

8

West Virginia

WVGSA

GRADE 6

MATH

PRACTICE TESTS

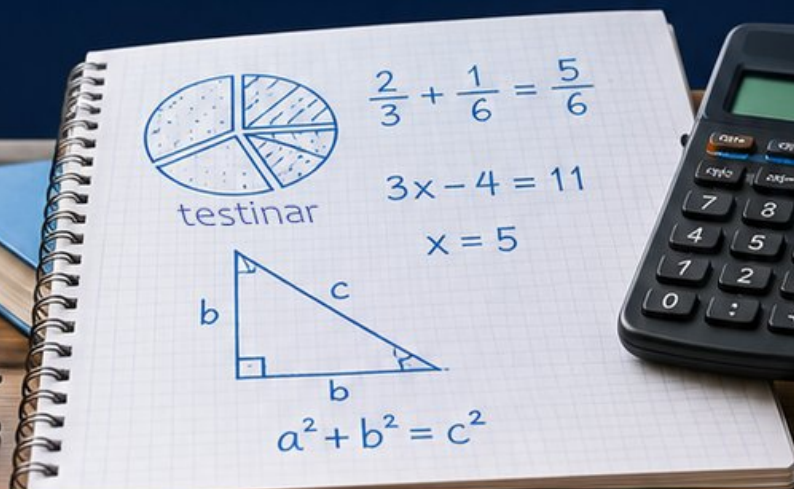
8
PRINTED
TESTS

+

2
ONLINE
TESTS

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

Standards-Aligned *Steady Southern* Problem Solving for Comprehensive Assessment Program



BUILT FOR
ACAP SUCCESS



REALISTIC TESTS
& QUESTION TYPES



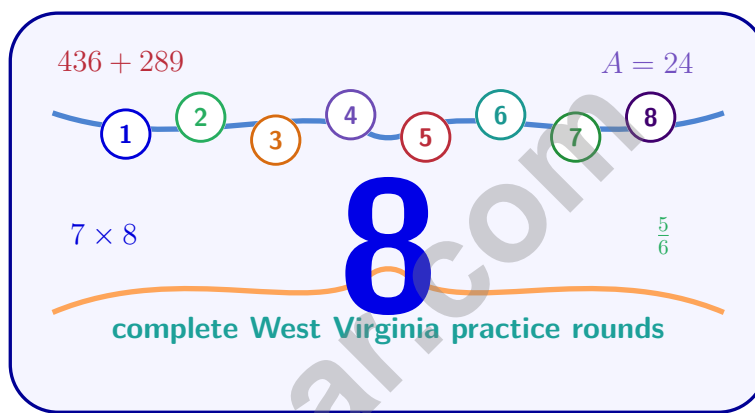
STRENGTHEN
MATH SKILLS



REVIEW, PRACTICE,
AND IMPROVE

8 West Virginia WVGSA Grade 6 Math Practice Tests

Standards-Aligned Mountain-State Stamina for West Virginia General Summative Assessment



Eight complete 40-question Grade 6 practice rounds for WVGSA, built for mountain-state stamina with ratios, rational numbers, expressions, equations, geometry, statistics, answer keys, and clear explanations for every item.

Jay Daie and Reza Nazari



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Welcome, West Virginia Math Explorer!

Eight focused rounds using mountain-state stamina

This book gives you eight full Grade 6 practice tests for WVGSA. Each round uses ridge roads, river valleys, and determined problem solving as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

Your West Virginia Practice Promise

Climb the problem one step at a time: read, model, solve, and check.

Read

Plan

Check

How to Use This Book

A eight-session routine for mountain-state stamina

1. **Preview the skills.** Scan the quick review pages before beginning the first round.
2. **Mark confidence.** Put a small star beside problems where your plan felt strong.
3. **Work in order.** Take one 40-question test at a time in a quiet place.
4. **Plan the next round.** Use the growth log to choose one habit and one skill to practice.
5. **Correct actively.** Retry missed items before reading the full explanation.

West Virginia review rhythm: Use each test as a climb, then review the steepest parts before the next round.



What Is Inside?

Eight WVGSA tests, 320 questions, and a full review path

Part	What You Will Practice
Tests 1–3	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Tests 4–6	Skill-building rounds with expressions, equations, geometry, data, and problem models.
Tests 7–8	Final stamina rounds for mixed review, neat work, and flexible strategy choices.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Mountain-state stamina means recognizing the skill even when the next question changes topic, changes format, or asks for an explanation.



Scan me!
For more practice
& answers

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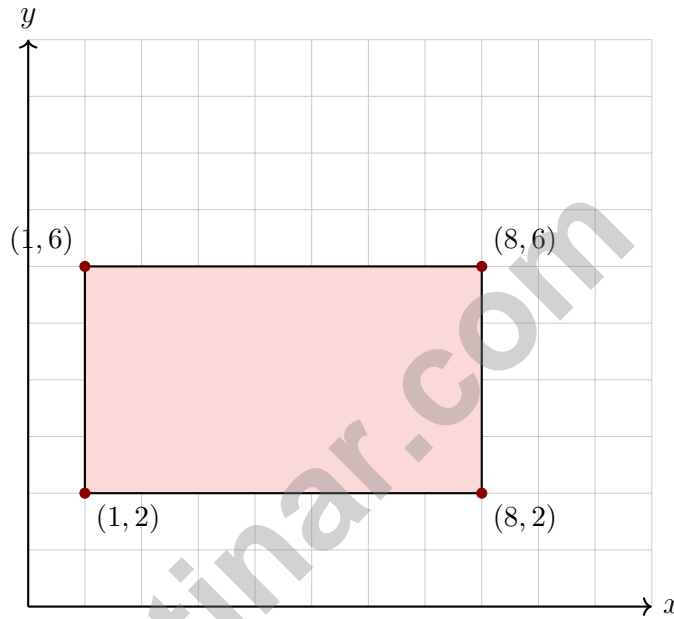
1) Which pair of ratios is equivalent?

A. 4 : 5 and 8 : 15

C. 2 : 9 and 4 : 20

B. 5 : 6 and 10 : 13

D. 3 : 7 and 6 : 14



2)

What is the perimeter of this rectangle?

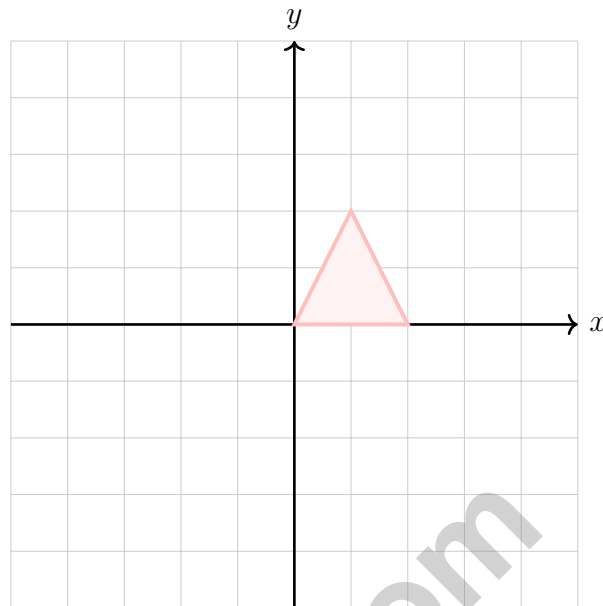
A. 11 units

C. 22 units

B. 18 units

D. 28 units





3)

Which of the following represents a reflection over the x -axis?

- A. $(x, y) \rightarrow (x, -y)$ C. $(x, y) \rightarrow (x + a, y + b)$
 B. $(x, y) \rightarrow (-x, y)$ D. $(x, y) \rightarrow (-x, -y)$

4) If a distribution has $Q_1 = 40$, Q_2 (median) = 50, and $Q_3 = 55$, what does this tell you about the data?

- A. The bottom half is spread out more than the top half C. The data is perfectly symmetric
 B. The top half is spread out more than the bottom half D. The data is bimodal



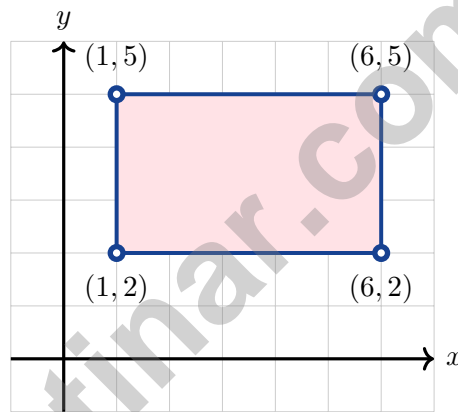
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5) What is the least common multiple (LCM) of 6 and 8?

- A. 24 C. 14
 B. 18 D. 48

6) A student plotted a point and said it was at $(-4, -2)$ in Quadrant II. What mistake did the student make?

- A. The x -coordinate should be positive C. The coordinates are swapped
 B. Both coordinates should be negative for Quadrant II D. The point is actually in Quadrant III



7)

A rectangle has vertices at $(1, 2)$, $(6, 2)$, $(6, 5)$, and $(1, 5)$. What is the perimeter?

- A. 14 units C. 18 units
 B. 16 units D. 20 units

8) Find the GCF of 42 and 28.



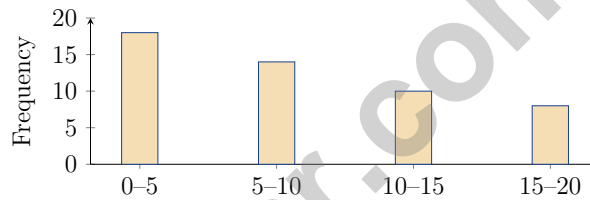
1) A painter paints 48 square feet in 2 hours. What is the rate in square feet per hour?

- A. 20 square feet per hour C. 50 square feet per hour
 B. 96 square feet per hour D. 24 square feet per hour

2) For the data set 2, 4, 6, 8, the mean is 5. Calculate the MAD.

- A. 1 C. 3
 B. 2 D. 5

3) The histogram below shows a data distribution. Which statement is accurate?



- A. The distribution is skewed left C. The distribution is symmetric
 B. The distribution is bimodal D. The distribution is skewed right

4) Class A has range 10 and Class B has range 15. By how much is Class B's range greater?



5) A student calculated the volume of a rectangular prism with dimensions 5 m, 4 m, and 3 m. They wrote $5 + 4 + 3 = 12 \text{ m}^3$. What is the correct volume?

A. 12 m^3

B. 20 m^3

C. 30 m^3

D. 60 m^3

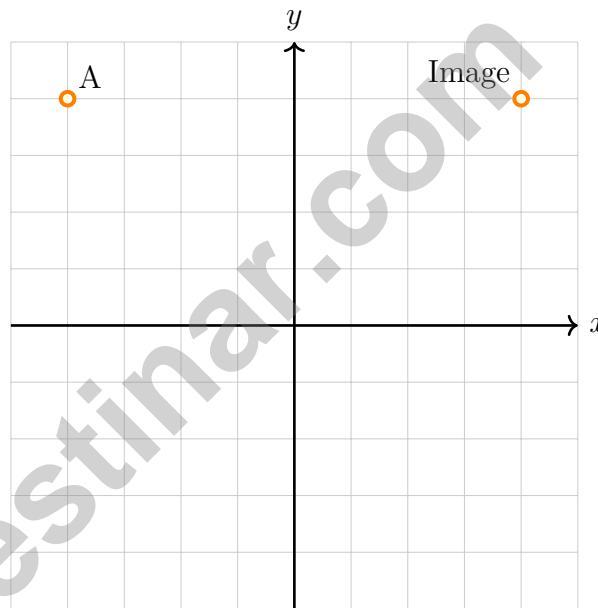
6) A rectangle has a perimeter of 28 units. If the length is 9 units, what is the width?

A. 4 units

B. 5 units

C. 6 units

D. 7 units



7)

When $(-4, 4)$ is reflected over the y -axis, which describes the transformation?

A. The point moves to $(4, 4)$

B. The point moves to $(-4, -4)$

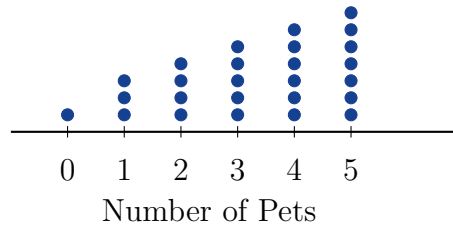
C. The point stays at $(-4, 4)$

D. The point moves to $(4, -4)$



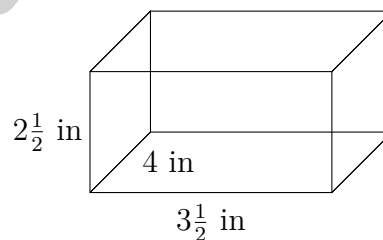
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& answers

- 1) A dot plot shows the number of pets owned by families in a neighborhood. The data displays a left-skewed pattern. This means:



- A. Most families have fewer pets, with fewer families having more pets
 B. Most families have many pets, with fewer families having fewer pets
 C. The data is evenly distributed
 D. All families have the same number of pets
- 2) A video streaming service charges \$8 per month. If m is months and T is total cost, the equation is $T = 8m$. What does the number 8 in the equation represent?

- A. The total cost
 B. The monthly charge
 C. The number of months
 D. The type of service



3)

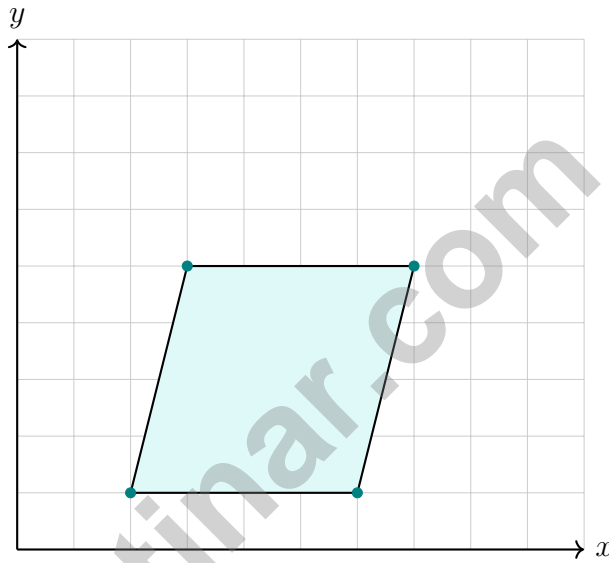
What is the volume of this rectangular prism?

- A. 10 in^3
 B. 28 in^3
 C. 35 in^3
 D. 42 in^3



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& answers

- 4) A number line shows tick marks at halves from -2 to 2 . What fraction is located halfway between -1 and 0 ? Write your answer as a fraction.



5)

What is the name of this quadrilateral?

- A. Parallelogram
- B. Rectangle
- C. Quadrilateral
- D. Trapezoid



West Virginia WVGSA Practice Test Answer Keys

How to use this West Virginia WVGSA answer section with a Grade 6 student:

1. check the answer first, then write one quick reason the choice is correct
2. mark questions to try again, especially the skills that feel connected to mountain-state stamina
3. rework the problem before reading the full explanation, using this reminder:
Climb the problem one step at a time: read, model, solve, and check.

A calm West Virginia correction routine turns every missed item into useful practice. Use each test as a climb, then review the steepest parts before the next round.



Scan me!
For more practice
& answers

West Virginia Practice Test Answers and Explanations

Review the eight printed WVGSA tests with determined, steady, and ready for the next ridge habits.

Practice Test 1 Answers and Explanations

- 1) **Choice D is correct.** (M.6.3) Check: $6 : 14 = (6 \div 2) : (14 \div 2) = 3 : 7$. The other pairs are not equivalent.
- 2) **Choice C is correct.** (M.6.23) Find the side lengths from the coordinates: width = $|8 - 1| = 7$ and height = $|6 - 2| = 4$. Perimeter of a rectangle is $2(\text{width} + \text{height}) = 2(7 + 4) = 22$ units.
- 3) **Choice A is correct.** (M.6.11) Reflection over the x -axis keeps the x -coordinate the same and negates the y -coordinate.
- 4) **Choice A is correct.** (M.6.26) $Q2 - Q1 = 50 - 40 = 10$ (bottom half spread). $Q3 - Q2 = 55 - 50 = 5$ (top half spread). The bottom half is more spread out.
- 5) **Choice A is correct.** (M.6.7) Multiples of 6: 6, 12, 18, 24, 30, ... Multiples of 8: 8, 16, 24, 32, ... The least common multiple is 24.
- 6) **Choice D is correct.** (M.6.11) The point $(-4, -2)$ has both negative coordinates, placing it in Quadrant III (lower left), not Quadrant II. Quadrant II requires a negative x and positive y .
- 7) **Choice B is correct.** (M.6.11) Length: $|6 - 1| = 5$ units. Width: $|5 - 2| = 3$ units. Perimeter: $2(5 + 3) = 16$ units.
- 8) **The correct answer is 14.** (M.6.7) The greatest common factor of 42 and 28 is 14.
- 9) **Choice C is correct.** (M.6.6) A loss of \$3 per day for 12 days: $(-3) \times 12 = -36$, meaning a \$36 decrease in value.
- 10) **Choice C is correct.** (M.6.11) Adding a deposit to an overdrawn balance: $-35 + 50 = 15$ dollars.
- 11) **Choice D is correct.** (M.6.16) Two blocks of 8 grams balance x . So $x = 8 + 8 = 16$. Also written as $x = 2 \times 8 = 16$.
- 12) **Choice B is correct.** (M.6.21) $88 = \frac{1}{2} \times b \times 11 \Rightarrow b = 16$ ft.
- 13) **Choice B is correct.** (M.6.21) Width: $7 - 1 = 6$ units. Height: $3 - 1 = 2$ units. Area = $6 \times 2 = 12$ square units.
- 14) **Choice A is correct.** (M.6.24) A valid net for a cube has exactly 6 square faces arranged so that when folded, they form a cube without overlap. A cross pattern and other valid arrangements work; a line of only 4 squares cannot fold into a cube.
- 15) **Choice A is correct.** (M.6.3) Area = $\pi r^2 \approx 3.14 \times 1^2 = 3.14 \times 1 = 3.14$ ft².
- 16) **Choice A is correct.** (M.6.25) Rewriting "How old is my teacher?" to "How old are the teachers at our school?" introduces variability (different teachers have different ages) and requires collecting multiple data points. Options B, C, and D don't improve the statistical nature of the original question.
- 17) **The correct answer is 3.** (M.6.19) The boundary value is the number in the inequality, 3.
- 18) **Choice D is correct.** (M.6.28) If every data value is identical, then min, Q_1 , median, Q_3 , and max are all equal. In this edge case, Q_1 is not less than the median; they are equal.
- 19) **Choice B is correct.** (M.6.29) For symmetric, bell-shaped distributions, the mean is at or very near the peak/center of the distribution.
- 20) **Choice D is correct.** (M.6.13) 15% of \$4000 is $0.15 \times 4000 = \$600$.
- 21) **The correct answer is 14.** (M.6.20) Multiply $2 \times 7 = 14$.
- 22) **The correct answer is Housing and Food are correctly calculated.** (M.6.20) A: Housing is $40\% \times 2500 = \$1000$. Correct. B: Food is $24\% \times 2500 = \$600$. Correct. C: Utilities is $10\% \times 2500 = \$250$, not \$200. Incorrect. D: Transportation is $12\% \times 2500 = \$300$, not \$250. Incorrect. E: Savings is $14\% \times 2500 = \$350$, not \$400. Incorrect.
- 23) **Choice B is correct.** (M.6.3) An upward trend with scatter indicates a positive correlation (as one variable increases, the other tends to increase), but the scatter shows the relationship is not perfect—it's weak to moderate, not deterministic.
- 24) **Choice C is correct.** (M.6.3) The question asks for girls' votes to boys' votes, so write $21 : 28$. Divide both numbers by 7 to get $3 : 4$.
- 25) **Choice D is correct.** (M.6.20) $12 \div \frac{5}{2} = 12 \times \frac{2}{5} = \frac{24}{5} = 4.8$ miles per hour.



A Note From Your Math Friend

Hi, Math Star!

◇ Wow! You finished 8 full practice tests. That is a LOT of math problems. You worked hard, and your brain got stronger every time. ◇

★ **Here is a big idea:** mistakes are okay! Every time you got something wrong, you got smarter. Through 8 tests, you learned that trying is the most important thing. ★

Look What You Did!

- **Hard Worker:** You did not give up!
- **Smart Thinker:** You used your math tools.
- **Brave Learner:** You tried hard problems.
- **Test Ready:** You feel proud and prepared.

Big tip for test day: take your time. Read each problem twice. Show your work. Check your answer. You can do this!

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

Jay Daie

Your Math Friend

MASTER MATH. ACE YOUR TESTS.

This Grade 6 Math Practice Tests book is designed to help students build confidence, strengthen math skills, and excel on comprehensive assessments.

With 8 full-length printed tests and 2 online tests, this resource provides realistic practice, a variety of question types, and detailed answer explanations to help students achieve their best.

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



PERFECT FOR

- ✓ Classroom Practice
- ✓ Homework & Review
- ✓ Independent Learning
- ✓ Test Preparation
- ✓ Skill Reinforcement
- ✓ Building Confidence



**PRACTICE TODAY.
SUCCEED TOMORROW.**

WHAT STUDENTS WILL GAIN



Stronger Math Skills

Build a solid foundation through targeted practice and review.



Better Problem Solving

Develop logical thinking and effective solution strategies.



Understand Key Concepts

Reinforce important math ideas aligned with standards.



Test Confidence

Get familiar with test formats and improve accuracy.



Achieve Success

Build confidence and perform your best on test day.

TOPICS COVERED

- ✓ Ratios & Rates
- ✓ Percents
- ✓ The Number System
- ✓ Statistics & Probability
- ✓ Expressions & Equations
- ✓ Data Analysis
- ✓ Geometry
- ✓ Measurement & Conversions
- ✓ Fractions & Decimals
- ✓ And More!



2 ONLINE TESTS

Extra online practice to reinforce learning and build confidence.

MORE PRACTICE. GREATER RESULTS.

Give your child the tools needed to develop strong math skills, confidence, and a positive attitude toward learning.



8 FULL-LENGTH
PRACTICE TESTS



2 ONLINE
PRACTICE TESTS



DETAILED ANSWER
EXPLANATIONS