

3

Oklahoma OSTP

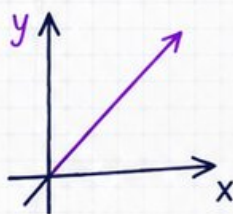
GRADE

7

MATH

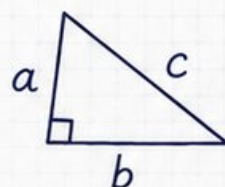
PRACTICE TESTS

- ✓ 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



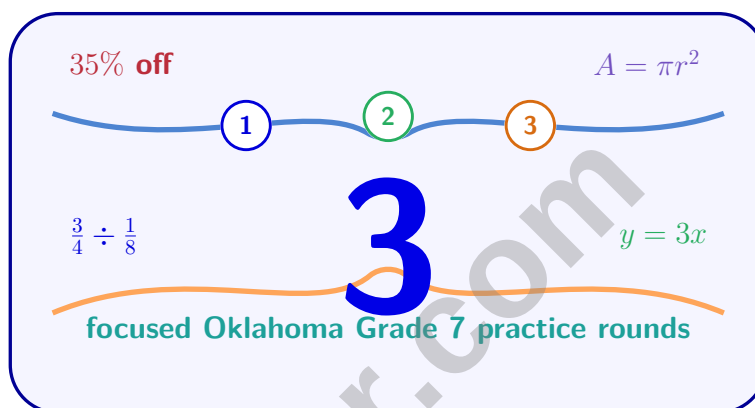
Detailed Answers
& Explanations



Improve Test
Performance

3 Oklahoma OSTP Grade 7 Math Practice Tests

Oklahoma Math Test Prep with Three Practice Rounds



Three 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!

Three focused rounds for sharper OSTP math thinking

This book gives you three 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 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.

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?

Three OSTP 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.



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& answers

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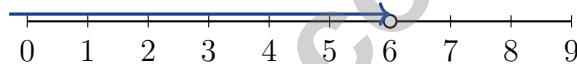
- 1) A triangular prism with a right-triangular base (legs 3 cm and 4 cm) and height 10 cm is sliced perpendicular to its triangular bases. Which shape could NOT be a cross-section?

☐ A. Triangle ☐ C. Pentagon
☐ B. Rectangle ☐ D. Hexagon

- 2) A scientist estimated the density of a liquid at 1.2 g/mL but the actual density was 1.5 g/mL. What is the percent error?

☐ A. 30% ☐ C. 80%
☐ B. 25% ☐ D. 20%

- 3) Which graph represents $w < 6$?



☐ A. Closed circle at 6 pointing right ☐ C. Closed circle at 6 pointing left
☐ B. Open circle at 6 pointing left ☐ D. Open circle at 6 pointing right

- 4) Expand and simplify: $7(t - 2) + 3(4 - t)$

☐ A. $4t - 2$ ☐ C. $6t + 12$
☐ B. $10t + 12$ ☐ D. $8t - 2$

- 5) A pair of shoes costs \$60. If a store marks up the wholesale cost by 50%, what is the selling price?

☐ A. \$110 ☐ C. \$30
☐ B. \$40 ☐ D. \$90



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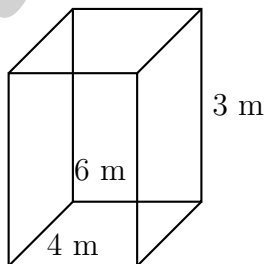
- 6) The difference between two integers is -9 . If one integer is 4, what is the other integer? (Hint: difference means subtract.)

7)

Scenario	Principal	Annual Rate	Years
Account 1	\$1000	6%	2
Account 2	\$1200	4%	2

Which account earns more interest, and by how much?

- ☐ A. Account 1 by \$20 ☐ C. Account 1 by \$24
☐ B. Account 2 by \$20 ☐ D. Both earn the same
- 8) Factor: $-4x - 12$
- ☐ A. $-4(x + 3)$ ☐ C. $-4(x - 3)$
☐ B. $4(x + 3)$ ☐ D. $-(4x + 12)$



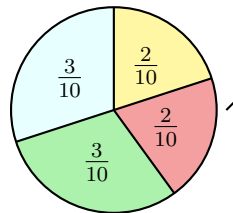
9)

A net of a rectangular prism is partially shown with dimensions 4 m, 6 m, and 3 m. If all six faces are included in the net, which statement about the total surface area is correct?

- ☐ A. The surface area is 108 m^2 . ☐ C. The surface area is 84 m^2 .
☐ B. The surface area is 72 m^2 . ☐ D. The surface area is 216 m^2 .



- 10) A scale model of a bridge has a ratio of 1 : 500 (model to real). If the real bridge is 150 meters long, how long is the model in centimeters?
- ☐ A. 3 cm ☐ C. 300 cm
☐ B. 3000 cm ☐ D. 30 cm
- 11) A plant grew 12 cm. This is 15% of its total final height. What was the total height?
- ☐ A. 60 cm ☐ C. 80 cm
☐ B. 72 cm ☐ D. 90 cm
- 12) What is $-4 + 6 + (-2)$?
- ☐ A. -12 ☐ C. 8
☐ B. 12 ☐ D. 0
- 13) Which terms are like terms?
- ☐ A. $4x$ and $4y$ ☐ C. $7m$ and $2m$
☐ B. $3x^2$ and $3x$ ☐ D. $5xy$ and $5x$



14)

A spinner with four unequal sections is spun 350 times. Section A has probability $\frac{3}{10}$ and Section B has probability $\frac{2}{10}$. How many times would you expect to see either Section A or Section B?

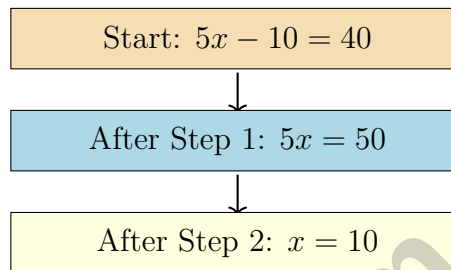
- ☐ A. 70 times ☐ C. 140 times
☐ B. 105 times ☐ D. 175 times



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- 1) A triangle has one side of length 11 cm. If the other two sides each have length x cm, for which values of x can a valid triangle be formed?

- ☐ A. Any positive value of x
☐ C. $5.5 < x$
☐ B. $0 < x \leq 11$
☐ D. $x \geq 11$



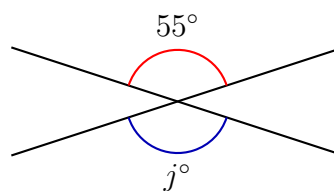
2)

What operation was used in Step 1?

- ☐ A. Add 10
 ☐ C. Multiply by 10
☐ B. Subtract 10
 ☐ D. Divide by 10

- 3) A map shows two cities that are $\frac{3}{4}$ inch apart. The scale is $\frac{1}{2}$ inch : 10 miles. What is the actual distance between the cities?

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



4)

Two intersecting lines form vertical angles. One angle is marked as 55° . What is the measure of angle j vertically opposite to it?

- ☐ A. 35°
☐ C. 125°
☐ B. 55°
☐ D. 235°



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5) A polygon is translated by the vector $(3, -5)$. One vertex of the original polygon is at $(-1, 4)$. Where is this vertex after the translation?

☐ A. $(2, -1)$

☐ C. $(-4, 1)$

☐ B. $(4, 9)$

☐ D. $(2, 1)$

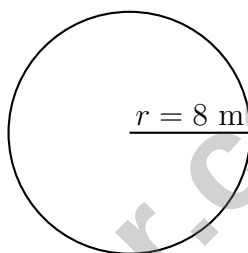
6) Two similar triangles have a scale factor of $1 : 3$. The smaller triangle has a side of 5 cm. What is the length of the corresponding side in the larger triangle?

☐ A. 5 cm

☐ C. 15 cm

☐ B. 10 cm

☐ D. 35 cm



7)

Based on the diagram, what is the circumference? Use $\pi \approx \frac{22}{7}$.

☐ A. $\frac{176}{7}$ m

☐ C. $\frac{88}{7}$ m

☐ B. $\frac{352}{7}$ m

☐ D. $\frac{704}{7}$ m

8) A circular rug has a radius of 2.5 meters. What is the approximate area of the rug? Use $\pi \approx 3.14$.

☐ A. 7.85 m^2

☐ C. 19.625 m^2

☐ B. 15.7 m^2

☐ D. 39.25 m^2



- 1) A dollhouse is built to a scale of 1 : 12 (model to real). If an actual bedroom is 12 feet long, 10 feet wide, and 8 feet tall, what is the volume of the dollhouse bedroom in cubic feet?

- ☐ A. 960×12 cubic feet ☐ C. 960 cubic feet
☐ B. $\frac{960}{12}$ cubic feet ☐ D. $\frac{960}{1728}$ cubic feet

- 2) A bag of marbles is modeled with $P(\text{red}) = 0.5$, $P(\text{blue}) = 0.3$, $P(\text{green}) = 0.15$, $P(\text{white}) = 0.05$. If you draw one marble, what is $P(\text{not blue})$?

- ☐ A. 0.3 ☐ C. 0.2
☐ B. 0.7 ☐ D. 0.15

3)

Service	Fee
Check deposit	\$0.25
Wire transfer	\$15.00
ATM withdrawal (out-of-network)	\$2.50
Monthly account fee	\$8.00

A customer performs one of each service during a month. What is the total in fees?

- ☐ A. \$25.00 ☐ C. \$26.00
☐ B. \$27.50 ☐ D. \$25.75
- 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) Emma spent \$18 and this was 20% of her total budget. What was her total budget?

- 6) A payday loan charges 15% interest for a two-week loan of \$500. How much interest must you pay?

- ☐ A. \$50
☐ B. \$150

- ☐ C. \$100
☐ D. \$75

- 7) An account earns 12% interest compounded annually. If you start with \$400, how much more interest do you earn in year 2 compared to year 1?

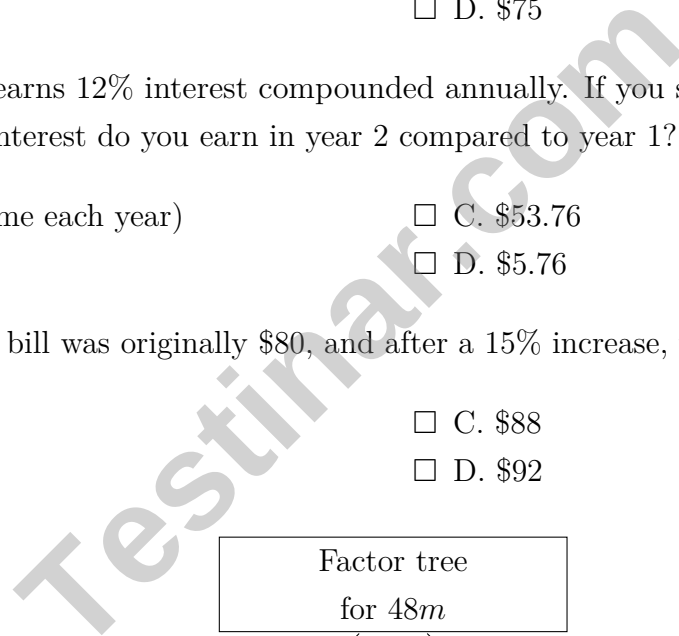
- ☐ A. \$0 (same each year)
☐ B. \$96

- ☐ C. \$53.76
☐ D. \$5.76

- 8) A restaurant bill was originally \$80, and after a 15% increase, what is the new bill?

- ☐ A. \$95
☐ B. \$12

- ☐ C. \$88
☐ D. \$92



- 9)

$6m$

8

If a factor tree shows that $48m = 6m \times 8$, then what is the GCF of $48m$ and 24?

- ☐ A. 6
☐ B. 8

- ☐ C. 24
☐ D. 12



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.G.1-7.G.5) A plane perpendicular to the triangular bases of a prism can produce a triangle (perpendicular to one base face) or a rectangle/quadrilateral (cutting two lateral faces). A hexagon would require intersecting all six faces, which is impossible for this perpendicular orientation.
- 2) **Choice D is correct.** (7.RP.3) Percent error = $\frac{|1.2-1.5|}{1.5} \times 100\% = \frac{0.3}{1.5} \times 100\% = 20\%$.
- 3) **Choice B is correct.** (7.EE.4b) $w < 6$ is a strict inequality, so use an open circle at 6 with the arrow pointing left.
- 4) **Choice A is correct.** (7.EE.1-7.EE.2) Distribute each: $7(t-2) = 7t-14$ and $3(4-t) = 12-3t$. Combine like terms: $7t-3t = 4t$ and $-14+12 = -2$, giving $4t-2$.
- 5) **Choice D is correct.** (7.RP.3) Markup amount = $0.50 \times 60 = \$30$. Selling price = $60 + 30 = \$90$.
- 6) **The correct answer is 13.** (7.NS.1-7.NS.3) If the difference is $4-x = -9$, then $x = 4 - (-9) = 4 + 9 = 13$. Check: $4 - 13 = -9$ ✓.
- 7) **Choice C is correct.** (7.RP.3) Account 1: $I = 1000(0.06)(2) = \$120$. Account 2: $I = 1200(0.04)(2) = \$96$. Difference: $120 - 96 = \$24$.
- 8) **Choice A is correct.** (7.EE.1-7.EE.2) Factor out the negative GCF: $-4x-12 = -4(x+3)$. Check: $-4(x+3) = -4x-12$.
- 9) **Choice A is correct.** (7.G.4-7.G.6) $SA = 2(4 \cdot 6 + 4 \cdot 3 + 6 \cdot 3) = 2(24 + 12 + 18) = 2(54) = 108 \text{ m}^2$.
- 10) **Choice D is correct.** (7.RP.1-7.RP.3) $150 \text{ m} = 15000 \text{ cm}$. Divide by scale: $15000 \div 500 = 30 \text{ cm}$.
- 11) **Choice C is correct.** (7.RP.3) If $12 = 0.15 \times h$, then $h = \frac{12}{0.15} = 80 \text{ cm}$.
- 12) **Choice D is correct.** (7.NS.1b) Add from left to right: $-4 + 6 = 2$, then $2 + (-2) = 0$. Alternatively, combine the negatives: $-4 + (-2) = -6$, then $-6 + 6 = 0$.
- 13) **Choice C is correct.** (7.EE.1) Like terms have the same variable and exponent. Both $7m$ and $2m$ contain the variable m with exponent 1.
- 14) **Choice D is correct.** (7.SP.5-7.SP.8) Section A: $\frac{3}{10} \times 350 = 105$. Section B: $\frac{2}{10} \times 350 = 70$. Combined: $105 + 70 = 175$ times.
- 15) **Choice C is correct.** (7.RP.1-7.RP.3) Unit rate = $4 \div 3 \approx 1.33$ miles per hour (or exactly $\frac{4}{3}$ miles per hour).
- 16) **Choice C is correct.** (7.NS.2d) Divide $1 \div 2 = 0.5$. This is a terminating decimal since the denominator has only factors of 2 and 5.
- 17) **Choice B is correct.** (7.EE.1-7.EE.2) Three times k is $3k$. Minus 7 gives $3k - 7$.
- 18) **Choice A is correct.** (7.EE.4b) "A number" is n ; "is more than" is $>$; "twice itself minus 5" is $2n - 5$. Direct translation: $n > 2n - 5$.
- 19) **The correct answer is A, C.** (7.SP.1-7.SP.4) City A dark roast (42%) > City B dark roast (38%), so A is correct. City B light roast (40%) > City A light roast (35%), so C is correct. B is wrong (survey size not given). D is wrong (A: 23%, B: 22%).
- 20) **Choice A is correct.** (7.G.1-7.G.5) Drawing A at scale 1:2 km: actual field is $4 \times 2 = 8 \text{ km}$ by $6 \times 2 = 12 \text{ km}$. Drawing B shows the same real field ($8 \text{ km} \times 12 \text{ km}$) as $8 \times 12 \text{ cm}$. Scale of B: $8 \text{ km} \div 8 \text{ cm} = 1 \text{ km per cm}$, or equivalently $8 \text{ cm} : 8 \text{ km}$ simplifies to $1 \text{ cm} : 1 \text{ km}$. Ratio check: $2 \text{ km (scale A)} \div 1 \text{ km (scale B)} = 2$, so drawing B should be 2× larger: B is $8 \times 12 \text{ cm}$ vs A is $4 \times 6 \text{ cm}$. Correct!
- 21) **Choice B is correct.** (7.SP.1-7.SP.4) The question is phrased to suggest a particular answer ("terrible food") rather than remaining neutral, which influences how people respond.
- 22) **Choice C is correct.** (7.SP.1-7.SP.4) Mean < Median indicates low outliers pulling the mean down. Mean > Median indicates high outliers pulling the mean up. Rep A: $1200 < 1400$ (low outliers). Rep B: $1200 > 1000$ (high outliers).
- 23) **The correct answer is \$3.** (7.RP.1-7.RP.3) Store A costs $2 \div \frac{2}{5} = 5$ dollars per pound. Store B costs $2.25 \div \frac{3}{4} = 3$ dollars per pound, so the lower price is \$3.
- 24) **Choice A is correct.** (7.SP.5-7.SP.8) Remaining space: $1 - \frac{1}{4} - \frac{1}{2} = \frac{1}{4}$. Split equally: $\frac{1}{4} \div 2 = \frac{1}{8}$.
- 25) **Choice B is correct.** (7.SP.5-7.SP.8) Even cards: $\{2, 4\} = 2$ outcomes. Heads: 1 outcome. Favorable: $2H, 4H = 2$ outcomes.
- 26) **Choice D is correct.** (7.RP.1-7.RP.3) For a proportional relationship, the ratio $\frac{\text{toys}}{\text{hours}}$ must be constant. Both ratios equal 30 toys per hour, so the relationship is proportional with $k = 30$.



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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:

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Printed Tests

2 Online
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 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!

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