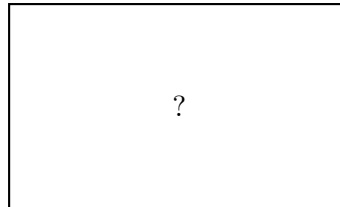
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6) What is  $56 \div 7$ ?

- A. 7  
 B. 10

- C. 9  
 D. 8

3 inches



7)

5 inches

What is the area of this rectangle?

- A. 8 sq in  
 B. 15 sq in

- C. 10 sq in  
 D. 12 sq in

8) A number line from 0 to 1 has 6 tick marks total, including 0 and 1. How many equal parts are there?

- A. 4  
 B. 5

- C. 6  
 D. 7



## 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.3b)** Divide the numerator and denominator of  $\frac{2}{4}$  by 2:  $\frac{2 \div 2}{4 \div 2} = \frac{1}{2}$ .
- 2) **Choice C is correct.** **(3.OA.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.
- 3) **Choice A is correct.** **(3.NBT.2)** Add to find the total:  $312 + 188 = 500$ . Ones:  $2 + 8 = 10$  (write 0, carry 1). Tens:  $1 + 8 + 1 = 10$  (write 0, carry 1). Hundreds:  $3 + 1 + 1 = 5$ .
- 4) **Choice A is correct.** **(3.NBT.3)**  $5 \times 70 = (5 \times 7) \times 10 = 35 \times 10 = 350$ . By decomposing  $70 = 7 \times 10$  and using the associative property, we see that only choice A equals 350.
- 5) **Choice D is correct.** **(3.G.1)** A quadrilateral has 4 vertices (corners), one at each place where two sides meet.
- 6) **Choice B is correct.** **(3.MD.7b)** Area = length  $\times$  width =  $10 \times 2 = 20$  square feet.
- 7) **Choice C is correct.** **(3.MD.3)** Pilar:  $6 \times 5 = 30$  coins. Quinn:  $4 \times 5 = 20$  coins. Difference:  $30 - 20 = 10$  coins.
- 8) **The correct answer is 6.** **(3.NF.3c)**  $\frac{12}{2}$  means 12 halves. 2 halves make 1 whole, so  $12 \div 2 = 6$  wholes.
- 9) **Choice D is correct.** **(3.OA.1)** Counting by ones from 0 to 10 does not show equal groups or repeated addition. Multiplication requires equal groups or arrays, like choices A, C, and D.
- 10) **Choice C is correct.** **(3.MD.1a)** From 4 : 30 to 5 : 30 is 1 hour (60 minutes). From 5 : 30 to 5 : 42 is 12 more minutes. Total:  $60 + 12 = 72$  minutes.
- 11) **Choice B is correct.** **(3.MD.7)** The square has side length 4. Area =  $4 \times 4 = 16$  square units.
- 12) **Choice D is correct.** **(3.OA.3)** Multiply: 6 rows  $\times$  5 columns = 30 squares.
- 13) **Choice B is correct.** **(3.MD.6)** 8 rows  $\times$  6 tiles per row = 48 square inches.
- 14) **Choice C is correct.** **(3.OA.5)** This is false.  $8 \times 6 = 48$  but  $7 \times 6 + 1 = 42 + 1 = 43$ . Option C does not follow any property.
- 15) **Choice D is correct.** **(3.MD.5b)**  $7 \times 7 = 49$  unit square tiles.
- 16) **Choice A is correct.** **(3.NF.2)**  $\frac{1}{6}$  means one part out of six equal parts, which is at the first tick mark from 0.
- 17) **Choices A and D are correct.** **(3.NF.3)**  $\frac{2}{8}$  and  $\frac{1}{4}$  both name one-fourth of a whole. The other choices are not equivalent to  $\frac{1}{4}$ .
- 18) **The correct answer is 25 unit squares.** **(3.MD.5a)** A square with side length 5 inches has area  $5 \times 5 = 25$  square inches, which equals 25 unit squares.
- 19) **Choice D is correct.** **(3.OA.9)** Multiplying any number by 2 gives an even result, because  $2 \times n$  means  $n$  groups of 2, and 2 is even. This pattern always holds: even  $\times$  any number = even.
- 20) **Choice B is correct.** **(3.MD.7d)** Composite shapes are found by dividing them into non-overlapping rectangles, finding each area, and adding them together. Choice A fails because an L-shape is not a single rectangle. Choices C and D are incorrect methods.
- 21) **The correct answer is 10 feet.** **(3.MD.8)**  $40 \div 4 = 10$  ft per side.
- 22) **Choice C is correct.** **(3.NBT.1)** The point is closer to 50 than to 40. Numbers from 45 to 49 round to 50.
- 23) **Choice D is correct.** **(3.NF.3a)**  $\frac{2}{6} = \frac{1}{3}$ . When Sam eats  $\frac{2}{6}$  of Bar 2, he ate the same amount as  $\frac{1}{3}$  of Bar 1.
- 24) **Choice A is correct.** **(3.OA.2)**  $10 \div 2 = 5$ . The picture shows 10 items split into 2 equal groups of 5 each.
- 25) **Choice C is correct.** **(3.OA.7)** Looking at the row for 6, the pattern continues:  $6 \times 9 = 54$ .
- 26) **Choice A is correct.** **(3.NF.2a)** One mark in the middle divides into 2 equal parts, each  $\frac{1}{2}$ .
- 27) **Choice B is correct.** **(3.NF.3d)** Four fourths is one whole. Four sixths is less than one whole. So  $\frac{4}{4} > \frac{4}{6}$ .
- 28) **Choice D is correct.** **(3.OA.4)** Multiply:  $8 \times 4 = 32$  chairs.
- 29) **Choice D is correct.** **(3.OA.6)** If  $2 \times 8 = 16$ , then  $16 \div 2 = 8$  and  $16 \div 8 = 2$ . The division answers are the factors.
- 30) **Choice C is correct.** **(3.MD.2)** 1 kg = 1000 g. Add:  $1000 + 600 + 400 = 2000$  g.

### Practice Test 2 Answers and Explanations



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A Note From Your Math Friend

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## 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](mailto:jay@testinar.com).

**Jay Daie**

Your Math Friend

# 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



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