

3

Oregon OSAS

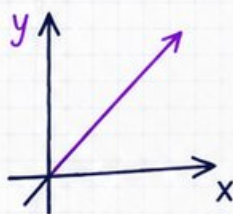
GRADE

7

MATH

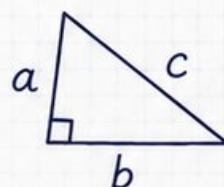
PRACTICE TESTS

- ✓ Standards Aligned
Problem Solving
For Comprehensive
Assessment Programs



$$y = mx + b$$

$$\frac{2}{3}x - \frac{4}{5} = \frac{1}{2}$$



$$3(x - 2) = 2x + 5$$

**3** 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



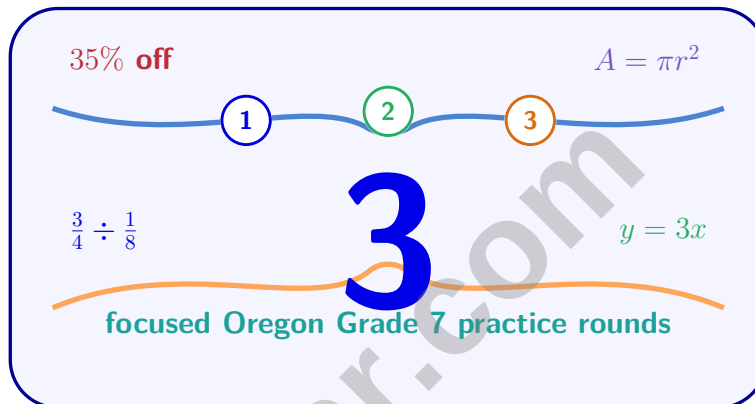
Detailed Answers
& Explanations



Improve Test
Performance

3 Oregon OSAS Grade 7 Math Practice Tests

Grade 7 OSAS Review with Keys and Skill Reinforcement



Three 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!

Three focused rounds for sharper OSAS math thinking

This book gives you three 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 three-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?

Three OSAS tests, 120 questions, and a focused review path

Part	What You Will Practice
Tests 1–2	Proportional relationships, unit rates, percents, rational-number operations, and careful reading.
Test 3	Expressions, equations, inequalities, scale drawings, geometry, data, probability, 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) Two similar isosceles triangles have areas in the ratio 4 : 25. What is the ratio of their corresponding sides?

☐ A. 2 : 5☐ C. 2 : 25☐ B. 4 : 25☐ D. 16 : 625

2) A contractor estimated 8 hours of work but the job took 10 hours. What is the percent error?

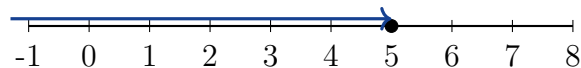
☐ A. 20%☐ C. 2%☐ B. 25%☐ D. 80%

3) Expand: $-7(3n - 2)$

☐ A. $-21n - 14$ ☐ C. $-21n + 14$ ☐ B. $21n - 14$ ☐ D. $-10n - 2$

4) If you have -5 dollars (meaning you owe 5 dollars) and you lose an additional 12 dollars, what is your new balance? Express your answer as an integer with the appropriate sign.

5) Which graph represents $z \leq 5$?

☐ A. Open circle at 5 pointing left☐ C. Open circle at 5 pointing right☐ B. Closed circle at 5 pointing right☐ D. Closed circle at 5 pointing left

- 6) A landscaper creates a scale model of a garden. The model shows a square garden with side length 5 inches. The actual garden has a side length of 25 feet. What is the scale?

☐ A. 1 : 5 ☐ C. 5 : 25
☐ B. 1 : 120 ☐ D. 1 : 60

- 7) Which pair of principal-rate-time combinations will produce the same simple interest of \$300?

☐ A. $P = \$1000, r = 6\%, t = 5$ years ☐ C. $P = \$1500, r = 8\%, t = 2$ years
AND $P = \$1500, r = 4\%, t = 5$ years AND $P = \$1600, r = 7.5\%, t = 2$
☐ B. $P = \$2000, r = 5\%, t = 3$ years years
AND $P = \$1000, r = 10\%, t = 3$ years ☐ D. $P = \$5000, r = 3\%, t = 2$ years
AND $P = \$2500, r = 6\%, t = 2$ years

- 8) Simplify: $\frac{7\frac{8}{3}}{\frac{3}{5}}$

- 9) Which statement is true?

☐ A. $-5 + 3 = 8$ ☐ C. $4 + (-9) = 5$
☐ B. $-12 + 20 = -8$ ☐ D. $-5 + 3 = -2$



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Total = 200 students



10)

Correct

Incorrect

The bar shows 55% of 200 students answered correctly. How many students answered correctly?

☐ A. 90☐ C. 110☐ B. 100☐ D. 120

11) A phone case costs \$15 and is discounted by \$3. What is the percent discount?

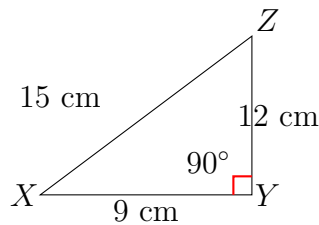
☐ A. 10%☐ C. 15%☐ B. 25%☐ D. 20%

12) Identify which pair are NOT like terms.

☐ A. $6a^2$ and $9a^2$ ☐ C. $-3y$ and $4y$ ☐ B. $5x$ and $5x^2$ ☐ D. $2mn$ and mn

13) Factor: $18ab + 27a$

☐ A. $9a(2b + 3)$ ☐ C. $a(18b + 27)$ ☐ B. $18(ab + 1.5a)$ ☐ D. $3(6ab + 9a)$ 



1)

A triangle has sides 9 cm, 12 cm, and 15 cm. Is this a right triangle?

☐ A. Yes☐ C. Cannot be determined☐ B. No☐ D. Only if one angle is 90°

2) A rectangular building is shown on a site plan as 7 inches by 11 inches at a scale of 1 in : 20 ft. Which statement correctly describes the actual building?

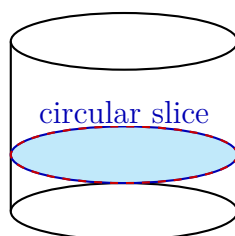
☐ A. The length is 140 ft and width is 220 ft☐ C. The length is 35 ft and width is 55 ft☐ B. The length is 220 ft and width is 140 ft☐ D. The length is 55 ft and width is 35 ft

3) A business's profit increased from \$12 000 to \$16 800. What is the percent increase in profit?

4) A consultant charges clients a base rate of \$100 per hour plus a 10% project management fee on the total billable hours. For a 10-hour project, what is the total cost?



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$$r = 3 \text{ cm}$$

5)

A cylinder with radius 3 cm and height 6 cm is sliced horizontally at a height of 1 cm from the bottom. What is the area of the circular cross-section?

☐ A. $3\pi \text{ cm}^2$

☐ C. $12\pi \text{ cm}^2$

☐ B. $9\pi \text{ cm}^2$

☐ D. $18\pi \text{ cm}^2$

6) If angle R is 12° more than its complement, what is the measure of angle R ?

☐ A. 39°

☐ C. 68°

☐ B. 51°

☐ D. 78°

7) A bagel has diameter 4 inches. Approximately, what is its circumference? Use $\pi \approx 3.14$.

☐ A. 6.28 in

☐ C. 25.12 in

☐ B. 12.56 in

☐ D. 50.24 in

8) A soup can has a radius of 2 inches and a height of 4 inches. What is the volume of the can? Use $\pi \approx 3.14$.

☐ A. 25.12 in^3

☐ C. 75.36 in^3

☐ B. 50.24 in^3

☐ D. 100.48 in^3



1) Angle X is supplementary to an angle of 47° . What is the measure of angle X ?

☐ A. 133°

☐ C. 43°

☐ B. 93°

☐ D. 227°

2) A bag contains 3 red marbles, 5 blue marbles, and 2 green marbles. Which probability is correct?

☐ A. $P(\text{blue}) = \frac{2}{10}$

☐ C. $P(\text{green}) = \frac{1}{2}$

☐ B. $P(\text{red}) = \frac{3}{10}$

☐ D. $P(\text{not red}) = \frac{6}{10}$

3) A beauty salon stylist earns \$100 in commission on \$250 in hair service sales. What is the commission rate?

☐ A. 25%

☐ C. 35%

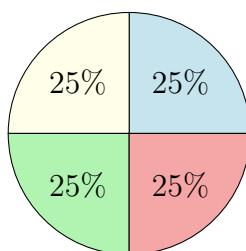
☐ B. 30%

☐ D. 40%

4) A car travels at a constant speed passing through the origin and the point $(2, 140)$ on a distance-time graph (where x = hours and y = miles). What is the unit rate in miles per hour?



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5)

Housing Food Savings Entertainment

Marcus has a monthly budget of \$2 000 divided equally among four categories. How much is budgeted for food?

☐ A. \$400☐ C. \$600☐ B. \$800☐ D. \$500

6) A certificate of deposit starts with \$750 at 6% annual compound interest. Which expression represents the balance after t years?

☐ A. $750 + 0.06t$ ☐ C. $750 + (0.06)^t$ ☐ B. $750(0.06t)$ ☐ D. $750(1.06)^t$

7)

Original: \$200

Student: \$250 (Wrong!)

Add \$50 only

Correct: \$300

Add \$100 (50% of \$200)

A student made an error. She claimed that a \$200 item with a 50% increase costs \$250. What is her mistake?

☐ A. She forgot to calculate 50% of the original price correctly.☐ C. She used the new price as the base for the percent, not the original.☐ B. The answer is actually correct.☐ D. She computed 50% of \$200 as \$50 instead of \$100.

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 A is correct.** (7.G.1-7.G.5) Area scales by the square of the linear scale factor. If areas are 4 : 25, then the linear scale factor is $\sqrt{4} : \sqrt{25} = 2 : 5$.
- 2) **Choice A is correct.** (7.RP.3) Percent error = $\frac{|8-10|}{10} \times 100\% = \frac{2}{10} \times 100\% = 20\%$.
- 3) **Choice C is correct.** (7.EE.1-7.EE.2) Distribute -7 : $-7(3n) - 7(-2) = -21n + 14$. Negative times negative is positive.
- 4) **The correct answer is -17 .** (7.NS.1-7.NS.3) The new balance is $-5 - 12 = -17$. You now owe 17 dollars.
- 5) **Choice D is correct.** (7.EE.4b) $z \leq 5$ includes 5, so a closed circle, with the arrow pointing left.
- 6) **Choice D is correct.** (7.RP.1-7.RP.3) Convert 25 feet to inches: $25 \times 12 = 300$ inches. Scale = $5 : 300 = 1 : 60$.
- 7) **Choice D is correct.** (7.RP.3) Check D: First gives $I = 5000(0.03)(2) = \$300$. Second gives $I = 2500(0.06)(2) = \$300$. Both equal \$300.
- 8) **The correct answer is $\frac{35}{24}$.** (7.RP.1-7.RP.3) $\frac{\frac{7}{8}}{\frac{3}{5}} = \frac{7}{8} \times \frac{5}{3} = \frac{35}{24}$.
- 9) **Choice D is correct.** (7.NS.1b) Check each: A: $-5 + 3 = -2$, not 8. B: $-5 + 3 = -2$ ✓. C: $4 + (-9) = -5$, not 5. D: $-12 + 20 = 8$, not -8 .
- 10) **Choice C is correct.** (7.RP.3) 55% of 200 is $0.55 \times 200 = 110$ students.
- 11) **Choice D is correct.** (7.RP.3) Discount percent = $\frac{3}{15} \times 100 = 20\%$.
- 12) **Choice B is correct.** (7.EE.1) These have different exponents (x^1 vs. x^2), so they are not like terms.
- 13) **Choice A is correct.** (7.EE.1-7.EE.2) GCF of $18ab$ and $27a$ is $9a$. Factor: $18ab + 27a = 9a(2b + 3)$.
- 14) **Choice C is correct.** (7.G.4-7.G.6) Two triangular bases: $2 \times \frac{1}{2}(3)(4) = 12 \text{ ft}^2$. Three rectangular sides: $3 \times 3 = 9$, $4 \times 3 = 12$, $5 \times 3 = 15 \text{ ft}^2$. Total: $12 + (9 + 12 + 15) = 12 + 36 = 48 \text{ ft}^2$.
- 15) **Choice C is correct.** (7.SP.5-7.SP.8) $75\% = \frac{3}{4}$. A spinner with 4 equal sections where 3 are shaded represents this probability.
- 16) **Choice D is correct.** (7.RP.1-7.RP.3) For $y = 5x$, substituting $x = 3$ gives $y = 5 \times 3 = 15$. So $(3, 15)$ lies on the line. The student made an error in their calculation or reasoning.
- 17) **The correct answer is 40.** (7.RP.1-7.RP.3) Substitute: $y = 5(8) = 40$.
- 18) **Choice C is correct.** (7.RP.3) Simple interest over 10 years: Interest = $\$100 \times 0.03 \times 10 = \30 . Total = $\$100 + \$30 = \$130$. This illustrates the trade-off between immediate wants (enjoying the game now) and long-term savings (compounding money for college)—a Grade-7 investing concept.
- 19) **The correct answer is B,D.** (7.SP.1-7.SP.4) Total is $280 + 420 + 100 = 800$. Online: $280/800 = 0.35 = 35\%$, so B is correct. In-store: $420/800 = 0.525 = 52.5\%$, so D is correct. A is wrong (not exactly 50%). C is wrong ($100/800 = 12.5\%$, not 10%).
- 20) **Choice B is correct.** (7.NS.1-7.NS.3) Convert to common denominator 4: $3\frac{3}{4} - 1\frac{2}{4} = 2\frac{1}{4}$.
- 21) **Choice B is correct.** (7.NS.1-7.NS.3) In 10 hours, there are $10 \div 2 = 5$ periods of 2 hours. Total drop: $1.2 \times 5 = 6^\circ\text{C}$, or -6°C .
- 22) **Choice D is correct.** (7.EE.1-7.EE.2) Substitute: $\frac{3(8)}{4} + 1 = \frac{24}{4} + 1 = 6 + 1 = 7$.
- 23) **Choice A is correct.** (7.EE.4b) Rewrite as $x + 4 < 8$. Subtract 4: $x < 4$.
- 24) **Choice A is correct.** (7.G.1-7.G.5) The reciprocal of $3 : 1$ is $1 : 3$. This is a common error where students flip the scale ratio.
- 25) **Choice A is correct.** (7.G.1-7.G.5) Reflecting $(0, 1)$ over $y = x$ gives $(1, 0)$. The other new vertices are $(1, 3)$, $(4, 3)$, and $(4, 0)$.
- 26) **Choice B is correct.** (7.G.4-7.G.6) Correct: $3.14 \times 25 = 78.5 \text{ cm}^2$. Student: $3 \times 25 = 75 \text{ cm}^2$. Difference: $78.5 - 75 = 3.5 \text{ cm}^2$.
- 27) **Choice B is correct.** (7.SP.1-7.SP.4) Surveying only students already in the library is convenient but misses students who rarely visit, creating a non-representative sample.



Hi, Progress Maker!

◇ You have done more than complete a set of tests. You have rehearsed the habits that make Grade 7 math feel less surprising. ◇

★ **Remember this:** Progress is not always loud. Sometimes it looks like fewer careless errors, clearer work, better pacing, and more confidence when a problem is unfamiliar. You practiced across 3 full Grade 7 practice tests, and that repeated effort matters. ★

Signs of Growth

- **Clear Work:** Your steps are easier to follow.
- **Better Pacing:** You know when to move on and return.
- **Stronger Checks:** You catch mistakes earlier.
- **Calmer Thinking:** You know what to try next.

Grade 7 test-day tip: Keep one short list of mistakes you often make, then check that list before each practice session.

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

Jay Daie

Your Growth Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **3** 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:

3 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.



Detailed Answers & Explanations

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



Improve Test Performance

Apply your knowledge and achieve your best score!

TOPICS COVERED

- ✓ 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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SOLVE
CONFIDENTLY



SUCCEED
BRIGHTLY