

6 OREGON OSAS

GRADE

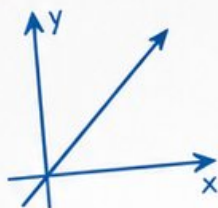
7

MATH

PRACTICE TESTS

Standards Aligned
Problem Solving For
Comprehensive
Assessment Programs

$$y = mx + b$$



$$2(x - 3) = 4x + 6$$



6 PRINTED
TESTS



2 ONLINE
TESTS



USE THESE TWO
ADDITIONAL ONLINE
PRACTICE TESTS
FOR EXTRA REVIEW AFTER
THE PRINTED TESTS
IN THIS BOOK.



Build
Confidence



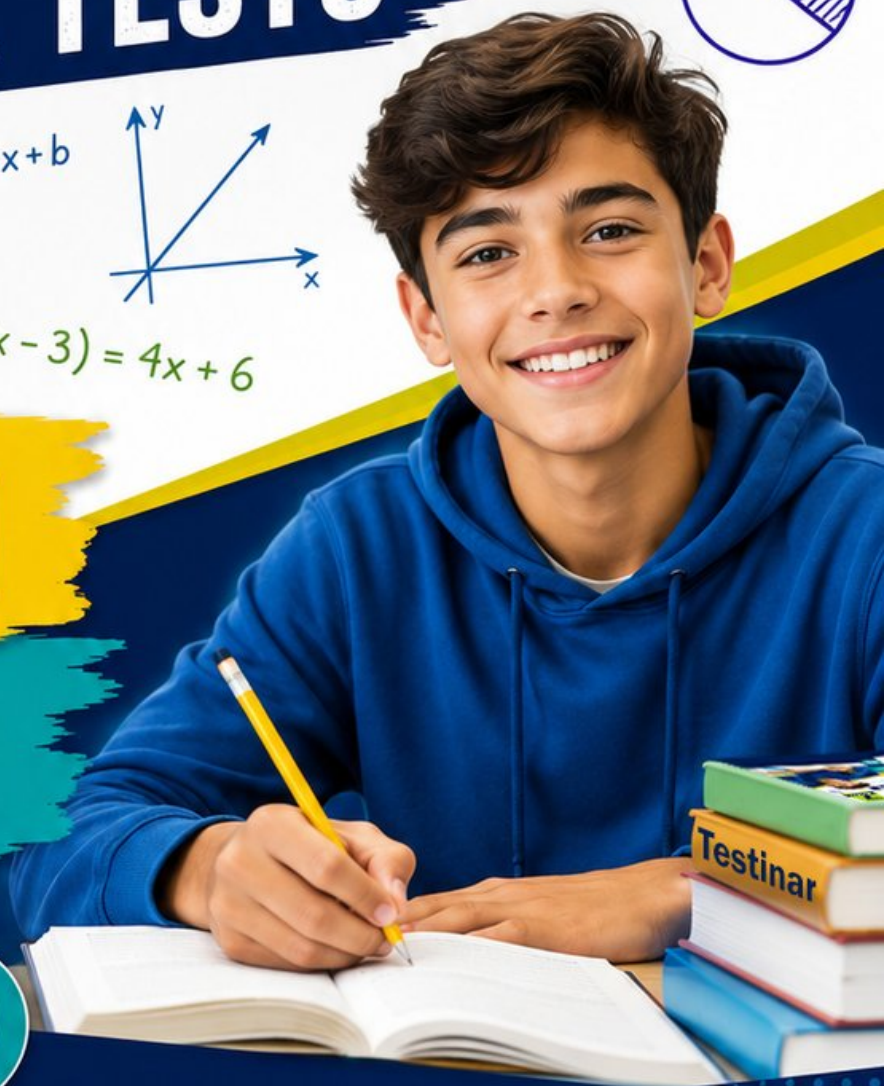
Strengthen
Math Skills



Detailed Answers
& Explanations

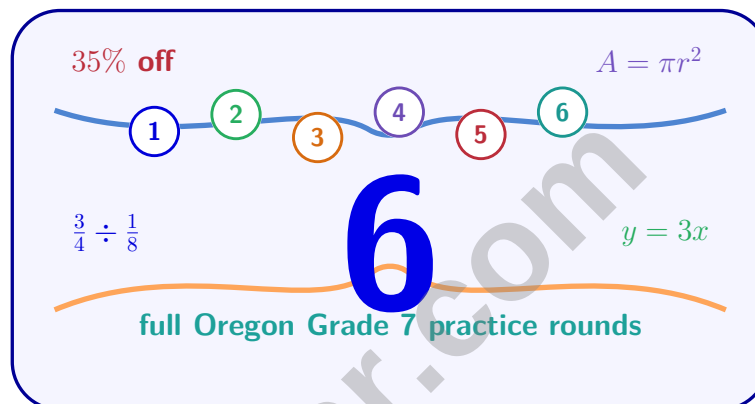


Improve Test
Performance



6 Oregon OSAS Grade 7 Math Practice Tests

Standards-Aligned Practice with Review, Answer Keys, and Explanations



Six complete 40-question Grade 7 OSAS practice rounds with proportional relationships, percents, rational numbers, expressions, equations, geometry, statistics, probability, answer keys, and clear explanations for every item.

Jay Daie and Reza Nazari



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Welcome, Oregon Grade 7 Problem Solver!

Six focused rounds for sharper OSAS math thinking

This book gives you six full Grade 7 OSAS math practice tests. Each round is built to help you notice structure, compare quantities, use proportional reasoning, handle rational numbers, and explain your thinking with care.

Your Oregon Practice Promise

I will read every question carefully, choose a strategy that fits, write enough work to prove my answer, and use corrections as training for the next test.

Read

Model

Verify

How to Use This Book

A six-session plan for confident Grade 7 review

1. **Warm up with the review pages.** Notice the big ideas before starting the tests.
2. **Complete one test at a time.** Treat each 40-question round like a real practice session.
3. **Show your reasoning.** Jot a proportion, equation, diagram, number line, or quick estimate when it helps.
4. **Correct actively.** Rework missed items before reading the explanation.
5. **Choose the next target.** After each test, name one skill and one habit to improve.

Oregon review rhythm: Work a test, score it, study your misses, then come back ready for the next round with one clear goal.



What Is Inside?

Six OSAS tests, 240 questions, and a complete review path

Part	What You Will Practice
Tests 1–3	Proportional relationships, unit rates, percents, rational-number operations, and careful reading.
Tests 4–6	Expressions, equations, inequalities, scale drawings, geometry, and multi-step problem solving.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Grade 7 success means recognizing which idea is being tested even when the next question changes format.



Scan me!
For more practice
& answers

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1) A student calculated 25% of 80 and got 15. Is this correct? If not, what is the correct answer?

☐ A. Yes, 15 is correct.

☐ C. No; the correct answer is 24.

☐ B. No; the correct answer is 32.

☐ D. No; the correct answer is 20.

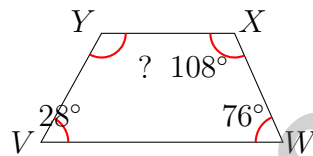
2) Solve for x : $5(x + 3) = 2x + 36$

☐ A. $x = 3$

☐ C. $x = 7$

☐ B. $x = 5$

☐ D. $x = 9$



3)

What is the missing angle measure in the quadrilateral?

☐ A. 108°

☐ C. 148°

☐ B. 128°

☐ D. 168°

4) A pair of jeans originally costs \$50. The store raises the price to \$60. What is the percent increase?

☐ A. 10%

☐ C. 20%

☐ B. 16.7%

☐ D. 30%

5) Two fair dice are rolled as a simulation of a compound event. If “success” is rolling a sum of 7, which of the following correctly identifies all successful outcomes?

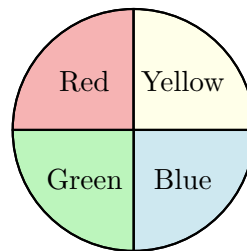
☐ A. (1, 7), (2, 7), (3, 7), (4, 7), (5, 7), (6, 7) — six outcomes

☐ C. (1, 6), (2, 5), (3, 4) — three outcomes

☐ B. (1, 6), (2, 5), (3, 4), (4, 3), (5, 2), (6, 1) — six outcomes

☐ D. Any roll where one die shows 7 — multiple outcomes





6)

A spinner is divided into 4 equal sections: Red, Yellow, Blue, and Green. What is the probability of spinning Red or Green?

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

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

7) The lateral surface area of a cylinder is 157 cm^2 . If the height is 10 cm, what is the radius? Use $\pi \approx 3.14$.

- ☐ A. 2.5 cm
☐ B. 5 cm

- ☐ C. 7.5 cm
☐ D. 10 cm

8) A triangle has vertices at $A(1, 0)$, $B(3, 0)$, and $C(2, 2)$. If the triangle is reflected over the x -axis, what are the new coordinates of vertex C ?

9) Two datasets have the same range of 20. Dataset A has $\text{MAD} = 2$. Dataset B has $\text{MAD} = 6$. What can we conclude?

- ☐ A. Both datasets have identical distributions
☐ B. Dataset A is clustered; Dataset B is spread throughout the range
☐ C. Dataset B is more reliable
☐ D. Dataset A has outliers



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& answers

10) A histogram shows the ages of people visiting a museum. The x-axis shows age intervals (10–20, 20–30, 30–40, etc.), and the heights of the bars show the number of people. What does the height of each bar represent?

- ☐ A. The width of each age interval ☐ C. The average age in each interval
☐ B. The frequency (count) in each age interval ☐ D. The age of the oldest person

11) A student chooses a shirt from 5 options and pants from 3 options. How many different outfits are possible?

- ☐ A. 8 ☐ C. 20
☐ B. 15 ☐ D. 25

12) A basketball player tracked free-throw success in practice sessions. The results are:

Session	Attempts	Made
Session 1	50	38
Session 2	75	54
Session 3	100	76

What is the overall experimental probability of success across all three sessions?

- ☐ A. 0.75 ☐ C. $\frac{168}{225}$
☐ B. 0.76 ☐ D. 0.71

13) A student picks a card from a deck, replaces it, and picks another. The first card is black. What is the probability the second card is also black?

- ☐ A. $\frac{1}{4}$ because the first was black ☐ C. 0 because exactly one card remains black
☐ B. $\frac{26}{52}$ because replacement restores the original deck ☐ D. $\frac{1}{52}$ because only one black card is left



1)

Hours Worked	Earnings (\$)
1	12
2	24
3	36
4	48

Which equation represents the relationship where h = hours and E = earnings?

☐ A. $E = h + 12$

☐ C. $E = 12 + h$

☐ B. $E = 12h$

☐ D. $E = h^2 + 11$

2) A student earns \$15 per hour working part-time. After working 30 hours, they earn \$450. The student's employer withholds 20% for taxes. What is the net pay?

☐ A. \$300

☐ C. \$360

☐ B. \$330

☐ D. \$390

3) A bag contains 3 red marbles, 2 blue marbles, and 5 green marbles. To simulate drawing one marble, which probability does rolling a standard die best represent?

☐ A. Probability of drawing red

☐ D. Probability of drawing blue or green

☐ B. Probability of drawing blue

☐ C. Probability of drawing green

4) A spinner with 6 equal sections and a die are both used in an experiment. What is the total number of outcomes?

☐ A. 6

☐ C. 18

☐ B. 12

☐ D. 36



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- 5) A spinner was spun 200 times with four equal sections labeled A, B, C, and D. Section A appeared 58 times. Which best describes the relationship between the experimental and theoretical probabilities for landing on A?
- ☐ A. Both are exactly 0.25. ☐ C. Experimental is 0.25; theoretical is 0.29.
- ☐ B. Experimental is 0.58; theoretical is 0.20. ☐ D. Experimental is 0.29; theoretical is 0.25.
- 6) A restaurant offers 3 appetizers, 4 entrees, and 2 desserts. How many different meals (appetizer, entree, dessert) are possible?
- ☐ A. 9 ☐ C. 24
- ☐ B. 12 ☐ D. 30
- 7) A librarian predicted 900 visitors in a month, but 1000 actually visited. What is the percent error?
- ☐ A. 11.1% ☐ C. 9%
- ☐ B. 100% ☐ D. 10%
- 8) Expand and simplify: $2(3 + 4y) - 5$
- ☐ A. $8y + 1$ ☐ C. $6 + 8y - 5$
- ☐ B. $8y - 5$ ☐ D. $12y + 1$



- 1) A plant scientist measures the heights (in cm) of two plant varieties after 6 weeks:

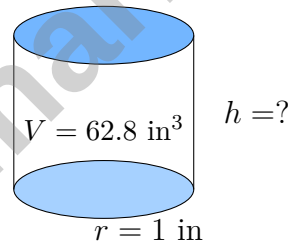
Variety	Mean	Median	IQR
Fast-Grow	32	31	8
Steady-Grow	31	32	3

Which statement best describes the distributions?

- ☐ A. Fast-Grow is taller and more consistent
☐ B. Steady-Grow has low outliers; Fast-Grow has consistent growth
☐ C. Both varieties are identical
☐ D. Steady-Grow is more consistent; Fast-Grow skewed high

- 2) If a circle's circumference is $\frac{132}{7}$ meters, using $\pi \approx \frac{22}{7}$, what is its radius?

- ☐ A. 2 m
☐ B. 3 m
☐ C. 4 m
☐ D. 6 m



3)

What is the height of the cylinder if the volume is 62.8 in^3 and the radius is 1 inch?
Use $\pi \approx 3.14$.

- ☐ A. 10 inches
☐ B. 15 inches
☐ C. 20 inches
☐ D. 30 inches



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& answers

- 4) Two classes have test-score distributions displayed as histograms with identical means (both 75). Class A has most scores clustered near 75 (narrow, bell-shaped); Class B has scores spread across the range (flat). What does this comparison reveal?

- ☐ A. Class A has higher variability than Class B
- ☐ B. Class B has lower variability than Class A
- ☐ C. Class A's shape shows less variability despite the same mean
- ☐ D. The mean tells you everything about variability

- 5) A fair coin is flipped 200 times in a simulation. The theoretical probability of getting heads is 0.5. Approximately how many times would you expect to see heads?

- 6) A letter is drawn from the word MATH, and then a number is chosen from 1 to 5. How many outcomes are in the sample space?

Letters: M, A, T, H Numbers: 1, 2, 3, 4, 5

- ☐ A. 9
- ☐ B. 15
- ☐ C. 20
- ☐ D. 25

- 7) Which of the following shows that $0.9p = p - 0.1p$?

- ☐ A. Factoring: $p - 0.1p = p(1 - 0.1) = 0.9p$
- ☐ B. Distribution: $0.1(p - p) = 0$
- ☐ C. Combining fractions: $0.9 + 0.1 = 1$
- ☐ D. All operations are equivalent



Oregon OSAS Grade 7 Practice Test Answer Keys**How to use this section with a Grade 7 student:**

1. check the answer first and circle any item that needs another look
2. retry the problem with fresh work before reading the explanation
3. write one short lesson learned from each missed or guessed item

A strong review routine turns every correction into a sharper plan for the next Oregon OSAS practice test.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice D is correct.** (7.RP.3) 25% of 80 is $0.25 \times 80 = 20$, not 15. The student made an error.
- 2) **Choice C is correct.** (7.EE.4a) Distribute: $5x + 15 = 2x + 36$. Subtract $2x$: $3x + 15 = 36$. Subtract 15: $3x = 21$. Divide by 3: $x = 7$.
- 3) **Choice C is correct.** (7.G.1-7.G.5) The angles in a quadrilateral sum to 360° . Since $28 + 76 + 108 = 212$, the missing angle is $360 - 212 = 148^\circ$.
- 4) **Choice C is correct.** (7.RP.3) Percent increase = $\frac{\text{change}}{\text{original}} \times 100\% = \frac{60-50}{50} \times 100\% = 20\%$.
- 5) **Choice B is correct.** (7.SP.5-7.SP.8) Each standard die shows 1–6, so (1, 7) is impossible. To get a sum of 7, identify all pairs (a, b) where $a + b = 7$ and $1 \leq a, b \leq 6$. These are the six outcomes listed. The probability is thus $\frac{6}{36} = \frac{1}{6}$.
- 6) **Choice B is correct.** (7.SP.5-7.SP.8) Each section is $\frac{1}{4}$. Red + Green = $\frac{1}{4} + \frac{1}{4} = \frac{1}{2}$.
- 7) **Choice A is correct.** (7.G.4-7.G.6) $157 = 2(3.14)(r)(10) \Rightarrow 157 = 62.8r \Rightarrow r = 2.5$ cm.
- 8) **The correct answer is (2, -2).** (7.G.1-7.G.5) Reflection over the x -axis uses the rule $(x, y) \rightarrow (x, -y)$. Applying this to $C(2, 2)$: $C' = (2, -2)$.
- 9) **Choice B is correct.** (7.SP.1-7.SP.4) Same range but different MADs: Dataset A's small MAD (2) means values cluster near the center; Dataset B's larger MAD (6) means values are spread throughout the 20-unit range.
- 10) **Choice B is correct.** (7.SP.1-7.SP.4) In a histogram, the height of each bar represents the frequency (count or number of data points) in that interval.
- 11) **Choice B is correct.** (7.SP.5-7.SP.8) By the counting principle: 5 shirts $\times$ 3 pants = 15 different outfits.
- 12) **Choice B is correct.** (7.SP.6) Total attempts: $50 + 75 + 100 = 225$. Total made: $38 + 54 + 76 = 168$. Probability: $\frac{168}{225} \approx 0.747 \approx 0.76$ (or exactly $\frac{56}{75}$).
- 13) **Choice B is correct.** (7.SP.5-7.SP.8) With replacement, the deck is restored and events are independent. $P(\text{black second}) = \frac{26}{52} = \frac{1}{2}$.
- 14) **Choice D is correct.** (7.SP.1-7.SP.4) All leaves appear exactly once, so no value repeats. There is no mode.
- 15) **Choice A is correct.** (7.SP.5-7.SP.8) A standard die has faces 1–6 only. Rolling a 7 is impossible, not merely unlikely. Probability = 0, not 0.1.
- 16) **Choice C is correct.** (7.SP.1-7.SP.4) Proportion from sample: $\frac{40}{60} = \frac{2}{3}$. Apply to population: $\frac{2}{3} \times 3000 = 2000$ expected successes.
- 17) **The correct answer is 7.** (7.G.1-7.G.5) Scale factor = $\frac{14}{10} = 1.4$. Height = $5 \times 1.4 = 7$ ft.
- 18) **Choice A is correct.** (7.RP.3) Percent error = $\frac{|6-10|}{10} \times 100\% = \frac{4}{10} \times 100\% = 40\%$.
- 19) **The correct answer is B, C.** (7.G.1-7.G.5) B and C are equivalent and correct: two angles are equal (50° each), so by the Isosceles Triangle Theorem, the sides opposite those angles must be equal. A is wrong (equilateral requires all angles 60°). D is wrong (two angles are the same).
- 20) **Choice A is correct.** (7.EE.1-7.EE.2) Distribute -2 : $-2(x) - 2(4) = -2x - 8$. Negative times positive is negative.
- 21) **Choice B is correct.** (7.NS.1-7.NS.3) $7 - (-2) - 5 = 7 + 2 - 5 = 9 - 5 = 4$. Convert the subtraction of a negative first.
- 22) **Choice D is correct.** (7.RP.1-7.RP.3) Multiply each model dimension by scale factor 4: $3 \times 4 = 12$ cm; $2 \times 4 = 8$ cm.
- 23) **Choice D is correct.** (7.NS.1b) Start at -8 on a number line and move 5 units right: $-8 + 5 = -3$.
- 24) **The correct answer is 125.6.** (7.G.4-7.G.6) Circumference = $2\pi r = 2 \times 3.14 \times 5 = 31.4$ m. Distance = $4 \times 31.4 = 125.6$ m.
- 25) **Choice C is correct.** (7.EE.1-7.EE.2) GCF of $48m$ and 24: GCF of 48 and 24 is 24. No variable is common to both. GCF is 24.
- 26) **Choice D is correct.** (7.RP.3) Sale price = original $\times 0.60$. So $36 = \text{original} \times 0.60$, giving original = $36 \div 0.60 = \$60$.
- 27) **Choice D is correct.** (7.EE.1-7.EE.2) Substitute: $\frac{6+10}{2} = \frac{16}{2} = 8$.
- 28) **Choice A is correct.** (7.EE.1) x terms: $3x + 5x - 2x = (3 + 5 - 2)x = 6x$. y terms: $4y + y - 3y = (4 + 1 - 3)y = 2y$. Result: $6x + 2y$.



Hi, Persistent Problem Solver!

◇ Some Grade 7 questions ask you to hold several ideas in your mind at once. That can feel hard, and that is exactly why practice matters. ◇

★ **Remember this:** You showed persistence by continuing through the set. That habit is powerful because difficult problems often open after one more good attempt. You practiced across 6 full Grade 7 practice tests, and that repeated effort matters. ★

Persistence Tools

- **Try a Smaller Case:** Use an easier number to see the pattern.
- **Draw It:** Make the situation visible.
- **Restate It:** Say the question in your own words.
- **Check One Step:** Fix the first unclear place.

Grade 7 test-day tip: When stuck, do not restart everything. Find the first step you trust, then rebuild from there.

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

Jay Daie

Your Persistence Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **6** full-length Math practice tests and **2** online tests to help Grade 7 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:

6 Full-Length Printed Tests

2 Online Practice Tests

 Detailed Answers & 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



Build Confidence

Practice regularly to feel prepared and test-ready.



Strengthen Math Skills

Develop key math concepts and problem solving abilities.



Improve Understanding

Learn with clear explanations and step-by-step solutions.



Test Confidence

Familiarize with test formats and improve accuracy and speed.



Boost Performance

Apply your knowledge and achieve your best score!

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



2 ONLINE TESTS

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



2 EXTRA ONLINE TEST ACCESS CODE IS INSIDE THE BOOK!

Don't lose it—your extra practice and success start here!



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