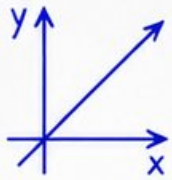
5 Oregon OSAS

GRADE 7 MATH

PRACTICE TESTS

Standards Aligned
Problem Solving
For Comprehensive
Assessment Programs



$y = mx + b$

$\frac{2}{3} + \frac{1}{6} = \frac{5}{6}$

$V = \pi r^2 h$

5 PRINTED TESTS

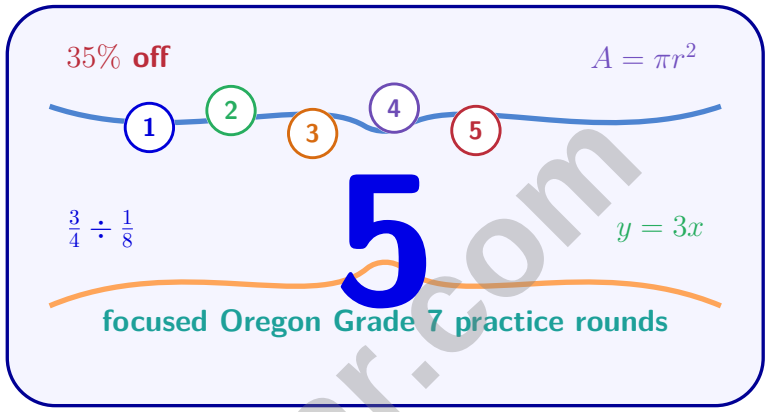
2 ONLINE TESTS

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

5 Oregon OSAS Grade 7 Math Practice Tests

Mixed Standards Practice with Review Pages and Complete Solutions



Five 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!

Five focused rounds for sharper OSAS math thinking

This book gives you five 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.

How to Use This Book

A five-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?

Five OSAS tests, 200 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.
Tests 3–5	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.

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1) A company has 250 employees. If 12% work in the office and the rest work remotely, how many work remotely?

☐ A. 30
☐ B. 88
☐ C. 162
☐ D. 220

2) Evaluate the expression: $-15 - 6 + (-4)$. (Remember: subtraction and addition are performed left to right.)

☐ A. -25
☐ B. -13
☐ C. -5
☐ D. 5

3) What is $-7 + 0$?

☐ A. 0
☐ B. -70
☐ C. 7
☐ D. -7

4) A proportional relationship passes through the points $(6, 2)$ and $(0, 0)$. What is the constant of proportionality?

5)

Sport	Students	Percent
Basketball	36	45%
Soccer	20	25%
Other	24	30%

The table shows sports preferences. If 45% of 80 students play basketball, how many is that?

☐ A. 30
☐ B. 45
☐ C. 40
☐ D. 36

6)

Markup Table

Cost	Selling Price
$40	$56
$50	?
$100	$140

A store uses a consistent markup strategy. Based on the table, what should be the selling price for an item that costs $50?

☐ A. $65
☐ C. $60
☐ B. $75
☐ D. $70

7) A living room measures 18 feet by 14 feet. On a floor plan with scale $\frac{1}{2}$ inch to 4 feet, what is the area of the room on the floor plan in square inches?

8) A circle graph shows the distribution of pets owned by households in a neighborhood. Dogs account for 40% of the 80 households surveyed. How many households own dogs?

☐ A. 20
☐ C. 48
☐ B. 32
☐ D. 64

9) Which equation represents a proportional relationship?

☐ A. $y = 3x + 5$
☐ B. $y = 2x + 1$
☐ C. $y = x - 2$
☐ D. $y = 7x$

10) A bank account grows at a constant rate over months. After 3 months, the balance is \$450. After 8 months, the balance is \$1200. Which statement explains whether this relationship is proportional?

☐ A. Cannot determine without more data.
☐ B. No, because the balances are different.
☐ C. No, because $1200 - 450$ is not equal to $8 - 3$.
☐ D. Yes, because the unit rate is constant.

11) Jordan invests \$1,000 in a savings account that earns 5% simple interest per year. How much interest does he earn in one year?

☐ A. \$25
☐ B. \$150
☐ C. \$100
☐ D. \$50

12) The temperature in Montreal at 6 AM was -4°C. By noon, it rose to 8°C. Then by 9 PM, it dropped to -2°C. What was the net change from 6 AM to 9 PM?

☐ A. 2°C
☐ B. -2°C
☐ C. 10°C
☐ D. -6°C

13) A debt of \$150 is split equally among 5 people. How much does each person owe?

☐ A. $-\$750$
☐ B. $-\$30$
☐ C. \$30
☐ D. \$750

1) A toss of two dice together was repeated 360 times. The number of times the sum was 7 was recorded as 58 times. What is the experimental probability of rolling a sum of 7?

Outcomes that make a sum of 7

1 6	2 5	3 4	4 3	5 2	6 1
(1, 6)	(2, 5)	(3, 4)	(4, 3)	(5, 2)	(6, 1)

☐ A. $\frac{1}{6}$
☐ B. $\frac{58}{360}$
☐ C. 0.16
☐ D. $\frac{7}{360}$

2) A credit card charges 12% simple interest annually. If you carry a balance of \$1500, how much interest will you owe after 6 months?

☐ A. \$45
☐ B. \$360
☐ C. \$180
☐ D. \$90

3) What is the greatest common numerical factor of $14ab$ and $21a$?

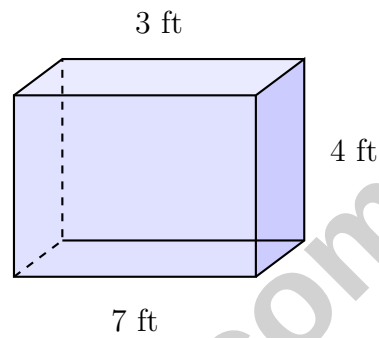
4) A store charges \$4 per pound for apples. Which equation gives the total cost c (dollars) for p pounds?

☐ A. $c = p + 4$
☐ B. $c = \frac{4}{p}$
☐ C. $p = 4c$
☐ D. $c = 4p$

5) A student made an error. They said: "In the table, $x = 2$ gives $y = 10$, and $x = 4$ gives $y = 20$, so $k = 2$." What mistake did they make?

☐ A. There is no mistake.
☐ B. They computed $10/2 = 5$, not $k = 2$.
☐ C. They forgot to check the second point.
☐ D. They used $y - x$ instead of y/x.

6)



This isometric view shows a rectangular prism with dimensions 7 ft × 4 ft × 3 ft. Calculate the surface area.

☐ A. 98 ft^2
☐ B. 122 ft^2
☐ C. 166 ft^2
☐ D. 336 ft^2

7) A sports equipment company surveys 500 customers about their new racket design. The company wants to ensure the sample represents both amateur and professional players. Which sampling method best achieves this?

☐ A. Random selection of all customers
☐ B. Stratified sampling with separate groups for amateurs and professionals
☐ C. Selecting every 10th customer from an online list
☐ D. Asking volunteers at a professional tennis tournament

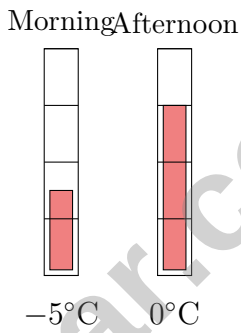
1) Which division problem has a quotient of $\frac{2}{5}$?

☐ A. $\frac{4}{5} \div 2$
☐ B. $\frac{1}{5} \div 2$
☐ C. $\frac{2}{15} \div 3$
☐ D. $\frac{4}{10} \div 2$

2) What is $-4.7 + 2.9$?

☐ A. -7.6
☐ B. -1.8
☐ C. -2.8
☐ D. 1.8

3)



The morning temperature was -5°C. By afternoon, it rose to 0°C. What was the change in temperature?

☐ A. -5°C
☐ B. 5°C
☐ C. 0°C
☐ D. -10°C

4) Which inequality represents "the difference of a number and 5 is greater than 8"?

☐ A. $5 - x > 8$
☐ B. $x - 5 > 8$
☐ C. $x - 5 < 8$
☐ D. $x + 5 > 8$

5) A map has a scale of 2 cm : 3 km. If two towns are 10 cm apart on the map, how far apart are they in reality?

☐ A. 12 km
☐ B. 15 km
☐ C. 18 km
☐ D. 20 km

6) A bakery charges $3 per cookie plus a $4 delivery fee. If your total bill is $19, how many cookies did you order?

7) Which of these fractions will produce a **terminating** decimal?

☐ A. $\frac{1}{7}$
☐ B. $\frac{3}{9}$
☐ C. $\frac{11}{100}$
☐ D. $\frac{4}{21}$

8) A sports team: Season 1 has 15 wins and 8 losses. Season 2 has 18 wins and 5 losses. What is the total wins minus losses across both seasons?

☐ A. 30 net wins
☐ B. 20 net wins
☐ C. 35 net wins
☐ D. 25 net wins

9) A galaxy is 2.3×10^{19} miles away. Which statement best describes this distance?

☐ A. A distance on Earth's surface
☐ B. A distance within our solar system
☐ C. An extremely vast distance beyond our solar system
☐ D. A distance of about 2.3 million miles

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.

Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

1) **Choice D is correct.** 7.RP.3 Office workers: $\frac{12}{100} \times 250 = 30$. Remote workers: $250 - 30 = 220$.
2) **Choice A is correct.** 7.NS.1-7.NS.3 Working left to right: $-15 - 6 = -21$, then $-21 + (-4) = -25$.
3) **Choice D is correct.** 7.NS.1b Adding zero to any number leaves it unchanged (additive identity). $-7 + 0 = -7$.
4) **The correct answer is $\frac{1}{3}$.** 7.RP.1-7.RP.3 The constant is $k = \frac{y}{x} = \frac{2}{6} = \frac{1}{3}$.
5) **Choice D is correct.** 7.RP.3 45% of 80 is $0.45 \times 80 = 36$ students.
6) **Choice D is correct.** 7.RP.3 From row 1: markup is $56 - 40 = \$16$ on cost of \$40, a 40% markup. For cost \$50: markup $= 0.40 \times 50 = \$20$, so selling price $= 50 + 20 = \$70$.
7) **The correct answer is 3.9375 .** 7.RP.1-7.RP.3 Scale: $\frac{1}{2}$ inch : 4 feet means 1 inch : 8 feet. Dimensions on plan: $18 \div 8 = 2.25$ inches and $14 \div 8 = 1.75$ inches. Area $= 2.25 \times 1.75 = 3.9375$ sq in.
8) **Choice B is correct.** 7.SP.1-7.SP.4 40% of $80 = 0.40 \times 80 = 32$ households.
9) **Choice D is correct.** 7.RP.1-7.RP.3 Proportional relationships have form $y = kx$ (passing through origin with no constant term). Only $y = 7x$ fits.
10) **Choice D is correct.** 7.RP.1-7.RP.3 Calculate the unit rate from each data point: $\$450 \div 3 = \$150$ per month and $\$1200 \div 8 = \$150$ per month. Since both unit rates are \$150 per month, the relationship is proportional.
11) **Choice D is correct.** 7.RP.3 Simple interest $= P \times r \times t = \$1{,}000 \times 0.05 \times 1 = \$50$.
12) **Choice A is correct.** 7.NS.1-7.NS.3 Net change = Final temp − Initial temp $= -2 - (-4) = -2 + 4 = 2°\text{C}$.
13) **Choice B is correct.** 7.NS.1-7.NS.3 Debt: $-150 \div 5 = -30$ dollars per person.
14) **Choice B is correct.** 7.EE.1-7.EE.2 Substitute: $2(5) + 3(1) - 2 = 10 + 3 - 2 = 11$.
15) **Choice D is correct.** 7.RP.1-7.RP.3 If $\frac{3}{4}$ patio uses $\frac{1}{2}$ ton, then 1 full patio uses $\frac{1/2}{3/4} = \frac{1}{2} \times \frac{4}{3} = \frac{2}{3}$ ton.
16) **Choice B is correct.** 7.NS.1-7.NS.3 $\frac{5}{6} \div \frac{5}{9} = \frac{5}{6} \times \frac{9}{5} = \frac{45}{30} = \frac{3}{2}$.
17) **Choice A is correct.** 7.NS.2d $0.125 = \frac{125}{1000}$. Find GCD(125, 1000) = 125. Divide both: $\frac{125 \div 125}{1000 \div 125} = \frac{1}{8}$. A is simplest form.
18) **Choice A is correct.** 7.NS.1-7.NS.3 Halved: $\frac{1}{2} \times \frac{9}{8} = \frac{9}{16}$ cups. Scaled by 4: $4 \times \frac{9}{16} = \frac{36}{16} = \frac{9}{4} = 2\frac{1}{4}$ cups.
19) **Choice B is correct.** 7.NS.1-7.NS.3 In proper scientific notation, the coefficient must satisfy $1 \leq a < 10$. $0.0000625 = 6.25 \times 10^{-5}$.
20) **The correct answer is A,B.** 7.RP.1-7.RP.3 $k = 5/20 = 0.25$ miles per minute, so A is correct. When $t = 40$: $d = 0.25 \times 40 = 10$ miles, so B is correct. C is incorrect: $d = 0.25t$, not $4t$. D is incorrect: $d = 0.25 \times 60 = 15$ miles, not 12.
21) **Choice C is correct.** 7.NS.2 A: $(-6) \times 3 = -18 < 0$ (false). B: $(-4) \times (-4) = 16 > 0$ (false). C: Both equal -10 (true). D: $(-1) \times 7 = -7$ and $(-1) \times 6 = -6$; $-7 \not< -6$ (false).
22) **Choice B is correct.** 7.NS.1-7.NS.3 Perimeter $= 4s = 32$, so $s = 8$ cm. Area $= s^2 = 8^2 = 64$ cm^2.
23) **Choice A is correct.** 7.EE.1-7.EE.2 The diagram shows a discount reduces price from p to $0.9p$. This means $0.9p = p - 0.1p$, factoring as $p(1 - 0.1)$.
24) **The correct answer is \$2500 .** 7.RP.3 $500 = P \times 0.05 \times 4 \Rightarrow 500 = 0.2P \Rightarrow P = \$2500$.
25) **Choice B is correct.** 7.SP.5-7.SP.8 All outcomes have equal probability (0.25 each), and $0.25 + 0.25 + 0.25 + 0.25 = 1$. This is a uniform model.
26) **Choice D is correct.** 7.RP.3 Daily rate for 5 days: $40 \times 5 = \$200$. Insurance premium: $0.15 \times 200 = \$30$. Total: $200 + 30 = \$230$.
27) **Choice A is correct.** 7.SP.3 Group 1's data clusters tightly around 12–13 km with a range of 4 km. Group 2 spreads from 5 to 25 km (range 20 km), making it unpredictable. Predictability correlates with small spread.
28) **Choice D is correct.** 7.RP.1-7.RP.3 Ratio 8 : 3 scaled by 2 gives 16 : 6. Check: $\frac{16}{6} = \frac{8}{3}$ (divide numerator and denominator by 2). Option B reduces to 3 : 1. Option C reduces to 4 : 3 (not 8 : 3).
29) **Choice D is correct.** 7.RP.3 Balance after 2 years: $2500(1.06)^2 = 2809$. Interest earned: $2809 - 2500 = 309$.

Author's Note

A Page for Persistence

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 5 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 **5** 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:

- **5** 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!

TOPICS COVERED

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- 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.

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PRACTICE REGULARLY | STAY FOCUSED | SOLVE CONFIDENTLY | SUCCEED BRIGHTLY