

7 Wyoming WY TOPP Grade 7 Math Practice Tests



ONLINE

7 PRINTED TESTS + 2 ONLINE TESTS

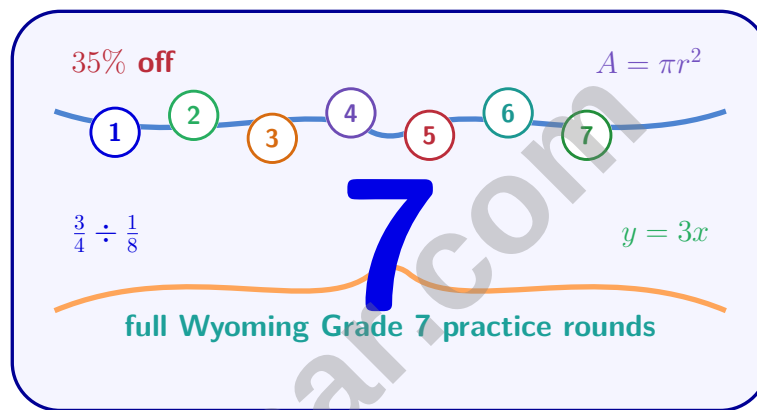


Standards Aligned Problem Solving
For Comprehensive Assessment Programs



8 Wyoming WY TOPP Grade 7 Math Practice Tests

A strong review plan for Wyoming Grade 7 proportions, algebraic thinking, geometry, data comparison, and probability reasoning



Eight complete 40-question Grade 7 WY TOPP 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, Wyoming Grade 7 Problem Solver!

Eight focused rounds for sharper WY TOPP math thinking

This book gives you seven full Grade 7 WY TOPP 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 Wyoming 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.

Wyoming 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 WY TOPP 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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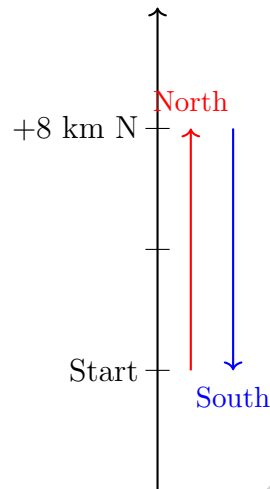
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- 1) A car travels at a constant speed of 55 miles per hour. Which equation relates distance d (miles) to time t (hours)?
- ☐ A. $d = t + 55$ ☐ C. $d = \frac{55}{t}$
☐ B. $d = \frac{t}{55}$ ☐ D. $d = 55t$
- 2) A fitness center charges a \$30 enrollment fee and \$45 per month. What is the total cost for 6 months of membership?
- ☐ A. \$240 ☐ C. \$300
☐ B. \$270 ☐ D. \$330
- 3) What is $-\frac{1}{4} \times 8$?
- ☐ A. -8 ☐ C. -2
☐ B. -4 ☐ D. 2
- 4) A retirement fund of \$10,000 grows at 4% annual compound interest. The formula for the balance after t years is:
- ☐ A. $A = 10000 + 400t$ ☐ C. $A = 10000 \times 0.04 \times t$
☐ B. $A = 10400^t$ ☐ D. $A = 10000(1.04)^t$
- 5) Which statement best describes the SSA (Side–Side–Angle) condition for constructing triangles?
- ☐ A. SSA always produces exactly one triangle ☐ C. SSA never produces a valid triangle
☐ B. SSA may produce zero, one, or two triangles ☐ D. SSA produces exactly two triangles



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- 6) A scout hikes 8 kilometers north, then 8 kilometers south. Using a signed number model where north is positive, what is the total displacement?



- ☐ A. 16 km north ☐ C. 0 km (back at start)
☐ B. 8 km north ☐ D. 8 km south
- 7) A cube has surface area 216 cm^2 . What is the edge length?
- ☐ A. 4 cm ☐ C. 36 cm
☐ B. 6 cm ☐ D. 1296 cm
- 8) To simulate drawing a card from a standard deck and finding whether it is a heart (probability $\frac{1}{4}$), which spinner design is best?
- ☐ A. Spinner with 2 equal sections (one shaded, one not) ☐ C. Spinner with 6 equal sections (two shaded, four not)
☐ B. Spinner with 4 equal sections (one shaded, three not) ☐ D. Spinner with 13 equal sections (one shaded, twelve not)



9) Which statement is true?

☐ A. $-5 + 3 = 8$

☐ C. $4 + (-9) = 5$

☐ B. $-12 + 20 = -8$

☐ D. $-5 + 3 = -2$

10) Which pair of terms are like terms?

☐ A. $2x$ and $2y$

☐ C. $4x^2$ and $4x$

☐ B. $-5ab$ and $3ab$

☐ D. $6m^3$ and $6m^2$

11) Solve: $2x + 7 \geq -1$

☐ A. $x \geq -4$

☐ C. $x \leq -4$

☐ B. $x \geq 3$

☐ D. $x > -4$

12) A school district collects data on student absences. Researchers survey 100 students randomly selected from each grade level. Why is this stratified approach appropriate?

☐ A. It reduces the total sample size needed

☐ C. It eliminates the need for random selection

☐ B. It ensures each grade is represented proportionally in the sample

☐ D. It automatically produces a larger sample

13) A student computed $\frac{1}{3} + \frac{1}{4}$ and got $\frac{2}{7}$. What was the student's error?

☐ A. Did not find common denominator

☐ C. The answer is correct

☐ B. Added incorrectly

☐ D. Used wrong common denominator

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

☐ A. $\frac{4}{5} \div 2$

☐ C. $\frac{2}{15} \div 3$

☐ B. $\frac{1}{5} \div 2$

☐ D. $\frac{4}{10} \div 2$



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- 1) A model rocket is 24 inches tall. The actual rocket is 60 feet tall. What is the scale factor of the model?

☐ A. 1 : 10☐ C. 1 : 60☐ B. 1 : 30☐ D. 1 : 120

- 2) A hiker starts at an elevation of 500 feet and descends 750 feet. What is the hiker's final elevation? (Represent descent as a negative change.)

- 3) Two sales reps' weekly commission earnings (in dollars):

Rep	Mean	Median
Rep A	\$1200	\$1400
Rep B	\$1200	\$1000

Which statement best describes their earnings?

- ☐ A. Both reps earn identical amounts weekly
- ☐ B. Rep A has low-earning weeks pulling the mean down; Rep B has high-earning weeks
- ☐ C. Rep A's median exceeds the mean (low outliers); Rep B's mean exceeds median (high outliers)
- ☐ D. Rep B earns more on average



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$$5x - 10$$

$$5(x - 2)$$

Both equivalent

4)

Which property explains why $5x - 10 = 5(x - 2)$?

- ☐ A. Associative property of multiplication ☐ C. Commutative property
☐ B. Distributive property (factoring) ☐ D. Combining like terms

5) A composite shape is formed by placing a right triangle (legs 5 cm and 12 cm) next to a 12 cm $\times$ 5 cm rectangle. What is the total area?

- ☐ A. 30 cm² ☐ C. 90 cm²
☐ B. 60 cm² ☐ D. 150 cm²

6) A triangular prism has a volume of 240 cm³ and a depth of 10 cm. What is the area of the triangular base?

- ☐ A. 12 cm² ☐ C. 36 cm²
☐ B. 24 cm² ☐ D. 48 cm²

7) In a circle with radius r , a chord has length r . What can you conclude about this chord?

- ☐ A. It must be a diameter ☐ C. It equals the radius
☐ B. It is shorter than the diameter ☐ D. It is impossible



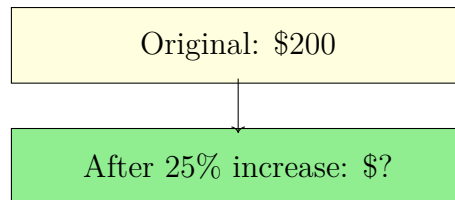
1) Simplify: $8x + 5y - 3x - 2y + x$

☐ A. $6x + 3y$

☐ C. $4x + 3y$

☐ B. $12x + 3y$

☐ D. $8x + 5y$



2)

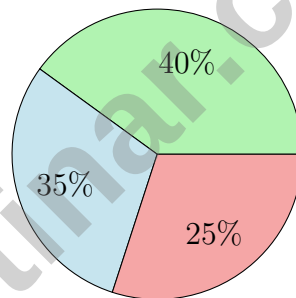
If an item costs \$200 and increases by 25%, what is the new price?

☐ A. \$225

☐ C. \$275

☐ B. \$300

☐ D. \$250



3)

Rent Food Transportation

A budget pie chart shows 40% rent, 35% food, 25% transportation out of \$2 400 monthly income. If you want to reduce transportation spending from 25% to 20%, by how much (in dollars) will your transportation budget decrease?

☐ A. \$120

☐ C. \$360

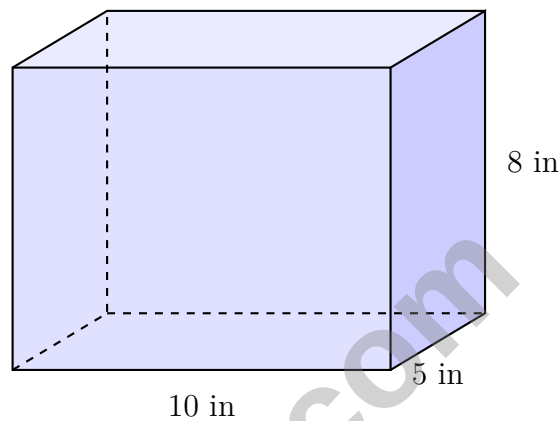
☐ B. \$240

☐ D. \$480



- 4) An athlete's workout time decreased from 90 minutes to 72 minutes. What is the percent decrease?

☐ A. 18% ☐ C. 25%
☐ B. 80% ☐ D. 20%



- 5) Which rectangular prism dimensions would give a surface area of exactly 340 square inches?
- ☐ A. 10 in $\times$ 8 in $\times$ 5 in ☐ C. 12 in $\times$ 8 in $\times$ 5 in
☐ B. 10 in $\times$ 9 in $\times$ 5 in ☐ D. 11 in $\times$ 8 in $\times$ 5 in
- 6) A simulation consists of rolling a die and flipping a coin, recording both results. This is the compound event. How many equally likely outcomes are in the sample space?
- ☐ A. 6 ☐ C. 12
☐ B. 8 ☐ D. 36



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Wyoming Test of Proficiency and Progress 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 Wyoming Test of Proficiency and Progress 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) For a proportional relationship, $d = kt$ where k is the constant of proportionality. Here $k = 55$.
- 2) **Choice C is correct.** (7.RP.3) Total cost = $30 + (45 \times 6) = 30 + 270 = \300 .
- 3) **Choice C is correct.** (7.NS.2) $-\frac{1}{4} \times 8 = -\frac{8}{4} = -2$.
- 4) **Choice D is correct.** (7.RP.3) Apply the compound interest formula $A = P(1 + r)^t$: $P = 10000$, $r = 0.04$. So $A = 10000(1 + 0.04)^t = 10000(1.04)^t$. (A is linear; C is simple interest; D confuses the base with the time variable.)
- 5) **Choice B is correct.** (7.G.1-7.G.5) SSA is the ambiguous case. Depending on the side lengths and angle, there may be no valid triangle (Triangle Inequality violated), exactly one triangle (right angle or obtuse), or two distinct triangles (acute angle with proper side ratio).
- 6) **Choice C is correct.** (7.NS.1-7.NS.3) $+8$ (north) and -8 (south) are opposites. Their sum is zero: $8 + (-8) = 0$. The scout returns to the starting point.
- 7) **Choice B is correct.** (7.G.4-7.G.6) $6s^2 = 216 \Rightarrow s^2 = 36 \Rightarrow s = 6$ cm.
- 8) **Choice B is correct.** (7.SP.5-7.SP.8) Probability $\frac{1}{4}$ means 1 favorable outcome out of 4 equally likely ones.
- 9) **Choice D is correct.** (7.NS.1b) Check each: A: $-5 + 3 = -2$, not 8. B: $-5 + 3 = -2$ ✓. C: $4 + (-9) = -5$, not 5. D: $-12 + 20 = 8$, not -8 .
- 10) **Choice B is correct.** (7.EE.1) Like terms have the same variable(s) and exponent(s). Both $-5ab$ and $3ab$ have the same variables and exponents.
- 11) **Choice A is correct.** (7.EE.4b) Subtract 7: $2x \geq -8$. Divide by 2: $x \geq -4$.
- 12) **Choice B is correct.** (7.SP.1-7.SP.4) Stratified sampling from each grade ensures all groups are included, preventing bias toward any single grade level.
- 13) **Choice A is correct.** (7.NS.1-7.NS.3) Correct answer: $\frac{1}{3} + \frac{1}{4} = \frac{4}{12} + \frac{3}{12} = \frac{7}{12}$. The student added numerators and denominators separately instead of finding a common denominator first.
- 14) **Choice A is correct.** (7.NS.1-7.NS.3) $\frac{4}{5} \div 2 = \frac{4}{5} \times \frac{1}{2} = \frac{4}{10} = \frac{2}{5}$.
- 15) **Choice A is correct.** (7.NS.1-7.NS.3) $2.5 \times \frac{3}{5} = \frac{2.5 \times 3}{5} = \frac{7.5}{5} = 1.5$ cups.
- 16) **Choice B is correct.** (7.EE.1-7.EE.2) Difference of y and 5 is $(y - 5)$. Twice this is $2(y - 5)$.
- 17) **The correct answer is -17 .** (7.NS.1-7.NS.3) After descending: $0 - 25 = -25$. After ascending 8 meters: $-25 - (-8) = -25 + 8 = -17$. She is 17 meters below sea level.
- 18) **The correct answer is A,D.** (7.RP.1-7.RP.3) True: A ($2 \times 40 = 80$ cm) and D (area scales by $(40)^2 = 1600$, so $3 \times 1600 = 4800$ cm²). False: B (should be cm, not m); C (area scales quadratically); E (area scales by 1600, not 40).
- 19) **The correct answer is 1.5.** (7.RP.1-7.RP.3) The unit rate is $6 \div 4 = 1.5$.
- 20) **Choice A is correct.** (7.EE.3-7.EE.4) Add 6: $4x = 16$. Divide by 4: $x = 4$. Check: $4(4) - 6 = 16 - 6 = 10$ ✓.
- 21) **Choice C is correct.** (7.G.1-7.G.5) Scale factor is 10. Actual dimensions: 50 cm $\times$ 30 cm. Area: $50 \times 30 = 1500$ cm².
- 22) **Choice D is correct.** (7.G.1-7.G.5) Reflecting $(-3, -3)$ over $y = x$ gives $(-3, -3)$ (it's on the line). Since Box 2 is at $(1, 1)$ to $(3, 3)$, the transformation is a 180° rotation, not a reflection over $y = x$.
- 23) **Choice A is correct.** (7.G.4-7.G.6) $C = 2\pi r = 2 \times \frac{22}{7} \times 3.5 = 2 \times \frac{22}{7} \times \frac{7}{2} = 22$ cm.
- 24) **Choice B is correct.** (7.G.4-7.G.6) $A = \pi r^2 = 3.14 \times 2^2 = 3.14 \times 4 = 12.56$ m².
- 25) **Choice C is correct.** (7.G.4-7.G.6) Lateral area = $2\pi rh \approx 2(3.14)(4)(5) = 125.6$ in².
- 26) **Choice C is correct.** (7.SP.1-7.SP.4) Percentage = $\frac{90}{360} \times 100\% = \frac{1}{4} \times 100\% = 25\%$.
- 27) **Choice B is correct.** (7.SP.5-7.SP.8) Red sections: C and D (2 out of 4). $P(\text{red}) = \frac{2}{4} = \frac{1}{2}$.
- 28) **Choice A is correct.** (7.RP.3) Strategy X: \$600 (no interest). Strategy Y: $\$360 + (5\% \times \$360) \approx \$360 + \$18 = \$378$ total. Strategy X provides more total value ($\$600 > \378), showing that saving more per month outweighs the benefit of interest—a key Grade-7 investment trade-off: higher savings frequency can beat lower savings with interest.
- 29) **The correct answer is 33.3%.** (7.RP.3) $\frac{1}{3} = 0.333\ldots = 33.\overline{3}\%$. Approximately 33% of the students attend the science club.



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Hi, Strategy Solver!

◇ Grade 7 math rewards students who think before they calculate. You practiced choosing strategies, not just hunting for answers. 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:** That matters because stronger math students do not use one method for every question. They notice the structure and choose the tool that fits. ★

Strategy Moves

- **Estimate:** Know the neighborhood of the answer.
- **Simplify:** Rewrite numbers in friendlier forms.
- **Model:** Draw what the words describe.
- **Verify:** Put the answer back into the problem.

Grade 7 test-day tip: Pause for ten seconds before hard questions. A short plan can save several minutes.

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

Jay Daie

Your Strategy Guide

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.

Perfect for classroom use, homework, test preparation, and extra practice at home.



THIS BOOK INCLUDES:

7 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
- ✓ Percents & Decimals
- ✓ Statistics & Probability
- ✓ Data Analysis
- ✓ Measurement & Conversions
- ✓ Algebraic Thinking
- ✓ And More!



PRACTICE
REGULARLY



STAY
FOCUSED



SOLVE
CONFIDENTLY



SUCCEED
BRIGHTLY



2 ONLINE TESTS

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



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