

7 Ohio OST

Grade 6 MATH

PRACTICE TESTS

7
PRINTED
TESTS

+

2
ONLINE
TESTS

Use these two additional online practice tests for extra review after the printed tests in this book.

Standards-Aligned *Steady Southern*
Problem Solving for Comprehensive
Assessment Program



7 Full-Length
Printed Tests



Standards-Aligned
Math Practice



Detailed Answer Keys
and Explanations



Build Confidence.
Achieve Success.



You've
Got
This!



PREPARE
PRACTICE
SUCCEED



PRACTICE
WITH PURPOSE



STRENGTHEN
MATH SKILLS



REVIEW, IMPROVE,
AND SUCCEED

7 Ohio OST Grade 6 Math Practice Tests

Standards-Aligned Buckeye-State Problem Solving for Ohio's State Tests



Seven complete 40-question Grade 6 practice rounds for OST, built for Buckeye-state problem solving with ratios, rational numbers, expressions, equations, geometry, statistics, answer keys, and clear explanations for every item.

Jay Daie and Reza Nazari



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Welcome, Ohio Math Explorer!

Eight focused rounds using Buckeye-state problem solving

This book gives you seven full Grade 6 practice tests for OST. Each round uses lake edges, city routes, and classroom-ready strategy as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

Your Ohio Practice Promise

Use a clear game plan: underline the task, write the math, and check the choice.

Read

Plan

Check

How to Use This Book

A seven-session routine for Buckeye-state problem solving

1. **Work in order.** Take one 40-question test at a time in a quiet place.
2. **Preview the skills.** Scan the quick review pages before beginning the first round.
3. **Correct actively.** Retry missed items before reading the full explanation.
4. **Mark confidence.** Put a small star beside problems where your plan felt strong.
5. **Plan the next round.** Use the growth log to choose one habit and one skill to practice.

Ohio review rhythm: Take a round, review what changed your answer, and carry that habit forward.



What Is Inside?

Eight OST tests, 320 questions, and a full review path

Part	What You Will Practice
Tests 1–3	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Tests 4–6	Skill-building rounds with expressions, equations, geometry, data, and problem models.
Test 7	Final stamina round for mixed review, neat work, and flexible strategy choices.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Buckeye-state problem solving means recognizing the skill even when the next question changes topic, changes format, or asks for an explanation.



Scan me!
For more practice
& answers

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1) What is the value of 11^2 ?

A. 22

C. 121

B. 110

D. 132

2) For the data set 5, 8, 12, x , if the median is 10, what must x be?

A. 8

C. 12

B. 10

D. Any value ≥ 12

3) A survey shows that the probability a person likes ice cream is 90%. What is the probability that a person does **not** like ice cream?

A. 0.1

C. 0.5

B. 0.2

D. 0.9

4) The median of a dataset shown in a stem-and-leaf plot is 58. If there are 9 data points, which value must be the 5th when arranged in order?

A. 50

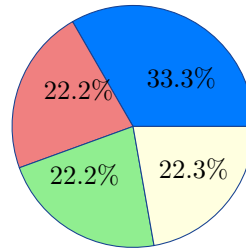
C. 65

B. Cannot determine

D. 58

5) Find the value of $|-14| + |8| - |-5|$.





6)

A circle graph shows 350 data points distributed as shown. If the 33.3% section is selected for sampling, approximately how many items will be sampled?

- A. 110 C. 120
 B. 115 D. 125

7) Simplify the ratio 25 : 35 to its lowest terms.

- A. 10 : 14 C. 25 : 35
 B. 7 : 5 D. 5 : 7

8) If 3 notebooks cost \$9, how much will 7 notebooks cost?

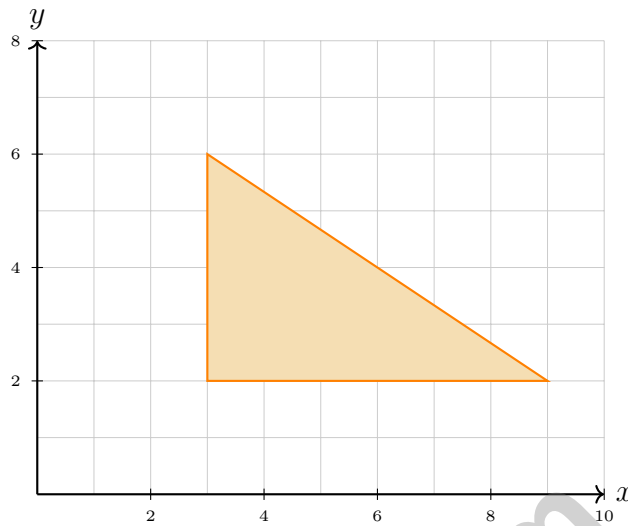
- A. \$18 C. \$21
 B. \$20 D. \$27

9) A rectangular prism has dimensions 5 cm by 5 cm by 2 cm. What is the volume?

- A. 12 cm³ C. 50 cm³
 B. 25 cm³ D. 75 cm³



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10)

Find the area of the right triangle with vertices at $(3, 2)$, $(9, 2)$, and $(3, 6)$.

- A. 10 square units C. 14 square units
 B. 12 square units D. 16 square units

11) On a number line, point A is at -3 and point B is at 4 . What is the distance between the two points?

12) A submarine is at a depth of -250 meters. It rises 75 meters. At what depth is the submarine now?

1) On a number line, the midpoint between two numbers is -0.5 . If one number is -2 , what is the other number?

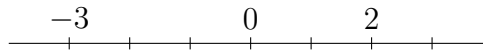
A. -3.5

C. 1.5

B. -1

D. 1

2) Which number line correctly shows three points: -3 , 0 , and 2 ?



Based on the number line, which statement is true?

A. $-3 > 2$

C. $-3 < 0 < 2$

B. $0 < -3$

D. $2 < 0$

3) A toy that costs $\$24$ is bought at 20% off. What is the final price?

A. $\$4.80$

C. $\$14.40$

B. $\$9.60$

D. $\$19.20$

4) A student is converting 8 feet to inches. He multiplies by 12 to get 96 . Is his work correct?

A. No, he should divide by 12 , not multiply.

C. No, 8 feet should equal 80 inches.

B. No, he should multiply by 3 instead of 12 .

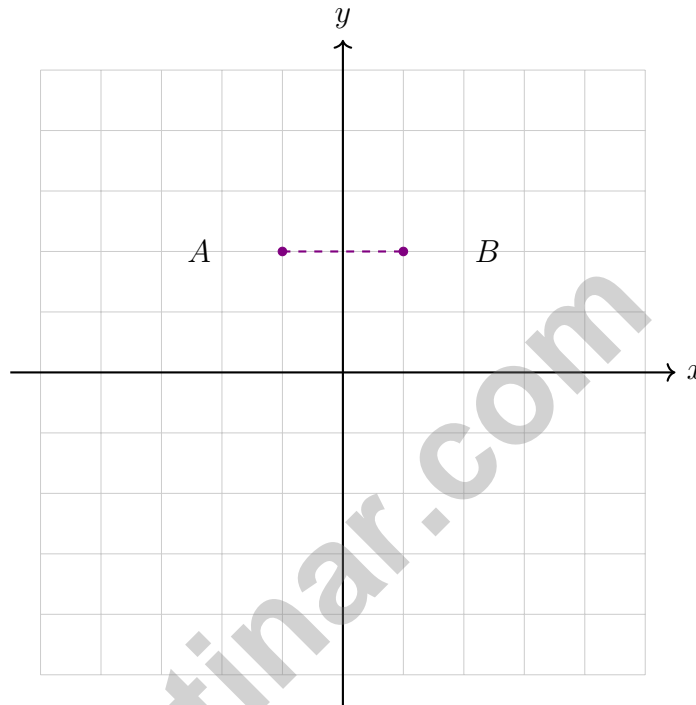
D. Yes, 8 feet = 96 inches.



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5) What is the GCF of 10 and 15?

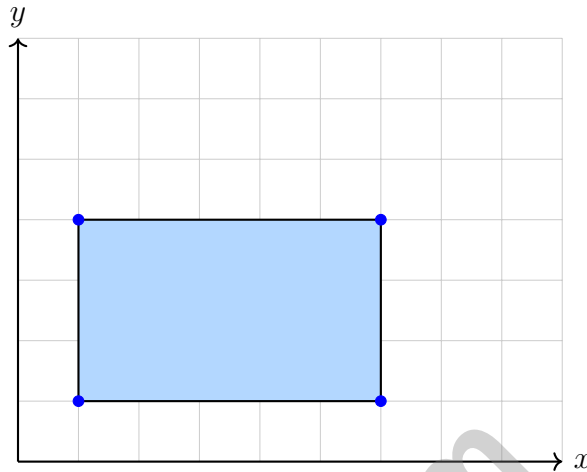
- A. 2
- B. 3
- C. 5
- D. 10



6)

Points A and B are shown. Which transformation was applied to point A to get point B ?

- A. Reflection across the x -axis
- B. Reflection across the y -axis
- C. A translation to the right
- D. A rotation of 90 degrees



1)

What is the area of this rectangle?

- A. 10 square units
- B. 13 square units
- C. 18 square units
- D. 15 square units

2) A triangular garden plot has a height of 7 meters and an area of 84 m^2 . What is the base of the triangle?

3)

Miles	50	100	150
Hours	1	2	3

Which rate does this table represent?

- A. 30 miles per hour
- B. 50 miles per hour
- C. 100 miles per hour
- D. 150 miles per hour



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4)

Proportional Relationship

Quantity A	Quantity B	Ratio
8	12	2 : 3
10	15	?
12	18	2 : 3

What ratio should fill the ? in the table above?

 A. 1 : 2 C. 2 : 5 B. 2 : 3 D. 3 : 4

5) A trapezoid has an area of 80 sq ft, one base of 14 ft, and a height of 10 ft. What is the length of the other base?

6) Factor $27 + 18$ using the GCF.

 A. $3(9 + 6)$ C. $6(4.5 + 3)$ B. $9(3 + 2)$ D. $18(2 + 1)$

7) A garden has tomato plants and pepper plants in a ratio of 8 : 3. If there are 24 tomato plants, how many pepper plants are in the garden?

 A. 27 pepper plants C. 3 pepper plants B. 8 pepper plants D. 9 pepper plants

Ohio OST Practice Test Answer Keys

How to use this Ohio OST answer section with a Grade 6 student:

1. check the answer first, then write one quick reason the choice is correct
2. mark questions to try again, especially the skills that feel connected to Buckeye-state problem solving

3. rework the problem before reading the full explanation, using this reminder:

Use a clear game plan: underline the task, write the math, and check the choice.

A calm Ohio correction routine turns every missed item into useful practice. Take a round, review what changed your answer, and carry that habit forward.



Ohio Practice Test Answers and Explanations

Review the seven printed OST tests with prepared, steady, and ready for the next question habits.

Practice Test 1 Answers and Explanations

- 1) **Choice C is correct.** **(6.EE.1)** $11^2 = 11 \times 11 = 121$. This is a two-digit squared number.
- 2) **Choice D is correct.** **(6.SP.2)** With 4 values, median is the average of the 2nd and 3rd positions. If ordered as 5, 8, 12, x , then median = $\frac{8+12}{2} = 10$ ✓, so $x \geq 12$.
- 3) **Choice A is correct.** **(6.NS.3)** Probability of not liking ice cream = $1 - 0.9 = 0.1$ or 10%.
- 4) **Choice D is correct.** **(6.SP.4)** With 9 data points (odd), the median is the middle value (5th). If the median is 58, then the 5th value is 58.
- 5) **The correct answer is 17.** **(6.NS.7c)** $|-14| = 14$, $|8| = 8$, $|-5| = 5$. So $14 + 8 - 5 = 17$.
- 6) **Choice B is correct.** **(6.SP.1d)** 33.3% of 350 is approximately $\frac{1}{3} \times 350 \approx 116.67 \approx 117$ items. Answer B (115) is the closest reasonable approximation among choices.
- 7) **Choice D is correct.** **(6.RP.1)** Both 25 and 35 are divisible by 5. Dividing both parts by 5 gives $\frac{25}{5} : \frac{35}{5} = 5 : 7$.
- 8) **Choice C is correct.** **(6.RP.3)** Unit price: $9 \div 3 = 3$ per notebook. For 7 notebooks: $3 \times 7 = 21$ dollars.
- 9) **Choice C is correct.** **(6.G.2)** $V = 5 \times 5 \times 2 = 25 \times 2 = 50 \text{ cm}^3$.
- 10) **Choice B is correct.** **(6.G.1)** Base: $9 - 3 = 6$ units. Height: $6 - 2 = 4$ units. Area = $\frac{1}{2} \times 6 \times 4 = 12$ square units.
- 11) **The correct answer is 7.** **(6.NS.6c)** Distance = $4 - (-3) = 4 + 3 = 7$ units. Use the formula: larger value minus smaller value.
- 12) **The correct answer is -175.** **(6.NS.3)** $-250 + 75 = -175$ meters. The submarine is now 175 meters below the surface.
- 13) **Choice B is correct.** **(6.SP.5c)** Distances from mean 7.625: $|6 - 7.625| = 1.625$, $|6 - 7.625| = 1.625$, $|7 - 7.625| = 0.625$, $|7 - 7.625| = 0.625$, $|8 - 7.625| = 0.375$, $|8 - 7.625| = 0.375$, $|9 - 7.625| = 1.375$, $|10 - 7.625| = 2.375$. Sum = 8.5. MAD = $8.5/8 = 1.0625$.
- 14) **Choice A is correct.** **(6.SP.4)** Original mean: $(8 + 8 + 9 + 10 + 10 + 10 + 11 + 12)/8 = 9.75$. After removing one 10: $(8 + 8 + 9 + 10 + 10 + 11 + 12)/7 = 9.71$. The mean decreases slightly.
- 15) **Choice A is correct.** **(6.SP.5d)** Median of 9 values is the 5th value, 88. Sum = $78 + 82 + 85 + 87 + 88 + 89 + 90 + 92 + 96 = 787$. Mean = $787 \div 9 \approx 87.4$, so the student's mean of 79 is incorrect.
- 16) **Choice A is correct.** **(6.RP.3)** Bar graphs excel at comparing values across categories (sports in this case). Line graphs show trends over time; circle graphs show parts of a whole; box plots display quartiles.
- 17) **Choice C is correct.** **(6.EE.3)** Credit minus charge: $72 - 88 = -16$ dollars (a \$16 debit/negative balance).
- 18) **The correct answer is Zero serves as a reference point by marking the origin. Negative numbers are to the left (A is correct). Opposites are equidistant from zero (C is correct). Distance from zero determines position relative to the reference point (E is correct).** **(6.NS.5)** Choice A correctly identifies the spatial arrangement with zero as origin. Choice C correctly describes opposites as equidistant from zero (the reference). Choice E correctly explains how distances from zero locate a number. Choice B is about comparison, not zero's role as reference. Choice D is about direction but doesn't specifically explain zero's reference-point function.
- 19) **Choice C is correct.** **(6.EE.2b)** $4m + 4n$ has 2 terms ($4m$ and $4n$), both have variables, and both have coefficient 4.
- 20) **Choice C is correct.** **(6.EE.2c)** Substitute $x = 3$: $6(3) + 2 = 18 + 2 = 20$.
- 21) **The correct answer is -\$3000.** **(6.NS.3)** Loss of \$500 per month for 6 months: $(-500) \times 6 = -3000$, meaning a loss of \$3000.
- 22) **Choice A is correct.** **(6.EE.6)** The bar shows $v + v + 9 = 2v + 9 = 35$. So $2v = 26$ and $v = 13$.
- 23) **Choice D is correct.** **(6.SP.2)** Sum = $3 + 5 + 7 + 9 + 11 = 35$. Mean = $35 \div 5 = 7$.
- 24) **Choice C is correct.** **(6.RP.3)** Tank 1 has a salt-to-water ratio of 1 : 4. Tank 2 has 2 : 8, which simplifies to 1 : 4, so the ratios are the same.
- 25) **Choice B is correct.** **(6.RP.3d)** A rate is a comparison of two quantities that have different units. Phrases like "miles per hour," "dollars per pound," and "items per day" show different units being compared.



Scan me!
For more practice
& answers

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

MASTER TODAY. SUCCEED TOMORROW.

This Grade 6 Math Practice Tests book is designed to help students strengthen their math skills, master important concepts, and build the confidence they need to excel on comprehensive assessments.

With 7 full-length printed tests and 2 online tests, students get the review, practice, and realistic test experience they need to improve accuracy, develop problem-solving abilities, and reach their full potential.

Perfect for classroom use, homework, test preparation, and extra practice at home.



PERFECT FOR:

- ✓ Classroom Practice
- ✓ Homework & Review
- ✓ Independent Learning
- ✓ Test Preparation
- ✓ Skill Reinforcement
- ✓ Building Confidence

★ PRACTICE TODAY.
SUCCEED TOMORROW.

WHAT STUDENTS WILL GAIN



Stronger Math Skills

Build a solid foundation through targeted practice and review.



Better Problem Solving

Develop logical thinking and effective solution strategies.



Deeper Understanding

Reinforce key concepts aligned with standards through meaningful practice.



Test Confidence

Become familiar with test formats and improve accuracy and speed.



Achieve Success

Build confidence and perform your best on test day.

TOPICS COVERED

- ✓ Ratios & Rates
- ✓ The Number System
- ✓ Expressions & Equations
- ✓ Geometry
- ✓ Fractions & Decimals
- ✓ Percents
- ✓ Statistics & Probability
- ✓ Data Analysis
- ✓ Measurement & Conversions
- ✓ And More!



2 ONLINE TESTS

Extra online practice to reinforce learning and build confidence.

MORE PRACTICE. GREATER RESULTS.

Give your child the tools needed to develop strong math skills, confidence, and a positive attitude toward learning.



7 FULL-LENGTH
PRINTED TESTS



STANDARDS-
ALIGNED PRACTICE



DETAILED ANSWER
KEYS & EXPLANATIONS