

# 4 Oregon OSAS

GRADE  
**6**  
MATH

## PRACTICE TESTS

Standards Aligned Problem Solving  
For Comprehensive Assessment Programs

**4**

PRINTED  
TESTS



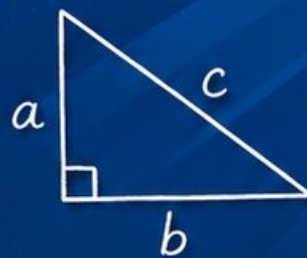
**2**

ONLINE  
TESTS



- ✓ Build Confidence
- ✓ Master Key Math Skills
- ✓ Answer Explanations for Every Question
- ✓ Test-Taking Strategies That Work

$$2x + 5 = 21$$
$$x = 8$$



$$\frac{3}{4} + \frac{1}{2} = \frac{5}{4}$$



USE THESE TWO  
**ADDITIONAL ONLINE  
PRACTICE TESTS**

FOR EXTRA REVIEW AFTER  
THE PRINTED TESTS  
IN THIS BOOK.

# 4 Oregon OSAS Grade 6 Math Practice Tests

*Standards-Aligned Forest-To-Coast Reasoning for Oregon Statewide Assessment System*



Four complete 40-question Grade 6 practice rounds for OSAS, built for forest-to-coast reasoning 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, Oregon Math Explorer!

Four focused rounds using forest-to-coast reasoning

This book gives you four full Grade 6 practice tests for OSAS. Each round uses coastal trails, forest paths, and careful graph reading as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

## Your Oregon Practice Promise

Let the details guide the work: read scale, label units, and check the answer in context.

Read

Plan

Check

## How to Use This Book

A four-session routine for forest-to-coast reasoning

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

**Oregon review rhythm:** Practice a round, review the trail of decisions, and improve one strategy next time.



## What Is Inside?

Four OSAS tests, 160 questions, and a full review path

Part	What You Will Practice
Tests 1–2	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Tests 3–4	Skill-building and final stamina rounds with expressions, equations, geometry, data, and problem models.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Forest-to-coast reasoning 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) A rectangular prism has length 6 cm, width 5 cm, and height  $\frac{4}{5}$  cm. What is its volume?

A.  $12 \text{ cm}^3$

C.  $24 \text{ cm}^3$

B.  $18 \text{ cm}^3$

D.  $30 \text{ cm}^3$

2) On a number line, if point A is at  $-\frac{5}{6}$  and point B is at  $\frac{1}{6}$ , what is the distance between them?

A.  $\frac{1}{6}$

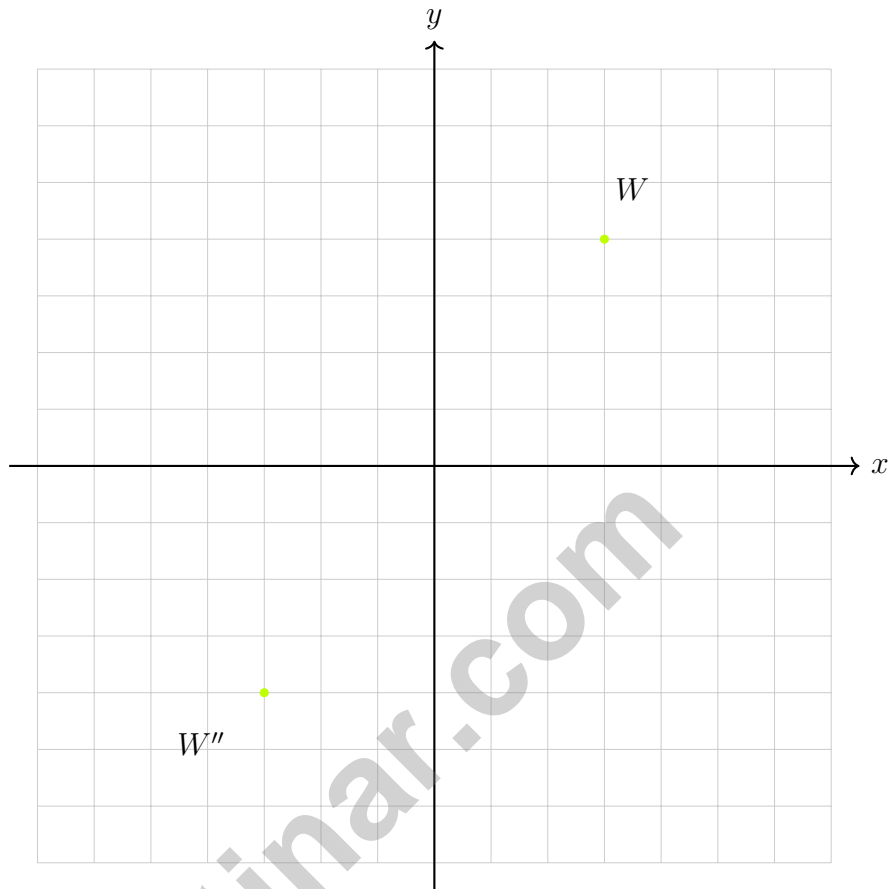
C. 1

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

D.  $1\frac{1}{6}$

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3)

If point  $W$  is at  $(3, 4)$  and point  $W''$  is at  $(-3, -4)$ , what transformation(s) would move  $W$  to  $W''$ ?

- A. Reflection across the  $x$ -axis only       C. Reflection across both axes  
 B. Reflection across the  $y$ -axis only       D. Reflection across the origin



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4) Compare  $-\frac{2}{3}$  and  $-\frac{1}{3}$ . Which symbol makes the statement true?

$$-\frac{2}{3} \square -\frac{1}{3}$$

A. <

C. =

B. >

D. Cannot compare

5) If the distance between points  $(0, a)$  and  $(0, -5)$  is 8 units, what is  $a$ ?

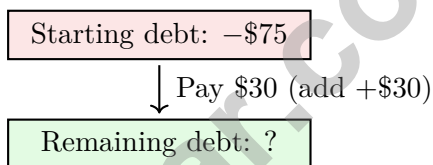
A.  $a = 3$  or  $a = -13$

C.  $a = 2$  or  $a = -12$

B.  $a = -3$  or  $a = 13$

D.  $a = 5$  or  $a = -8$

6) A debt of \$75 is represented as  $-\$75$ . If the debt is paid down by \$30, what is the remaining debt?

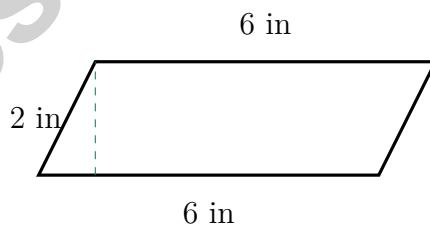


A.  $-\$105$

C. \$45

B.  $-\$45$

D. \$105



7)

What is the area of the parallelogram?

A.  $8 \text{ in}^2$

C.  $16 \text{ in}^2$

B.  $12 \text{ in}^2$

D.  $24 \text{ in}^2$

1) Evaluate  $\frac{x}{2} + \frac{y}{3}$  when  $x = 8$  and  $y = 9$ .

A. 5

C. 8

B. 9

D. 7

2) Rewrite the question to make it statistical:

Original: "How fast is my car?"

A. What color is my car?

C. How fast do different cars in the

B. How many cars are in the parking lot?  
lot?

parking lot go?

D. What brand is my car?

3) A five-number summary is:  $\min = 2$ ,  $Q_1 = 5$ ,  $\text{median} = 8$ ,  $Q_3 = 11$ ,  $\max = 15$ . What is the lower whisker length?

A. 2

C. 5

B. 3

D. 13

4) Corn plant heights (inches) from 9 plants:  $\{24, 26, 28, 30, 32, 34, 36, 38, 40\}$ . What is the shape?

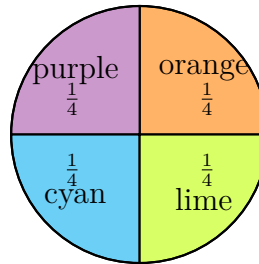
A. Symmetric

C. Skewed left

B. Skewed right

D. Bimodal



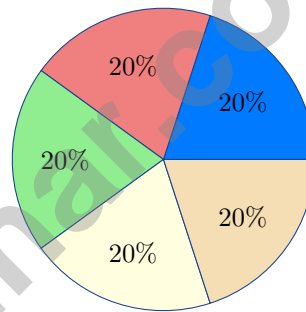


5)

The spinner above has four equal sections. What is the probability of spinning orange or cyan?

- A.  $\frac{1}{4}$   
 B.  $\frac{1}{2}$

- C.  $\frac{3}{4}$   
 D. 1



6)

A circle graph is divided into 5 equal sections. Each section represents what percent?

- A. 20%  
 B. 15%

- C. 10%  
 D. 25%

7) A teacher uses a histogram to compare test scores. The histogram has intervals: 50–60 (freq 2), 60–70 (freq 5), 70–80 (freq 8), 80–90 (freq 4), 90–100 (freq 1).

What percentage of students scored between 70 and 90?

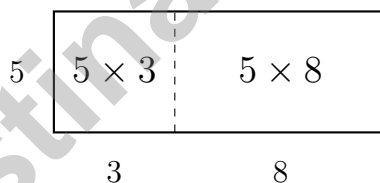
- A. 48%  
 B. 52%

- C. 60%  
 D. 80%



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- 1) Factor out the common factor from  $12x + 8$ . Which expression is equivalent?
- A.  $4(3x + 2)$                        C.  $6(2x + 1)$   
 B.  $2(6x + 4)$                        D.  $3(4x + 3)$
- 2) A pizza is cut into 8 slices. One slice costs \$2.50. What is the total cost of the pizza?
- A. \$18.00                       C. \$16.00  
 B. \$20.00                       D. \$22.00
- 3) What is the prime factorization of 72?
- A.  $2^3 \times 3^2$                        C.  $8 \times 9$   
 B.  $2^2 \times 18$                        D.  $2 \times 36$
- 4) A student tries to use the area model below to find  $5(3 + 8)$  but makes an error. The student writes:  $5(3 + 8) = 15 + 8 = 23$ . What is the error?



- A. 5 was only distributed to the first term  
 B. The sum  $3 + 8$  should equal 11, not both terms  
 C.  $5(3 + 8)$  should simplify to 55, not 23  
 D. Choices A and C are both correct



- 5) A company's quarterly profit or loss can be shown in a table. If profit is positive and loss is negative, which quarter shows a loss?

Quarter	Profit/Loss (\$)
Q1	+2000
Q2	-500
Q3	+1500
Q4	+3000

- A. Q1
- B. Q4
- C. Q3
- D. Q2
- 6) Which fraction is equivalent to  $-0.5$  on a number line?

- A.  $-\frac{1}{4}$
- B.  $-\frac{3}{4}$
- C.  $-\frac{2}{3}$
- D.  $-\frac{1}{2}$



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**Oregon OSAS Practice Test Answer Keys****How to use this Oregon OSAS 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 forest-to-coast reasoning
3. rework the problem before reading the full explanation, using this reminder:  
Let the details guide the work: read scale, label units, and check the answer in context.

**A calm Oregon correction routine turns every missed item into useful practice. Practice a round, review the trail of decisions, and improve one strategy next time.**



## Oregon Practice Test Answers and Explanations

Review the four printed OSAS tests with observant, steady, and ready for the next path habits.

### Practice Test 1 Answers and Explanations

- 1) **Choice C is correct.** **(6.GM.A.2)**  $V = 6 \times 5 \times 0.8 = 30 \times 0.8 = 24 \text{ cm}^3$ .
- 2) **Choice C is correct.** **(6.NS.C.6)** Distance =  $\frac{1}{6} - (-\frac{5}{6}) = \frac{1}{6} + \frac{5}{6} = \frac{6}{6} = 1$ .
- 3) **Choice C is correct.** **(6.NS.C.6)** To go from (3, 4) to (-3, -4), both the  $x$ -coordinate sign and  $y$ -coordinate sign must change. This requires reflection across both the  $x$ -axis and  $y$ -axis.
- 4) **Choice A is correct.** **(6.NS.C.7)** Both are negative. Since  $-\frac{2}{3} \approx -0.67$  and  $-\frac{1}{3} \approx -0.33$ , we have  $-\frac{2}{3} < -\frac{1}{3}$ .
- 5) **Choice A is correct.** **(6.NS.C.8)** Same  $x$ -coordinate (0):  $|a - (-5)| = 8$ , so  $|a + 5| = 8$ . Thus  $a + 5 = 8$  or  $a + 5 = -8$ , giving  $a = 3$  or  $a = -13$ .
- 6) **Choice B is correct.** **(6.NS.B.3)** Starting debt: -75. Payment of 30:  $-75 + 30 = -45$ . Remaining debt is \$45.
- 7) **Choice B is correct.** **(6.GM.A.1)** Area =  $6 \times 2 = 12 \text{ in}^2$ .
- 8) **Choice B is correct.** **(6.GM.A.3)** Perimeter =  $2(8 + 4) = 2(12) = 24$  units.
- 9) **Choice B is correct.** **(6.GM.A.1)** Width:  $8 - 2 = 6$  units. Height:  $6 - 1 = 5$  units. Area =  $6 \times 5 = 30$  square units.
- 10) **The correct answer is 67%.** **(6.RP.A.3)** Multiply the decimal by 100:  $0.67 \times 100 = 67\%$ .
- 11) **Choice A is correct.** **(6.GM.A.4)** A rectangular prism with dimensions  $3 \times 4 \times 5$  has faces: two  $3 \times 4$ , two  $3 \times 5$ , and two  $4 \times 5$ . This matches the net description exactly.
- 12) **Choice C is correct.** **(6.AEE.A.3)** The coefficient is the number multiplied by the variable, including decimals. Here it is 3.5.
- 13) **Choice C is correct.** **(6.DR.D.4)** Total frequency:  $1 + 4 + 6 + 3 + 1 = 15$ . The median is the 8th value. Counting:  $1 + 4 = 5$  (at 15 msg); continuing to 20 msg gives  $5 + 6 = 11$ . The 8th value is in the 20 message group.
- 14) **The correct answer is 90.** **(6.RP.A.3)**  $60\%$  of  $150 = 0.60 \times 150 = 90$  students.
- 15) **Choice A is correct.** **(6.DR.D.4)** Stem 8 has 5 leaves, which is more than any other stem. Thus, the 80 – 89 range contains the most heart rates.
- 16) **Choice C is correct.** **(6.NS.C.6)** The relationship is proportional because the ratio visits/days is constant:  $100/1 = 200/2 = 300/3 = 100$ . A constant increase alone is not enough to prove proportionality, but the constant ratio confirms it here.
- 17) **Choice C is correct.** **(6.DR.C.3)** Each category:  $\$400 \div 5 = \$80$ .
- 18) **The correct answer is The unit rate is 25 items per hour, and the  $y$ -value when  $x = 1$  is 25.** **(6.RP.A.3)** A is correct because  $50 \div 2 = 25$  items per hour. D is correct because when  $x = 1$ ,  $y = 25$ . Choice B is false for a proportional relationship, Choice C should be  $y = 25x$ , and Choice E is false.
- 19) **Choice A is correct.** **(6.RP.A.3)** Distance:  $4 \text{ inches} \times 20 \text{ mi/inch} = 80 \text{ miles}$ . Time:  $80 \div 50 = 1.6$  hours.
- 20) **Choice B is correct.** **(6.NS.A.1)**  $2\frac{1}{4} = \frac{9}{4}$  and  $1\frac{1}{2} = \frac{3}{2}$ , so  $\frac{9}{4} \div \frac{3}{2} = \frac{9}{4} \times \frac{2}{3} = \frac{18}{12} = \frac{3}{2} = 1\frac{1}{2}$ .
- 21) **The correct answer is 1.8.** **(6.RP.A.3)** Divide:  $180 \text{ cm} \div 100 \text{ cm/meter} = 1.8$  meters.
- 22) **Choice A is correct.** **(6.NS.B.2)**  $6,435 \div 33 = 195$ . Check:  $33 \times 195 = 6,435$ .
- 23) **Choice A is correct.** **(6.NS.B.3)** Compare:  $0.83 = 0.830 > 0.800 > 0.380 > 0.308$ . Order from greatest to least: 0.83, 0.8, 0.38, 0.308.
- 24) **Choice B is correct.** **(6.NS.B.4)**  $84 = 4 \times 21 = (2 \times 2) \times (3 \times 7) = 2^2 \times 3 \times 7$ . Options A, C, and D contain composite numbers.
- 25) **Choice B is correct.** **(6.NS.B.4)** GCF of 30 and 45 is 15. So  $30 + 45 = 15(2 + 3)$ . Choice A uses GCF 5, which works but is not the greatest. Choice B is correct.
- 26) **Choice D is correct.** **(6.NS.C.5)** A negative number means the value is below zero. Since the temperature is  $-12^\circ\text{C}$ , it is 12 degrees below zero.
- 27) **Choice C is correct.** **(6.NS.C.7)**  $|-5| = 5$ ,  $|-3| = 3$ ,  $|2| = 2$ . So  $5 + 3 - 2 = 6$ .



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## Hi, Math Athlete!

◇ 4 practice tests done! That's serious training. Your math muscles are strong. You are in great shape for the big test. ◇

★ **Trainers know:** muscle memory is real. The more you practice, the more your brain knows what to do without thinking. You built that muscle memory! ★

### Athlete Performance

- **Endurance:** TOP! You can finish a long test.
- **Strength:** STRONG! You handle hard problems.
- **Speed:** JUST RIGHT! You don't rush.
- **Recovery:** GOOD! You bounce back from tough questions.

**Trainer tip:** on test day, drink water, breathe deeply, and warm up with the easier questions first. Your training will carry you the rest of the way!

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 Trainer

# PRACTICE TODAY. SUCCEED TOMORROW!

This book includes 4 full-length Math practice tests and 2 online tests to help Grade 6 students build confidence, strengthen skills, and excel on standardized assessments.

Each practice test is carefully crafted to reflect the latest standards and includes a variety of question types, realistic test conditions, and detailed answer explanations.

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

## THIS BOOK INCLUDES:

**4** Full-Length  
Printed Tests

**2** Online Practice  
Tests

 Detailed Answer  
Explanations

 **MORE PRACTICE.  
GREATER RESULTS.**

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

## WHAT YOU'LL 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 with clear explanations and meaningful practice.



### Test Confidence

Familiarize with test formats and improve accuracy and speed.



### Achieve Success

Build confidence and perform your best on test day.

## TOPICS COVERED

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



### 2 ONLINE TESTS

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



**VISIT [TESTINAR.COM/MATH6](https://www.testinar.com/math6)**  
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