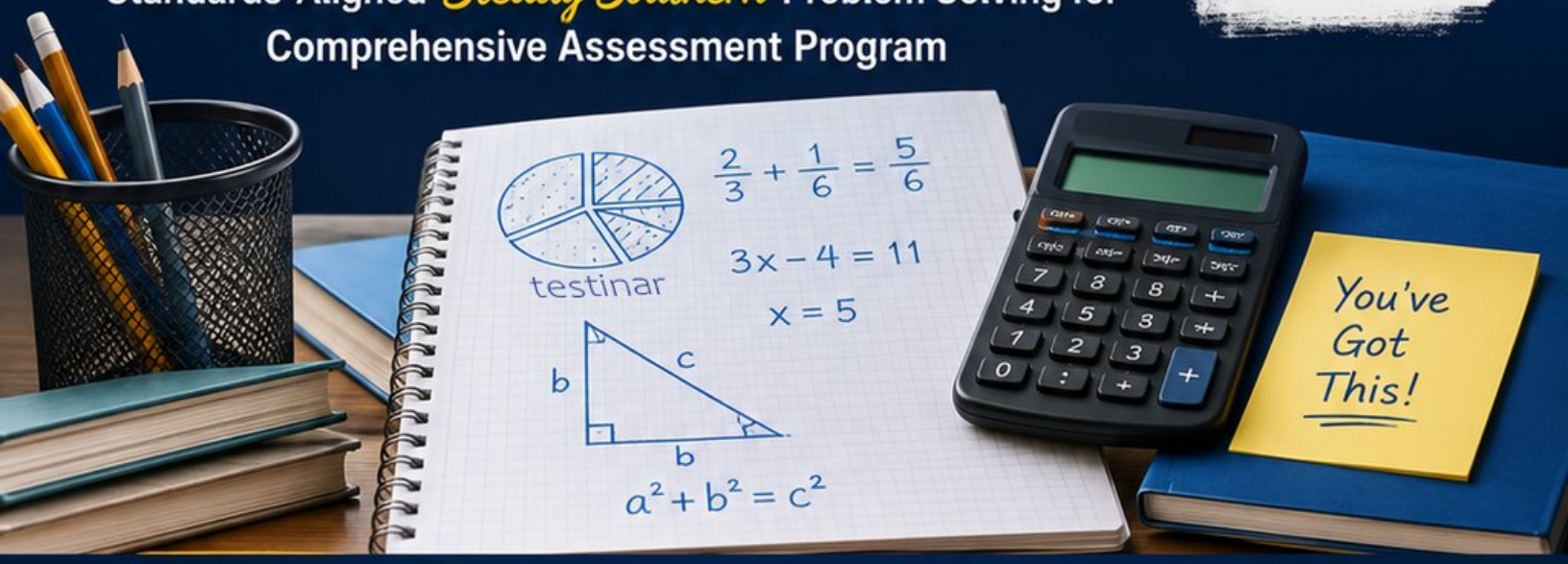
8 Ohio OST

GRADE 6 MATH PRACTICE TESTS

8 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



BUILT FOR ACAP SUCCESS

REALISTIC TESTS & QUESTION TYPES

STRENGTHEN MATH SKILLS

REVIEW, PRACTICE, AND IMPROVE

8 Ohio OST Grade 6 Math Practice Tests

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

Eight 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

Copyright ©

Testinar Inc

Published by Testinar Inc

Testinar.com

Welcome, Ohio Math Explorer!

Eight focused rounds using Buckeye-state problem solving

This book gives you eight 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.

How to Use This Book

A eight-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.
Tests 7–8	Final stamina rounds 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.

Table of Contents

1) The table below shows a proportional relationship between distance and time. What is the missing value?

Time (hours)	2	4	6
Distance (miles)	90	180	?

☐ A. 240
☐ B. 260
☐ C. 270
☐ D. 300

2) The base of a triangle is 15 inches. What height is needed to create an area of 90 in^2?

☐ A. 6 in
☐ B. 12 in
☐ C. 15 in
☐ D. 30 in

3)

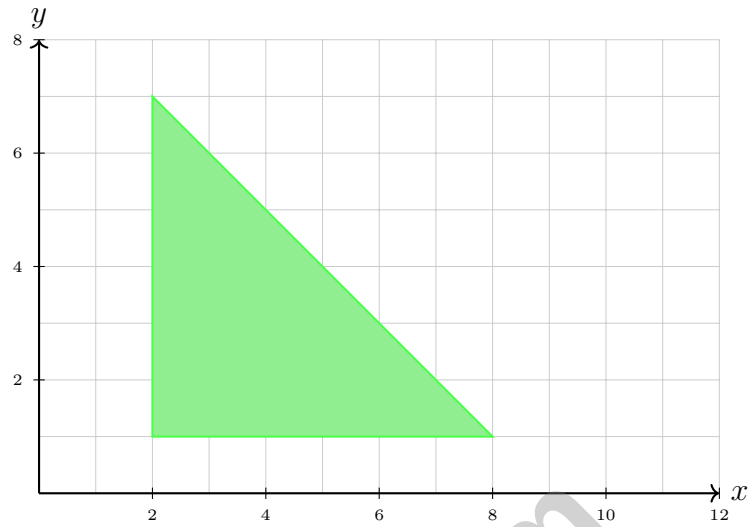
A parallelogram has a base of 6.5 inches and a height of 2.5 inches. What is the area?

☐ A. 9 in^2
☐ B. 16.25 in^2
☐ C. 18 in^2
☐ D. 9.5 in^2

4) What is the volume of a rectangular prism with length 6 in, width 4 in, and height 2 in?

☐ A. 12 in^3
☐ B. 24 in^3
☐ C. 36 in^3
☐ D. 48 in^3

5)



A right triangle has vertices at $(2, 1)$, $(8, 1)$, and $(2, 7)$. What is its area?

☐ A. 15 square units
☐ B. 18 square units
☐ C. 21 square units
☐ D. 24 square units

6) A toy car model is 12 cm long. The scale of the model is 1 cm = 0.5 m. What is the length of the actual car?

12 cm

☐ A. 4 m
☐ B. 5 m
☐ C. 8 m
☐ D. 6 m

7) Which shows the correct first step when computing $\frac{3}{8} \div \frac{9}{10}$?

☐ A. $\frac{3}{8} \times \frac{9}{10}$
☐ B. $\frac{3}{8} - \frac{10}{9}$
☐ C. $\frac{8}{3} \times \frac{9}{10}$
☐ D. $\frac{3}{8} \times \frac{10}{9}$

8) Which pair of integers are 5 units apart on a number line?

☐ A. -8 and -3
☐ B. 2 and 8
☐ C. -4 and 2
☐ D. 1 and 5

9) Maria starts with 20 dollars and earns 12 dollars per hour. Her total money is $20 + 12h$ where h is hours worked. What does the constant 20 represent?

☐ A. The amount earned per hour
☐ B. The hours worked
☐ C. The starting amount
☐ D. The total earned

10) Solve for x: $2x = 14$.

11) The maximum capacity is 4,000 gallons. What is the greatest allowed number of gallons?

1) A recipe uses a 7:3 ratio of flour to baking powder. A graph with flour on the x-axis and baking powder on the y-axis contains the point $(14, 6)$.
Is this point correct for the 7:3 ratio?

☐ A. Yes, because $14 \times 3 = 42$
☐ B. Yes, because $14 \div 7 = 2$ and $2 \times 3 = 6$
☐ C. No, because the ratio should be 7:14
☐ D. No, because the y-value should be 7

2) Class B scores are $60, 75, 85, 95, 100$ with mean 83. Find the mean absolute deviation.

3) A box plot for Dataset X shows Q1 = 20, median = 25, Q3 = 35. A box plot for Dataset Y shows Q1 = 22, median = 26, Q3 = 32. Which statement is true?

☐ A. Dataset X has a larger interquartile range.
☐ B. Dataset Y has a larger interquartile range.
☐ C. Both have the same interquartile range.
☐ D. The IQR cannot be compared.

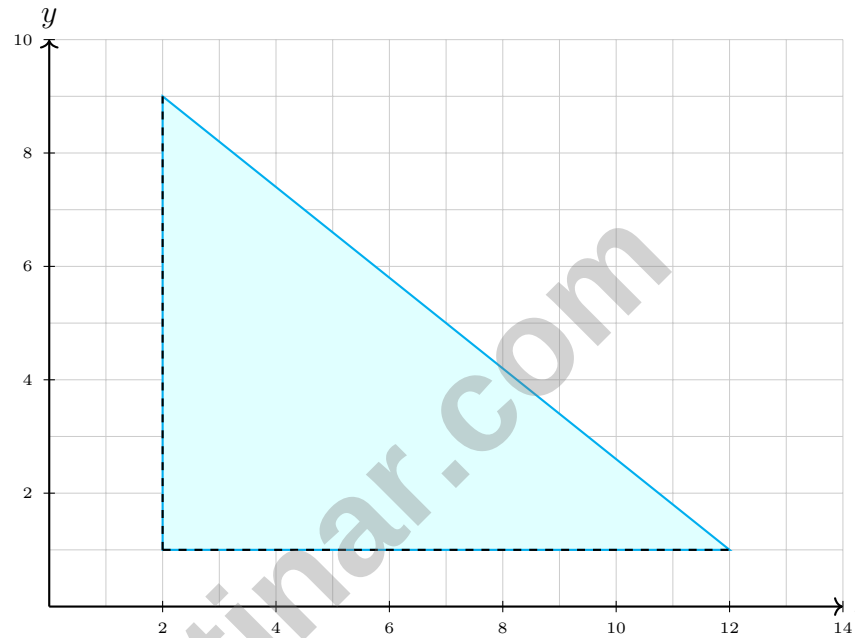
4) A chocolate box has length 5 in, width 3 in, and height $\frac{1}{2}$ in. What is its volume?

☐ A. 4.5 in^3
☐ B. 7.5 in^3
☐ C. 15 in^3
☐ D. 30 in^3

5) A pentagon has vertices at $(1, 1)$, $(5, 1)$, $(7, 4)$, $(4, 7)$, and $(1, 5)$. How many sides does it have?

☐ A. 4 sides
☐ B. 5 sides
☐ C. 6 sides
☐ D. 7 sides

6)



A right triangle has vertices at $(2, 1)$, $(12, 1)$, and $(2, 9)$. What is its area?

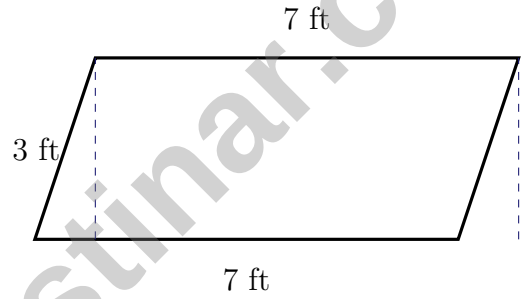
☐ A. 36 square units
☐ B. 50 square units
☐ C. 42 square units
☐ D. 40 square units

1) What is $\frac{3}{4} \div \frac{3}{8}$?

☐ A. $\frac{9}{32}$
☐ B. $\frac{24}{32}$
☐ C. $\frac{1}{2}$
☐ D. 2

2) A thermometer shows $-8°C$. It drops another $12°C$. What is the new temperature number?

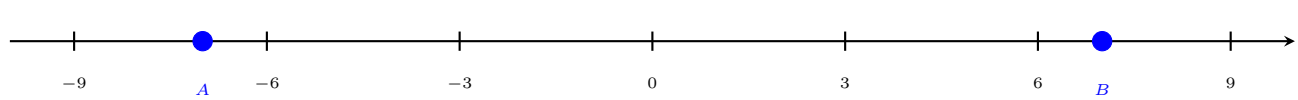
3)



What is the area of the parallelogram shown?

☐ A. 10 ft^2
☐ B. 17 ft^2
☐ C. 21 ft^2
☐ D. 28 ft^2

4)



On a number line, point A is at -7 and point B is at 7. What is the distance between them?

5) A storage box has dimensions $2\frac{1}{2}$ m by $1\frac{1}{2}$ m by 2 m. Find its volume.

☐ A. 6 m^3
☐ B. 7.5 m^3
☐ C. 9 m^3
☐ D. 12.5 m^3

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 eight 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.RP.3 Rate is $90 \div 2 = 45$ miles per hour. For 6 hours: $45 \times 6 = 270$ miles.
2) **Choice B is correct.** 6.G.1 $90 = \frac{1}{2} \times 15 \times h \Rightarrow h = 12$ in.
3) **Choice B is correct.** 6.G.1 Area $= 6.5 \times 2.5 = 16.25$ in^2.
4) **Choice D is correct.** 6.G.2 $V = 6 \times 4 \times 2 = 24 \times 2 = 48$ in^3.
5) **Choice B is correct.** 6.G.1 Base: $8 - 2 = 6$ units. Height: $7 - 1 = 6$ units. Area $= \frac{1}{2} \times 6 \times 6 = 18$ square units.
6) **Choice D is correct.** 6.RP.3 Multiply: 12 cm $\times$ 0.5 m/cm $= 6$ m.
7) **Choice D is correct.** 6.NS.1 Keep the first fraction, invert the second, and multiply.
8) **Choice A is correct.** 6.NS.3 The distance between -8 and -3 is $|-3-(-8)| = |5| = 5$ units.
9) **Choice C is correct.** 6.EE.2b The constant 20 does not depend on h and represents the initial amount before earning anything.
10) **The correct answer is 7.** 6.EE.5 Divide both sides by 2: $x = 7$.
11) **The correct answer is** 4,000. 6.EE.8 The maximum value is 4,000.
12) **Choice B is correct.** 6.EE.2c Substitute: $5(2) + 2(3) - 3(1) = 10 + 6 - 3 = 13$.
13) **Choice D is correct.** 6.EE.6 Total cost $= a + 15 = 20 + 15 = 35$ cents.
14) **Choice C is correct.** 6.EE.9 If 8 gallons cover 160 miles, then 320 miles (twice as far) requires $2 \times 8 = 16$ gallons.
15) **Choice B is correct.** 6.NS.8 Using the rule $(a, b) \to (-a, b)$: $(5, -2) \to (-5, -2)$.
16) **Choice B is correct.** 6.SP.1b The key feature of a statistical question is that it expects variability in the data. Since people in a city have different ages, you must collect data from many people and calculate. Using "average" or "large group" alone does not make it statistical.
17) **Choice D is correct.** 6.SP.2 Plot A median $= 5$. Plot B median $= 5$ (the middle value). Both are equal.
18) **Choice B is correct.** 6.SP.2 With 6 values, median is the average of the 3rd and 4th values: $\frac{22 + 24}{2} = 23$.
19) **The correct answer is The graph is a straight line through the origin, and the ratio of y to x is always constant.** 6.NS.7d Statements A and B correctly describe proportional relationships. C is wrong because b must equal 0 for proportionality. D is wrong because proportional equations have the form $y = kx$, not $y = k/x$. E is wrong because a proportional relationship must start at the origin.
20) **Choice C is correct.** 6.SP.4 Five stems with at least one leaf each means a minimum of 5 data points (one per stem).
21) **Choice A is correct.** 6.RP.3 Simplify 6 : 4 by dividing both parts by 2 to get 3 : 2. Statement Y says the same thing in words, so the two statements match.
22) **Choice A is correct.** 6.RP.3d A rate compares two quantities with different units. Divide the distance by the time: $180 \div 3 = 60$ miles per hour.
23) **Choice B is correct.** 6.RP.3 The ratio is 2 : 50 or 1 : 25. For 6 oz of chlorine: $6 \times 25 = 150$ gallons.
24) **Choice C is correct.** 6.NS.4 Find GCF(12, 18). Factors of 12: $1, 2, 3, 4, 6, 12$. Factors of 18: $1, 2, 3, 6, 9, 18$. GCF is 6. She can make 6 piles with 2 red shirts and 3 blue shirts each.
25) **Choice D is correct.** 6.RP.1 Count the counters by color: 3 orange and 4 green. Since the question asks orange to green, write $\frac{3}{4}$.
26) **Choice B is correct.** 6.RP.3b Divide total gallons by time: $10 \div 2 = 5$ gallons per minute.
27) **Choice A is correct.** 6.RP.3a The constant of proportionality is the unit rate: centimeters per inch. From the table: $2.54 \div 1 = 2.54$ centimeters per inch. The equation is $y = 2.54x$.

Author's Note

A Note From Your Math Friend

Hi, Math Star!

◇ Wow! You finished 8 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 8 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 MATH. ACE YOUR TESTS.

This Grade 6 Math Practice Tests book is designed to help students build confidence, strengthen math skills, and excel on comprehensive assessments.

With 8 full-length printed tests and 2 online tests, this resource provides realistic practice, a variety of question types, and detailed answer explanations to help students achieve their best.

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

8 PRINTED TESTS

+

2 ONLINE TESTS

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.

Understand Key Concepts
Reinforce important math ideas aligned with standards.

Test Confidence
Get familiar with test formats and improve accuracy.

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.

8 FULL-LENGTH PRACTICE TESTS

2 ONLINE PRACTICE TESTS

DETAILED ANSWER EXPLANATIONS