

10 Oklahoma OSTP

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



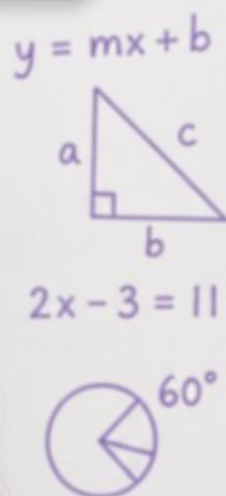
DETAILED ANSWER EXPLANATIONS

Learn with step-by-step
solutions



FOCUSED & EFFECTIVE

Target key math skills
with purposeful practice



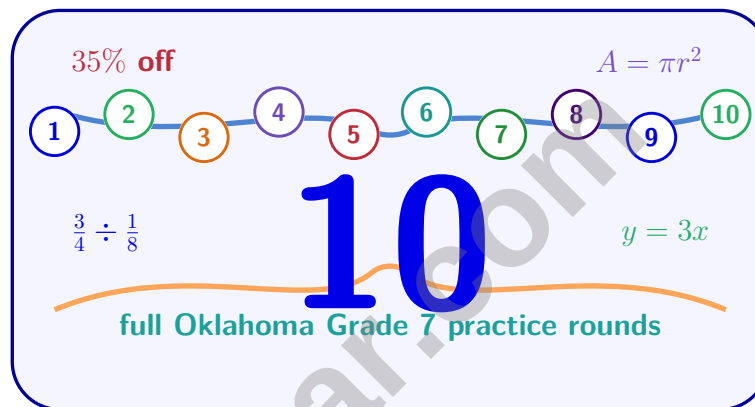
10 PRINTED TESTS
+2 ONLINE TESTS

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

PRACTICE ★ REVIEW ★ SUCCEED

10 Oklahoma OSTP Grade 7 Math Practice Tests

Oklahoma Grade 7 OSTP Practice for careful Grade 7 preparation in rational numbers, ratios, equations, geometry, data, and probability



Ten complete 40-question Grade 7 OSTP 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, Oklahoma Grade 7 Problem Solver!

Ten focused rounds for sharper Oklahoma OSTP math thinking

This book gives you ten full Grade 7 OSTP 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 Oklahoma 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.

Oklahoma 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 Oklahoma OSTP 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 Oklahoma 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

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- 1) A garden produces 12 pounds of tomatoes per square meter of soil. If g is the garden area in square meters and t is the total tomatoes in pounds, which equation is correct?

☐ A. $t = \frac{12}{g}$

☐ B. $g = 12t$

☐ C. $t = g + 12$

☐ D. $t = 12g$

- 2) Solve: $-2(x + 1) < 10$

☐ A. $x > -6$

☐ B. $x < -6$

☐ C. $x < 6$

☐ D. $x > 6$

- 3) A square tile has an area of 169 square inches. What is the side length of the tile?

☐ A. 11 inches

☐ B. 12 inches

☐ C. 13 inches

☐ D. 14 inches

- 4) A school must choose between two lunch-line systems. System A averages 8 minutes wait with MAD 0.5 minutes. System B averages 8.2 minutes with MAD 1.8 minutes. For student experience, which is better?

☐ A. System B (slightly faster average)

☐ B. System A (consistent experience, predictable waits)

☐ C. Both are equally acceptable

☐ D. Requires knowing the number of students

Die Outcomes

Red	Blue
-----	------

5)

A biased die has 2 red faces and 4 blue faces. What is the probability of rolling blue on a single roll?

☐ A. $\frac{2}{6}$

☐ B. $\frac{5}{6}$

☐ C. $\frac{4}{6}$

☐ D. $\frac{1}{2}$



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- 6) When a standard die is rolled and a spinner with sections W, X, Y, Z is spun, how many favorable outcomes result in rolling a number less than 4 and landing on a consonant?
- ☐ A. 3 ☐ C. 9
☐ B. 6 ☐ D. 12
- 7) A dot plot shows cholesterol levels (in mg/dL) for two age groups. Group 1 (Ages 30–40): 160, 165, 165, 170, 170, 170, 175, 180 mg/dL; Group 2 (Ages 50–60): 140, 160, 190, 210, 230, 240 mg/dL. What is the key difference?
- ☐ A. Group 1 is more concentrated; Group 2 is more spread out
☐ B. Group 2 has lower cholesterol overall
☐ C. Both groups have identical levels
☐ D. Group 1 always has higher cholesterol
- 8) Two events A and B are independent. $P(A) = \frac{1}{2}$ and $P(B) = \frac{1}{3}$. What is $P(A \text{ or } B)$?
- ☐ A. $\frac{2}{5}$ ☐ C. $\frac{5}{6}$
☐ B. $\frac{2}{3}$ ☐ D. $\frac{1}{6}$
- 9) A factory tests light bulbs for quality. Out of 1000 bulbs tested, 980 passed inspection. Based on this experimental data, how many bulbs out of 5000 would be expected to pass?
- ☐ A. 980 ☐ C. 4800
☐ B. 3900 ☐ D. 4900



10) A probability is $\frac{3}{5}$. Which of the following is NOT equivalent to this probability?

☐ A. 0.6

☐ C. $\frac{6}{10}$

☐ B. 60%

☐ D. 65%

11)

Three Estimates Comparison Table

Test	Estimate	Actual	Percent Error
Trial 1	36	40	?
Trial 2	76	80	?
Trial 3	99	100	?

Which trial has the smallest percent error?

☐ A. Trial 1

☐ C. All equal

☐ B. Trial 2

☐ D. Trial 3

12) A store marks up the cost c by \$5, then multiplies by 3 for sale price. Which expression shows the final price?

☐ A. $3c + 5$

☐ C. $3c - 5$

☐ B. $3c + 15$

☐ D. $c + 15$

13) How would you verify that a simple interest problem is correct? Which step is essential?

☐ A. Use the formula $A = P(1 + rt)$ to check that the total amount is correct

☐ C. Compare the answer to other students' work

☐ B. Divide the interest by the principal to ensure the rate matches the given rate

☐ D. Plug the values back into the formula and recalculate



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1) Solve for x : $3(2x - 1) = 15$

☐ A. $x = 2$

☐ C. $x = 4$

☐ B. $x = 3$

☐ D. $x = 5$

2) Looking at the soccer team box plots again, where do the distributions overlap?

☐ A. From 4 to 6 hours (overlap of both boxes)

☐ C. Overlap occurs only at the medians

☐ B. No overlap exists between teams

☐ D. Team B completely contains Team A's range

3) A stem-and-leaf plot shows:

Stem	Leaves
22	0, 3, 7
23	1, 4, 6, 9
24	2, 5, 8

What is the sum of the minimum and maximum values?

☐ A. 470

☐ C. 468

☐ B. 471

☐ D. 473

4) A storage shed floor plan shows a large rectangle ($14 \text{ ft} \times 10 \text{ ft}$) with two triangular sections attached to the shorter sides (each triangle has base 10 ft and height 4 ft). What is the total floor area?

☐ A. 100 ft^2

☐ C. 180 ft^2

☐ B. 140 ft^2

☐ D. 220 ft^2



5) Expand: $-5(4 - n)$

☐ A. $-20 + 5n$

☐ B. $-20 - 5n$

☐ C. $20 + 5n$

☐ D. $5n - 4$

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

☐ A. $2x + 5y + z$

☐ B. $4x + 4y + 2z$

☐ C. $9xyz$

☐ D. $2x + 3y - z$

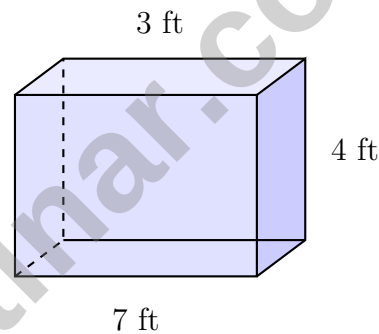
7) What is the GCF of $12xy$, $18y$, and 6?

☐ A. 6

☐ B. $6y$

☐ C. 12

☐ D. $18y$



8)

This isometric view shows a rectangular prism with dimensions $7 \text{ ft} \times 4 \text{ ft} \times 3 \text{ ft}$. Calculate the surface area.

☐ A. 98 ft^2

☐ B. 122 ft^2

☐ C. 166 ft^2

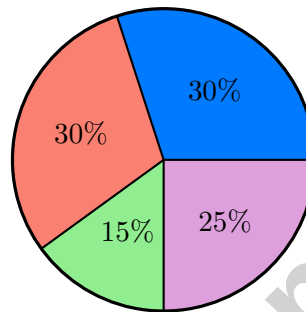
☐ D. 336 ft^2



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- 1) A quality-control manager randomly selects 100 items from a production line of 5000 items. The 5000 items is the _____.

- ☐ A. sample ☐ C. population
☐ B. parameter ☐ D. statistic



- 2)

The circle graph shows movie genre preferences. Blue is action (30%), salmon is drama (30%), green is comedy (15%), and purple is thriller (25%). If 1200 people were surveyed, how many prefer drama?

- ☐ A. 180
 ☐ C. 360
☐ B. 300
 ☐ D. 600

- 3) A comparison table for scientific notation values is shown below:

Scientific Notation	Standard Form
5.0×10^3	5,000
5.0×10^2	500
5.0×10^{-1}	?

What is the value for 5.0×10^{-1} ?

- ☐ A. 0.05 ☐ C. 50
- ☐ B. 0.5 ☐ D. 5,000



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4) Combine like terms: $(7a + 9) - (3a - 4)$

☐ A. $4a + 13$

☐ C. $10a + 5$

☐ B. $4a + 5$

☐ D. $4a - 13$

5) 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. $40h = 185 + 65$

6)

Outcome	Red	Blue	Green
Probability	0.35	0.25	?

A probability model is shown. Find the probability of Green.

7) Solve: $\frac{x-4}{2} = 5$

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



Multiply by 2

$$x - 4 = 10$$



Add 4

$$x = 14$$

☐ A. $x = 6$

☐ C. $x = 14$

☐ B. $x = 10$

☐ D. $x = 18$



Oklahoma OSTP 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 Oklahoma OSTP practice test.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice D is correct.** (7.RP.1-7.RP.3) Production is 12 pounds per square meter. Total tomatoes equal 12 times the area: $t = 12g$.
- 2) **Choice A is correct.** (7.EE.4b) Distribute: $-2x - 2 < 10$. Add 2: $-2x < 12$. Divide by -2 and flip: $x > -6$.
- 3) **Choice C is correct.** (7.NS.1-7.NS.3) Since area = s^2 and $169 = 13^2$, the side length is $\sqrt{169} = 13$ inches.
- 4) **Choice B is correct.** (7.SP.1-7.SP.4) System A's small MAD (0.5 min) means students wait reliably 8 minutes. System B's large MAD (1.8 min) means unpredictable waits: some 6 min, some 10+ min. Consistency matters for user experience.
- 5) **Choice C is correct.** (7.SP.5-7.SP.8) Blue faces: 4 out of 6. $P(\text{blue}) = \frac{4}{6} = \frac{2}{3}$.
- 6) **Choice C is correct.** (7.SP.5-7.SP.8) Numbers less than 4: $\{1, 2, 3\} = 3$ outcomes. Consonants: $\{W, X, Y, Z\} = 4$ outcomes. Favorable: $3 \times 4 = 9$ outcomes.
- 7) **Choice A is correct.** (7.SP.3) Group 1 clusters at 165–175 mg/dL (range 20). Group 2 spans 140–240 mg/dL (range 100), showing much greater spread and variability.
- 8) **Choice C is correct.** (7.SP.5-7.SP.8) For independent events: $P(A \text{ or } B) = P(A) + P(B) - P(A) \cdot P(B) = \frac{1}{2} + \frac{1}{3} - \frac{1}{6} = \frac{5}{6}$.
- 9) **Choice D is correct.** (7.SP.6) Experimental probability of passing = $\frac{980}{1000} = 0.98$. We use this rate to predict outcomes in a larger sample: $0.98 \times 5000 = 4900$ expected passing bulbs.
- 10) **Choice D is correct.** (7.SP.5-7.SP.8) $\frac{3}{5} = 0.6 = 60\%$. Only 65% is different.
- 11) **Choice D is correct.** (7.RP.3) Trial 1: $\frac{4}{40} \times 100\% = 10\%$. Trial 2: $\frac{4}{80} \times 100\% = 5\%$. Trial 3: $\frac{1}{100} \times 100\% = 1\%$. Trial 3 is smallest.
- 12) **Choice B is correct.** (7.EE.1-7.EE.2) First add the markup: $(c + 5)$. Then multiply by 3: $3(c + 5) = 3c + 15$. Distribute to both terms.
- 13) **Choice D is correct.** (7.RP.3) To verify a simple interest calculation, substitute all values back into $I = Prt$ (or $A = P + I$) to check that the result is correct. This is a standard verification method in math.
- 14) **Choice D is correct.** (7.RP.1-7.RP.3) Multiply doll height by scale: 2 feet $\times 12 = 24$ feet.
- 15) **Choice D is correct.** (7.RP.3) After discount: $480 \times 0.50 = \$240$. Tax: $0.055 \times 240 = \$13.20$. Final: $240 + 13.20 = \$253.20$.
- 16) **The correct answer is 16.** (7.G.4-7.G.6) The longest chord is the diameter: $d = 2r = 2 \times 8 = 16$ inches.
- 17) **Choice C is correct.** (7.NS.1b) Combine step-by-step: $-2 + (-5) = -7$, then $-7 + 3 = -4$, then $-4 + 8 = 4$. Or group: $(-2 - 5) + (3 + 8) = -7 + 11 = 4$.
- 18) **The correct answer is 275.** (7.G.4-7.G.6) $V = B \times h = 25 \times 11 = 275 \text{ cm}^3$.
- 19) **Choice B is correct.** (7.EE.1) Combine: $-\frac{1}{2}a + \frac{3}{2}a - a = -\frac{1}{2}a + \frac{3}{2}a - \frac{2}{2}a = \frac{-1+3-2}{2}a = \frac{0}{2}a = 0$.
- 20) **The correct answer is 157.** (7.G.4-7.G.6) $V = \pi r^2 h \approx 3.14 \times (2.5)^2 \times 8 = 3.14 \times 6.25 \times 8 = 157 \text{ m}^3$.
- 21) **The correct answer is A,D.** (7.G.4-7.G.6) Choice A gives the correct formula. Choice D is verified: $3.14 \times 5^2 = 78.5 \text{ cm}^2$. B confuses formula with circumference. C forgets that area scales with the square of the radius. E mistakes semicircle (half) for one-third.
- 22) **Choice A is correct.** (7.EE.1-7.EE.2) The rectangle has length $3x + 5$ and area $9x + 15$. Height must be 3, which is the GCF.
- 23) **Choice C is correct.** (7.SP.1-7.SP.4) 38% of 750 = $0.38 \times 750 = 285$ students.
- 24) **Choice D is correct.** (7.RP.3) 50% of 180 is $0.50 \times 180 = 90$.
- 25) **Choice B is correct.** (7.EE.1-7.EE.2) Difference of y and 5 is $(y - 5)$. Twice this is $2(y - 5)$.
- 26) **Choice D is correct.** (7.RP.1-7.RP.3) Unit rate is $(1, 0.35)$, so $k = 0.35 \text{ kg per tablet}$. For 8 tablets: $8 \times 0.35 = 2.8 \text{ kg}$.
- 27) **Choice C is correct.** (7.NS.1-7.NS.3) Evaluate: A: $\frac{2}{4} - \frac{3}{4} = -\frac{1}{4} = -0.25$; B: $-\frac{2}{8} + \frac{1}{8} = -\frac{1}{8} = -0.125$; C: $\frac{3}{8} - \frac{8}{8} = -\frac{5}{8} = -0.625$; D: $-0.5 = -0.5$. The smallest is C at -0.625 .
- 28) **Choice A is correct.** (7.NS.2d) $1 \div 9 = 0.111 \dots = 0.\overline{1}$. Denominators of 9 produce repeating 1's.
- 29) **Choice C is correct.** (7.NS.1-7.NS.3) Discount: $\frac{1}{5} \times 60 = 12$. Price: $60 - 12 = 48$ dollars.



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!

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