

10 Oregon OSAS

GRADE
7
MATH

PRACTICE TESTS

Standards Aligned Problem
Solving For Comprehensive
Assessment Programs



10 PRINTED TESTS

Realistic practice to build
confidence and mastery



2 ONLINE TESTS

Extra practice for
continued success



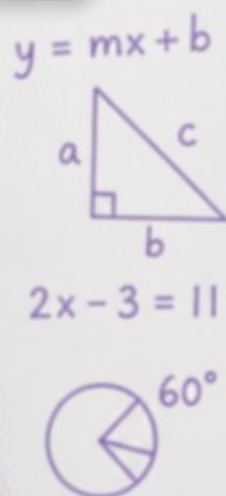
DETAILED ANSWER EXPLANATIONS

Learn with step-by-step
solutions



FOCUSED & EFFECTIVE

Target key math skills
with purposeful practice



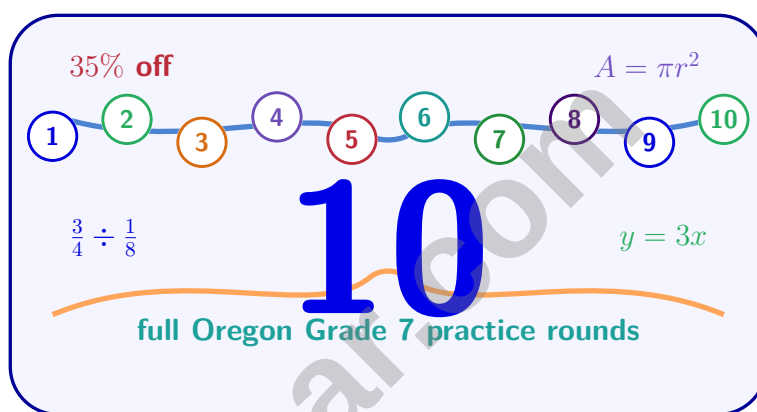
10 PRINTED TESTS
+2 ONLINE TESTS

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

PRACTICE ★ REVIEW ★ SUCCEED

10 Oregon OSAS Grade 7 Math Practice Tests

Oregon Grade 7 OSAS Practice for forest-clear practice across proportional graphs, percents, algebra, geometry, statistics, and probability



Ten 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!

Ten focused rounds for sharper Oregon OSAS math thinking

This book gives you ten 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 ten-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?

Ten Oregon OSAS tests, 400 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.
Tests 7–9	Statistics, probability, mixed review, stamina, and choosing efficient strategies.
Test 10	A final Oregon round to show growth across the whole book.
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.



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& answers

Table of Contents

★ Practice Test 1	_____	11
★ Practice Test 2	_____	25
★ Practice Test 3	_____	39
★ Practice Test 4	_____	54
★ Practice Test 5	_____	68
★ Practice Test 6	_____	82
★ Practice Test 7	_____	97
★ Practice Test 8	_____	112
★ Practice Test 9	_____	126
★ Practice Test 10	_____	140
Practice Test Answer Keys	_____	155
Practice Test Answers and Explanations	_____	161

- 1) A cylindrical can contains a volume of 376 cm^3 . The radius is 4 cm. What is the height of the can? Use $\pi \approx 3.14$.
- ☐ A. 3.75 cm ☐ C. 7.5 cm
☐ B. 5.625 cm ☐ D. 9.375 cm
- 2) The population of a city is 1.5×10^6 . How is this number written in standard form?
- ☐ A. 15,000 ☐ C. 1,500,000
☐ B. 150,000 ☐ D. 15,000,000
- 3) Combine: $(9g - 7) + (4g + 12) - (5g - 3)$
- ☐ A. $8g + 8$ ☐ C. $18g + 8$
☐ B. $8g - 2$ ☐ D. $8g + 20$
- 4) Solve: $\frac{1}{2}x + 3 = 8$
- ☐ A. $x = 5$ ☐ C. $x = 10$
☐ B. $x = 8$ ☐ D. $x = 16$
- 5) A bar graph shows sales by quarter. The title says "Quarterly Sales Growth," but the y-axis starts at \$90,000 (not \$0), and Q1–Q2 sales only rise from \$100,000 to \$101,000. Why is this graph potentially misleading?
- ☐ A. The bars are too tall ☐ C. The color scheme is confusing
☐ B. The y-axis doesn't start at zero, ☐ D. The labels are too small
exaggerating the growth



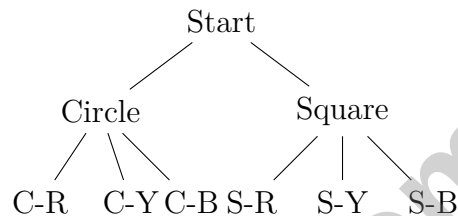
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- 6) A number cube is labeled with the numbers 1, 2, 2, 3, 3, 3. When rolled, what is the probability of rolling a 3?

☐ A. $\frac{1}{3}$
☐ B. $\frac{1}{2}$

☐ C. $\frac{2}{3}$
☐ D. $\frac{1}{6}$

- 7) A tree diagram shows all outcomes for selecting a shape (Circle or Square) and a color (Red, Yellow, or Blue). How many final branches should the tree have?



☐ A. 2 branches
☐ B. 3 branches

☐ C. 5 branches
☐ D. 6 branches

- 8) A quality control inspector checked 500 items and found 15 defective. Based on this experimental data, if 8000 items are produced, how many are expected to be defective?

☐ A. 15
☐ B. 120

☐ C. 240
☐ D. 485

- 9) A teacher randomly selects two students without replacement from a class of 12 to give a presentation. If 7 students are prepared, what is the probability both selected are prepared?

☐ A. $\frac{49}{144}$
☐ B. $\frac{7}{12} \cdot \frac{6}{12}$

☐ C. $\frac{42}{120}$
☐ D. $\frac{7}{22}$



10) Distance Estimates (Miles)

Route	Estimate	Actual
Bike Ride	12	15

What is the percent error for the bike ride distance?

- ☐ A. 80% ☐ C. 20%
☐ B. 3% ☐ D. 25%

11) Expand: $-4(3b + 2)$

- ☐ A. $-12b - 8$ ☐ C. $12b - 8$
☐ B. $-12b + 8$ ☐ D. $-12b + 2$

12) A robot starts at position 0 on a number line. It moves left 8 units, then right 3 units. What is its final position?

- ☐ A. -11 ☐ C. 5
☐ B. -5 ☐ D. 11

13) A rectangular field has dimensions $200\text{ m} \times 150\text{ m}$. On a scale drawing where the scale is $1\text{ cm} : 10\text{ m}$, what is the perimeter of the field in the scale drawing?

- ☐ A. 700 cm ☐ C. 70 cm
☐ B. 35 cm ☐ D. 350 cm

14) Maria scored 85% on a test with 40 questions. How many questions did she answer correctly?

- ☐ A. 24 ☐ C. 34
☐ B. 30 ☐ D. 36



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- 1) A science lab measures temperature change over time. The table below shows the data. Is this a proportional relationship, and if so, what is the constant of proportionality?

Time (min)	Temp Change ($^{\circ}\text{C}$)
2	5
4	10
7	17.5

- ☐ A. Yes, $k = 7$
☐ C. No, the values don't form a constant ratio
- ☐ B. Yes, $k = 5$
☐ D. Yes, $k = 2.5$
- 2) A composite figure is made of a rectangle (8 ft by 5 ft) with a square (3 ft by 3 ft) attached to one side. What is the total area?
- ☐ A. 40 ft^2
☐ C. 49 ft^2
- ☐ B. 45 ft^2
☐ D. 56 ft^2
- 3) An item is on sale for \$48 after a 20% discount. What was the original price?

- 4) A rectangular prism has length 8 cm, width 6 cm, and height 10 cm. Convert its volume to liters if 1 liter = $1,000 \text{ cm}^3$.
- ☐ A. 0.48 L
 ☐ C. 48 L
- ☐ B. 480 L
 ☐ D. 4.8 L



- 5) A savings account earns simple interest at 4.5% per year. If you deposit \$600 today, how much interest will you earn after 3 years?

- 6) Which expression is equivalent to $-(4x - 7)$?

☐ A. $-4x - 7$

☐ B. $-4x + 7$

☐ C. $4x - 7$

☐ D. $4x + 7$

- 7) Simplify: $3x + 4y + 2z - x + y - z$

☐ A. $2x + 5y + z$

☐ B. $4x + 4y + 2z$

☐ C. $9xyz$

☐ D. $2x + 3y - z$

- 8) Factor: $-14p + 35q$

☐ A. $-7(2p - 5q)$

☐ B. $7(-2p + 5q)$

☐ C. $7(2p + 5q)$

☐ D. $-7(2p + 5q)$

- 9) A rectangular prism has length 16 in, width 8 in, and height 2 in. What is the surface area?

☐ A. 120 in^2

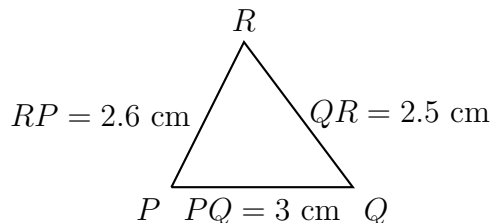
☐ B. 240 in^2

☐ C. 352 in^2

☐ D. 412 in^2



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1)

For triangle PQR with sides $PQ = 3$, $QR = 2.5$, $RP = 2.6$ cm, is the triangle acute, right, or obtuse? Check: $3^2 \stackrel{?}{<} 2.5^2 + 2.6^2$

☐ A. Acute: $9 < 13.01$ ☐ C. Obtuse: $9 > 13.01$ ☐ B. Right: $9 = 13.01$ ☐ D. Cannot be determined2) A sector in a circle graph has a central angle of 54° . What percent does it represent?☐ A. 12%☐ C. 18%☐ B. 15%☐ D. 20%

3) Which of the following is NOT in proper scientific notation?

☐ A. 3.8×10^5 ☐ C. 12.4×10^2 ☐ B. 9.2×10^{-3} ☐ D. 7.01×10^8 4) Combine: $(10g + 6) + (2g - 8) - (3g + 1)$ ☐ A. $9g - 3$ ☐ C. $15g - 3$ ☐ B. $9g + 13$ ☐ D. $9g - 15$ 5) A student simplifies $\frac{y^8}{y^3}$ and gets y^{11} . What rule did they use incorrectly?☐ A. They used the product rule instead of the quotient rule.☐ C. They forgot to simplify the coefficient.☐ B. They multiplied exponents instead of subtracting them.☐ D. They changed the base incorrectly.

- 6) A plumber charges \$65 for a service call and \$40 per hour of work. The total bill was \$185. Which equation helps find h , the number of hours worked?

☐ A. $40 + 65h = 185$

☐ C. $65(h + 40) = 185$

☐ B. $65 + 40h = 185$

☐ D. $40h = 185 + 65$

- 7) A bag contains 4 red marbles, 6 blue marbles, and 5 yellow marbles. If a marble is drawn at random, find $P(\text{red or yellow})$ as a decimal.

- 8) Solve: $\frac{x}{4} + 5 = 9$

☐ A. $x = 8$

☐ C. $x = 16$

☐ B. $x = 12$

☐ D. $x = 20$

- 9) Marcus earns \$12 per hour. After working 8 hours, he spent \$15 on lunch. How much money does he have left?

☐ A. \$81

☐ C. \$111

☐ B. \$96

☐ D. \$127

- 10) A rectangular garden has actual dimensions of 15 m by 9 m. A scale drawing uses a scale of 1 cm : 3 m. What is the perimeter of the drawing in centimeters?

☐ A. 8 cm

☐ C. 24 cm

☐ B. 16 cm

☐ D. 32 cm



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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 C is correct.** (7.G.4-7.G.6) $V = \pi r^2 h \Rightarrow 376 = 3.14 \times 16 \times h \Rightarrow h = \frac{376}{50.24} = 7.5$ cm.
- 2) **Choice C is correct.** (7.NS.1-7.NS.3) $1.5 \times 10^6 = 1.5 \times 1,000,000 = 1,500,000$.
- 3) **Choice A is correct.** (7.EE.1-7.EE.2) Combine: $(9g + 4g - 5g) + (-7 + 12 + 3) = 8g + 8$.
- 4) **Choice C is correct.** (7.EE.3-7.EE.4) Subtract 3: $\frac{1}{2}x = 5$. Multiply by 2: $x = 10$.
- 5) **Choice B is correct.** (7.SP.1-7.SP.4) When the y-axis does not start at zero, small changes appear visually much larger than they actually are. Here, a 1% increase is exaggerated into what looks like significant growth.
- 6) **Choice B is correct.** (7.SP.5-7.SP.8) Three faces show 3. Total faces: 6. $P(\text{rolling } 3) = \frac{3}{6} = \frac{1}{2}$.
- 7) **Choice D is correct.** (7.SP.5-7.SP.8) Each of the 2 shapes branches into 3 color outcomes. Total: $2 \times 3 = 6$ final branches.
- 8) **Choice C is correct.** (7.SP.6) Experimental probability of defect = $\frac{15}{500} = 0.03$. Expected defects in 8000: $0.03 \times 8000 = 240$.
- 9) **Choice D is correct.** (7.SP.5-7.SP.8) $P(\text{first prepared}) = \frac{7}{12}$; 6 prepared remain out of 11 total. $P(\text{second prepared}) = \frac{6}{11}$. Product: $\frac{7}{12} \cdot \frac{6}{11} = \frac{42}{132} = \frac{7}{22}$.
- 10) **Choice C is correct.** (7.RP.3) Percent error = $\frac{|12-15|}{15} \times 100\% = \frac{3}{15} \times 100\% = 20\%$.
- 11) **Choice A is correct.** (7.EE.1-7.EE.2) Distribute -4 : $-4(3b) - 4(2) = -12b - 8$.
- 12) **Choice B is correct.** (7.NS.1-7.NS.3) Moving left 8 units: $0 - 8 = -8$. Moving right 3 units: $-8 - (-3) = -8 + 3 = -5$. Or: $-8 + 3 = -5$.
- 13) **Choice C is correct.** (7.RP.1-7.RP.3) Drawing dimensions: $200 \div 10 = 20$ cm; $150 \div 10 = 15$ cm. Perimeter = $2(20 + 15) = 70$ cm.
- 14) **Choice C is correct.** (7.RP.3) 85% of 40 is $0.85 \times 40 = 34$ questions.
- 15) **Choice C is correct.** (7.RP.3) Tax = $0.08 \times 120 = \$9.60$. Tip on pre-tax bill = $0.15 \times 120 = \$18$. Total = $120 + 9.60 + 18 = \$147.60$.
- 16) **Choice D is correct.** (7.RP.3) STEP 1: Convert percentage to decimal: $4\% = 4 \div 100 = 0.04$. STEP 2: $I = 1200 \times 0.04 \times 2 = \96 .
- 17) **Choice D is correct.** (7.NS.1b) Moving left on a number line means adding a negative: $4 + (-11) = -7$. You land at -7 .
- 18) **Choice C is correct.** (7.EE.1-7.EE.2) Expand $8(x + 2) = 8x + 16$. Check others: A) $8x + 16$ ✓, B) $4(2x + 4) = 8x + 16$ ✓, D) $2(4x + 8) = 8x + 16$ ✓. Only C) $8x + 2 \neq 8x + 16$ is not equivalent.
- 19) **Choice C is correct.** (7.SP.1-7.SP.4) 23% of 3200 = $0.23 \times 3200 = 736$ students.
- 20) **Choice C is correct.** (7.EE.1-7.EE.2) Substitute: $\frac{7-1}{3} + 2 = \frac{6}{3} + 2 = 2 + 2 = 4$.
- 21) **Choice C is correct.** (7.EE.1) Combine: $\frac{1}{2}a + \frac{1}{4}a = \frac{2}{4}a + \frac{1}{4}a = \frac{3}{4}a$.
- 22) **The correct answer is A,D.** (7.G.4-7.G.6) Choice A gives the correct formula. Choice D is verified: $3.14 \times 5^2 = 78.5$ cm². B confuses formula with circumference. C forgets that area scales with the square of the radius. E mistakes semicircle (half) for one-third.
- 23) **Choice D is correct.** (7.SP.5-7.SP.8) With replacement means the second selection has the same probability distribution as the first. Spinning twice (not removing) models this.
- 24) **Choice C is correct.** (7.RP.1-7.RP.3) $y = 3.5 \times 4 = 14$.
- 25) **Choice A is correct.** (7.NS.1-7.NS.3) Evaluate each: A is 3; B is -5 ; C is 1; D is -4 . The greatest is 3.
- 26) **Choice B is correct.** (7.NS.1-7.NS.3) Change: $-30 - 0 = -30^\circ\text{C}$. Rate: $(-30) \div 10 = -3^\circ\text{C}/\text{hour}$.
- 27) **Choice A is correct.** (7.NS.2d) $0.\overline{36} = 0.363636\ldots = \frac{36}{99} = \frac{4}{11}$ (divide by GCD 9). B is false (that's 0.36, terminating). C is false (it repeats). D is false (11 is the denominator).
- 28) **Choice A is correct.** (7.NS.1-7.NS.3) Each descent of 3.5 m is negative: $-3.5 \times 6 = -21$ m.
- 29) **The correct answer is 16 .** (7.G.4-7.G.6) Circumference = $\pi d = 3.14 \times 0.6 = 1.884$ m. Rotations = $30 \div 1.884 \approx 16$.



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Hi, Math Hero!

◇ This full-length book gave you ten complete Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. You showed up for Grade 7 practice again and again. That is what real growth looks like: steady effort, honest review, and a willingness to try. ◇

★ **Remember this:** A math hero is not someone who never misses a question. A math hero learns from the miss and comes back stronger. ★

Hero Habits

- **Courage:** You try problems that are not automatic.
- **Honesty:** You review what needs work.
- **Patience:** You let skills grow over time.
- **Pride:** You recognize the effort you gave.

Grade 7 test-day tip: Save one solved problem you are proud of. Looking back at progress helps motivation stay strong.

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

Jay Daie

Your Math Hero Guide

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes 10 full-length Math practice tests and 2 extra 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:

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



2 EXTRA 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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FOCUSED



SOLVE
CONFIDENTLY



SUCCEED
BRIGHTLY

PRACTICE ★ REVIEW ★ SUCCEED