

7 Oklahoma OSTP

Grade 7 Math Practice Tests



7 PRINTED TESTS + 2 ONLINE TESTS



**Standards Aligned Problem Solving
For Comprehensive Assessment Programs**



8 Oklahoma OSTP Grade 7 Math Practice Tests

A complete practice path for Oklahoma Grade 7 percents, simple interest, equations, scale drawings, data comparison, and probability



Eight 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.

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Welcome, Oklahoma Grade 7 Problem Solver!

Eight focused rounds for sharper OSTP math thinking

This book gives you seven 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

An eight-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?

Eight OSTP tests, 280 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 7–8	Statistics, probability, mixed review, stamina, and choosing efficient strategies.
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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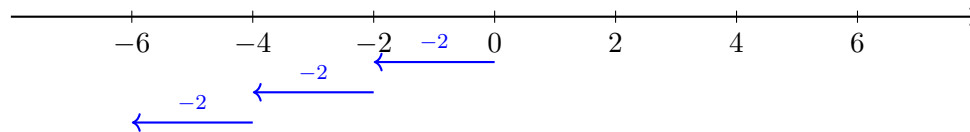
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- 1) A path forms a triangle with sides $(\frac{1}{2}x + 1)$ ft, $(x + 3)$ ft, and $(2x - 1)$ ft. What is the perimeter?

☐ A. $\frac{7}{2}x + 3$ ☐ C. $3.5x + 3$
☐ B. $3x + 3$ ☐ D. $4x + 3$

- 2) The number line shows repeated additions. What does $3 \times (-2)$ equal?



☐ A. -8 ☐ C. 6
☐ B. -6 ☐ D. 8

- 3) A bank charges a 3% fee on ATM withdrawals outside its network. If a customer withdraws \$300 from an out-of-network ATM, what is the ATM fee?

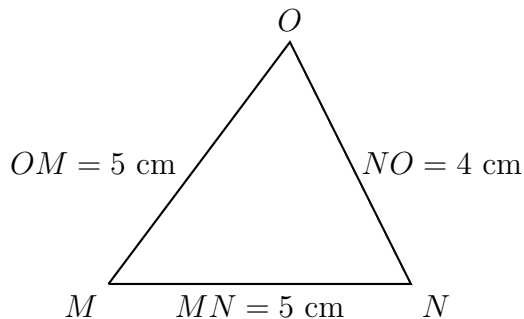
☐ A. \$6.00 ☐ C. \$12.00
☐ B. \$15.00 ☐ D. \$9.00

- 4) A bank offers two savings products: Account 1 earns 7% compound interest on a \$1,200 deposit; Account 2 earns 8% compound interest on a \$1,100 deposit. After 1 year, which account has the greater balance and by how much?

☐ A. Account 1 by \$96 ☐ C. Account 1 by \$50
☐ B. Account 2 by \$96 ☐ D. Account 2 by \$20



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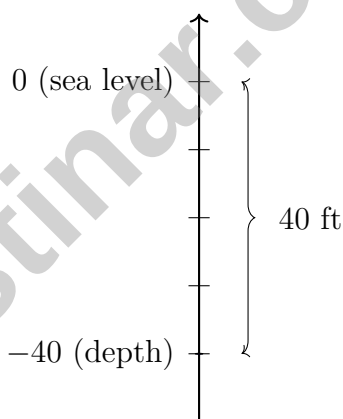


5)

Triangle MNO has sides $MN = 5 \text{ cm}$, $NO = 4 \text{ cm}$, and $OM = 5 \text{ cm}$. What type of triangle is MNO ?

☐ A. Scalene☐ C. Equilateral☐ B. Isosceles☐ D. Right triangle

6) A scuba diver descends 40 feet below sea level. Which integer represents this depth?

☐ A. 40 (ignores direction/below sea level)☐ C. 0 (at sea level, not below)☐ B. -80 (double the depth)☐ D. -40 (correct; below is negative)

- 7) A number line arrow starts at -6 and ends at 9 . What integer was added?
- ☐ A. -15 ☐ C. 3
☐ B. -3 ☐ D. 15
- 8) Find the GCF of $8b$ and $20b$.
- ☐ A. $4b$ ☐ C. $20b$
☐ B. $8b$ ☐ D. $2b$
- 9) A rectangular prism has length 10 cm, width 4 cm, and height 3 cm. What is the surface area?
- ☐ A. 120 cm^2 ☐ C. 180 cm^2
☐ B. 164 cm^2 ☐ D. 240 cm^2
- 10) Which expression represents “8 times the sum of x and 3 ”?
- ☐ A. $8x + 3$ ☐ C. $(8 + x) + 3$
☐ B. $8(x + 3)$ ☐ D. $8 + x + 3$
- 11) Simplify: $11a - 6a + 2a$
- ☐ A. $7a$ ☐ C. $9a$
☐ B. $19a$ ☐ D. $5a$
- 12) A die is rolled to simulate an event with probability $\frac{1}{3}$. Which outcomes on the die could represent a success?
- ☐ A. Rolling a 1 or 2 ☐ C. Rolling a $1, 2, 3$, or 4
☐ B. Rolling a 1 or 2 or 3 ☐ D. Rolling a $1, 2, 3, 4$, or 5



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1) If a cylinder is scaled such that both the radius and height are doubled, by what factor does the volume increase?

☐ A. 2☐ C. 8☐ B. 4☐ D. 16

2) What is $\sqrt{144}$?

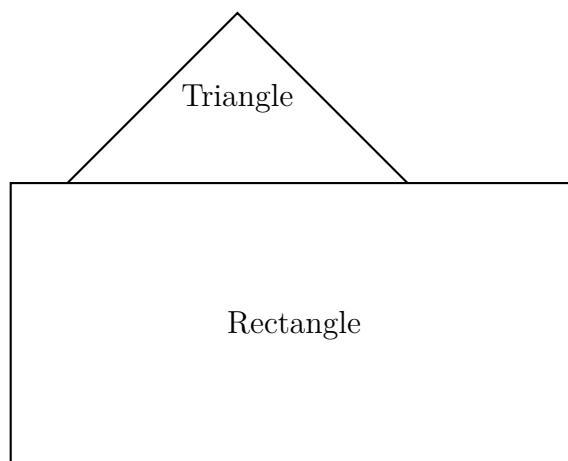
☐ A. 10☐ C. 12☐ B. 11☐ D. 14

3) Subtract: $6\frac{1}{3} - 2\frac{5}{6}$. Express your answer as a mixed number.

4) A student claims that $x + x + x + 5 = 3x + 5$ and $x(3 + 5) = 3x + 5$. Which statement is true?

☐ A. Both claims are correct☐ C. Only the second claim is correct☐ B. Only the first claim is correct☐ D. Neither claim is correct

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5)

A composite figure shows a house shape: a rectangle (10 units $\times$ 5 units) with a triangular roof (base 6 units, height 3 units). What is the total area?

- ☐ A. 50 sq units ☐ C. 68 sq units
☐ B. 59 sq units ☐ D. 80 sq units

6) A triangular prism container is filled with water. The triangular base has legs 8 cm and 6 cm. If the container is 15 cm deep, what is the volume of water it can hold?

- ☐ A. 120 cm³ ☐ C. 360 cm³
☐ B. 240 cm³ ☐ D. 720 cm³

7) In a circle, two sectors have central angles: Sector X has a central angle of 40° , and Sector Y has a central angle of 80° . How does Sector Y 's area compare to Sector X 's area?

- ☐ A. Sector Y is half the size ☐ C. Sector Y is twice the size
☐ B. Sector Y is the same size ☐ D. Cannot be determined



1) Solve: $6x - \frac{1}{2} = \frac{11}{2}$

☐ A. $x = 1$

☐ C. $x = 2$

☐ B. $x = \frac{3}{2}$

☐ D. $x = \frac{5}{2}$

2) A photo is 8 inches wide and 6 inches tall. It is enlarged by a scale factor of 2.5. What are the new dimensions?

☐ A. 5.5 inches $\times$ 3.5 inches

☐ C. 16 inches $\times$ 12 inches

☐ B. 10 inches $\times$ 8 inches

☐ D. 20 inches $\times$ 15 inches

3) A store sells 120 items in one day. If 30% of them were on sale, how many items were on sale?

☐ A. 30

☐ C. 40

☐ B. 90

☐ D. 36

4) A restaurant's menu prices increased by 8%. If a meal was \$25, what is the new price?

☐ A. \$33

☐ C. \$32

☐ B. \$2

☐ D. \$27

5)

Number of Heads	0	1	2	3	Total
Frequency	12	36	37	15	100

A coin is flipped 3 times in each trial, and this is repeated 100 times. The table shows the number of heads per trial. What is the estimated probability of getting exactly 2 heads in three flips?

☐ A. 0.27

☐ C. 0.37

☐ B. 0.35

☐ D. 0.40



- 6) A phone plan costs \$25 per month plus \$0.20 for each minute of international calls. If a customer's bill was \$45, write an equation to represent the number of minutes m of international calls, solve for m , and verify your answer.

- 7) A rectangular patio measuring 18 m by 24 m is drawn at scale 1 cm : 2 m. The drawing is then enlarged so the new scale becomes 1 cm : 1 m. By what factor does the perimeter on the drawing increase?

- | | |
|-------------------------------------|--|
| ☐ A. 2 times | ☐ C. $\sqrt{2}$ times |
| ☐ B. 4 times | ☐ D. $1/2$ times |

- 8) A cone with base radius r and height h is cut horizontally at height $\frac{h}{3}$ from the base. The radius of the circular cross-section is:

- | | |
|--|---|
| ☐ A. $\frac{r}{3}$ | ☐ C. $\frac{r}{2}$ |
| ☐ B. $\frac{2r}{3}$ | ☐ D. r |

- 9) Three angles form a straight line and measure 35° , 62° , and x° . What is x ?

- | | |
|--|---|
| ☐ A. 27° | ☐ C. 97° |
| ☐ B. 83° | ☐ D. 180° |



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Oklahoma School Testing Program 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 School Testing Program practice test.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice A is correct.** (7.EE.1-7.EE.2) Add all sides: $(\frac{1}{2}x + 1) + (x + 3) + (2x - 1) = (\frac{1}{2}x + x + 2x) + (1 + 3 - 1) = \frac{7}{2}x + 3$.
- 2) **Choice B is correct.** (7.NS.2) Three groups of -2 : $3 \times (-2) = -6$. The arrows move left 2 units, 3 times, landing on -6 .
- 3) **Choice D is correct.** (7.RP.3) ATM fee = $0.03 \times 300 = \$9.00$.
- 4) **Choice A is correct.** (7.RP.3) Account 1: $1200(1.07) = 1284$. Account 2: $1100(1.08) = 1188$. Difference: $1284 - 1188 = 96$.
- 5) **Choice B is correct.** (7.G.1-7.G.5) Two sides have the same length: $OM = MN = 5$ cm. An isosceles triangle has at least two congruent sides. Checking: $4^2 + 5^2 = 41 \neq 25$, so it is not a right triangle.
- 6) **Choice D is correct.** (7.NS.1-7.NS.3) Descending (going down) below sea level is represented by a negative number. A descent of 40 feet is -40 .
- 7) **Choice D is correct.** (7.NS.1b) If -6 plus an unknown value equals 9, then the unknown is 15 because $-6 + 15 = 9$. The distance from -6 to 9 is 15 units.
- 8) **Choice A is correct.** (7.EE.1-7.EE.2) Find GCF of 8 and 20: it is 4. Since both terms have b , the GCF is $4b$.
- 9) **Choice B is correct.** (7.G.4-7.G.6) $SA = 2(10 \cdot 4 + 10 \cdot 3 + 4 \cdot 3) = 2(40 + 30 + 12) = 2(82) = 164 \text{ cm}^2$.
- 10) **Choice B is correct.** (7.EE.1-7.EE.2) The sum of x and 3 is $(x + 3)$. Eight times this is $8(x + 3)$.
- 11) **Choice A is correct.** (7.EE.1) Combine: $(11 - 6 + 2)a = 7a$.
- 12) **Choice A is correct.** (7.SP.5-7.SP.8) $\frac{2}{6} = \frac{1}{3}$. Rolling a 1 or 2 represents 2 favorable outcomes out of 6 equally likely outcomes.
- 13) **Choice B is correct.** (7.NS.1-7.NS.3) Common denominator is 6: $\frac{3}{6} + \frac{2}{6} = \frac{5}{6}$.
- 14) **Choice B is correct.** (7.NS.2d) $9 \div 10 = 0.9$. Powers of 10 produce terminating decimals with the numerator shifted by decimal places.
- 15) **Choice C is correct.** (7.NS.1-7.NS.3) Proper scientific notation requires $1 \leq a < 10$. The coefficient 12.4 violates this rule.
- 16) **The correct answer is -150 .** (7.NS.1-7.NS.3) The elevation change is $200 - 350 = -150$. She is now 150 meters below sea level.
- 17) **Choice A is correct.** (7.EE.4b) "A number decreased by 7" is $n - 7$; "is less than or equal to 12" is ≤ 12 . (Note: D is the simplified solution but A is the direct translation.)
- 18) **Choice A is correct.** (7.G.1-7.G.5) Scale 1 cm : 1 m means 1 cm on the drawing represents 1 m in reality. Scale factor is 1 m per cm. Multiply each drawing dimension by the scale factor: $3 \text{ cm} \times 1 \text{ m/cm} = 3 \text{ m}$ and $5 \text{ cm} \times 1 \text{ m/cm} = 5 \text{ m}$. This foundational skill (single scale) is the basis for comparing two scales in later problems.
- 19) **Choice B is correct.** (7.G.1-7.G.5) A vertical plane through the apex and the center of the base of a square pyramid creates an axial cross-section. The base of the triangle equals the side of the square base (8 cm), and the two slant heights are equal, forming an isosceles triangle.
- 20) **Choice A is correct.** (7.G.1-7.G.5) Let angles be $2x$ and $3x$. Then $2x + 3x = 90^\circ$, so $5x = 90^\circ$ and $x = 18^\circ$. Larger angle is $3(18) = 54^\circ$.
- 21) **The correct answer is A,D.** (7.RP.1-7.RP.3) A and D are true. Relationship A ($y = 4x$) is proportional and has y -intercept 0. Relationship B has constant term 2, so it is not proportional and has y -intercept 2.
- 22) **The correct answer is 11.** (7.RP.1-7.RP.3) $y = 2.2 \times 5 = 11$.
- 23) **Choice B is correct.** (7.G.1-7.G.5) Reflection over $y = -x$ swaps coordinates and negates both: $(x, y) \rightarrow (-y, -x)$.
- 24) **Choice A is correct.** (7.G.4-7.G.6) $C = 2\pi r \Rightarrow 6.28 = 2 \times 3.14 \times r \Rightarrow 6.28 = 6.28r \Rightarrow r = 1 \text{ cm}$.
- 25) **Choice C is correct.** (7.SP.1-7.SP.4) Random selection from a complete population list ensures every member has equal chance of selection, minimizing bias.
- 26) **Choice C is correct.** (7.SP.1-7.SP.4) Medians show typical performance (center). MAD shows consistency. Together, they reveal whether the entire class has shifted up (higher median) with stable performance (stable MAD), justifying curriculum advancement.
- 27) **Choice C is correct.** (7.SP.5-7.SP.8) Prime numbers from 1 to 20: 2, 3, 5, 7, 11, 13, 17, 19 (8 numbers). $P(\text{prime}) = \frac{8}{20} = \frac{2}{5}$.



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One Last Encouragement

Hi, Determined Student!

◇ You did meaningful Grade 7 practice. That matters because confidence is built through action, not waiting until everything feels easy. This broad and demanding book gave you seven strong Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. ◇

★ **Remember this:** Carry this with you: you can learn hard things by breaking them into steps, asking good questions, and reviewing with honesty. ★

Take This With You

- **You Can Start:** Even when the problem looks big.
- **You Can Adjust:** When the first method is not enough.
- **You Can Learn:** From every corrected mistake.
- **You Can Improve:** One practice session at a time.

Grade 7 test-day tip: Walk into test day ready to think, not ready to be perfect. Thinking clearly is the goal.

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

Jay Daie

Your Grade 7 Math Friend

Practice Today. Succeed Tomorrow!

This book includes **7** 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.

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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
- ✓ 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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