

4 West Virginia WVGSA

GRADE
6
MATH

PRACTICE TESTS

Standards Aligned Problem Solving
For Comprehensive Assessment Programs

4

PRINTED
TESTS



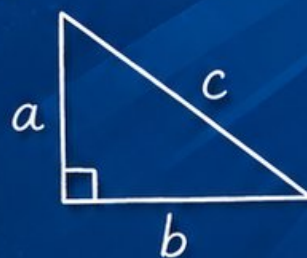
2

ONLINE
TESTS



- ✓ Build Confidence
- ✓ Master Key Math Skills
- ✓ Answer Explanations for Every Question
- ✓ Test-Taking Strategies That Work

$$2x + 5 = 21$$
$$x = 8$$



$$\frac{3}{4} + \frac{1}{2} = \frac{5}{4}$$

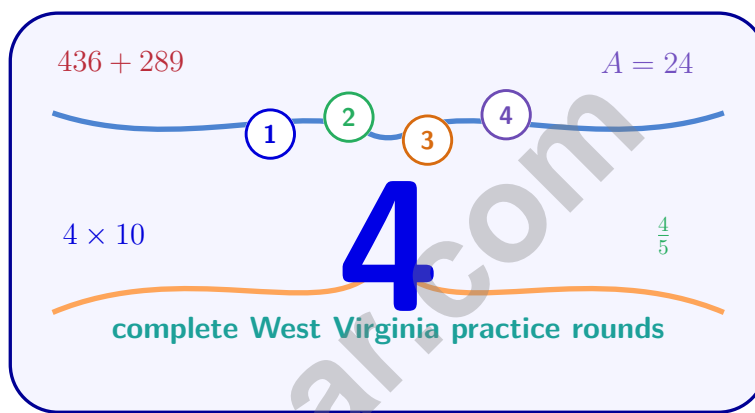


USE THESE TWO
**ADDITIONAL ONLINE
PRACTICE TESTS**

FOR EXTRA REVIEW AFTER
THE PRINTED TESTS
IN THIS BOOK.

4 West Virginia WVGSA Grade 6 Math Practice Tests

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



Four 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!

Four focused rounds using mountain-state stamina

This book gives you four 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 four-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?

Four WVGSA tests, 160 questions, and a full review path

Part	What You Will Practice
Tests 1–2	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Tests 3–4	Skill-building and final stamina rounds with expressions, equations, geometry, data, and problem models.
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.

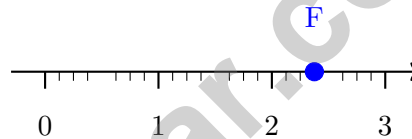


Scan me!
For more practice
& answers

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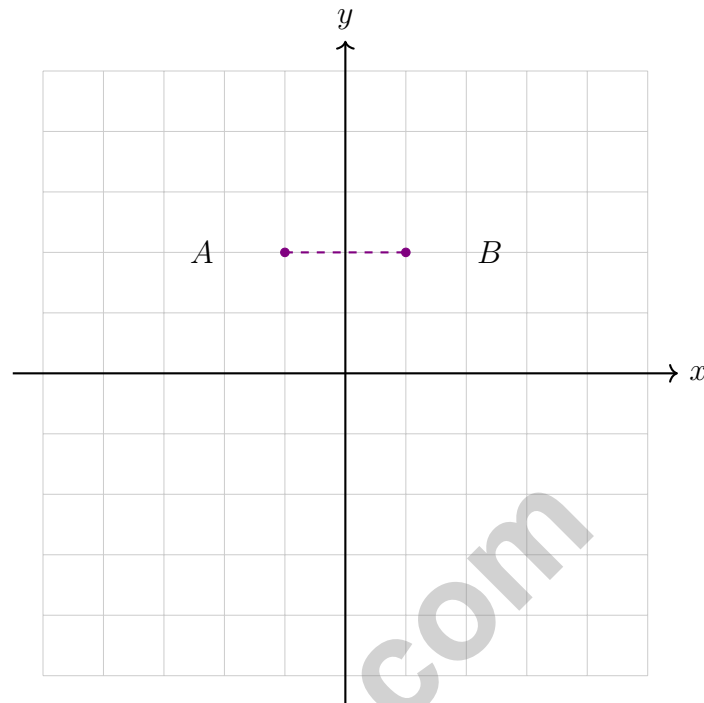
★ Practice Test 1	_____	14
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- 1) Brand X cereal: 12 oz box for \$3.00. Brand Y cereal: 15 oz box for \$4.50. Which brand has the lower unit price?
- A. Brand X at \$0.30 per oz C. Brand X at \$0.25 per oz
 B. Brand Y at \$0.30 per oz D. Brand Y at \$0.35 per oz
- 2) What is the opposite of zero?
- A. Zero C. Undefined
 B. One D. Positive infinity
- 3) The number line below has tick marks at eighths from 0 to 1. Which mixed number is closest to point F?



- A. $2\frac{1}{4}$ C. $2\frac{1}{2}$
 B. $2\frac{3}{8}$ D. $2\frac{5}{8}$





4)

Points A and B are shown. Which transformation was applied to point A to get point B ?

- A. Reflection across the x -axis
- B. Reflection across the y -axis
- C. A translation to the right
- D. A rotation of 90 degrees

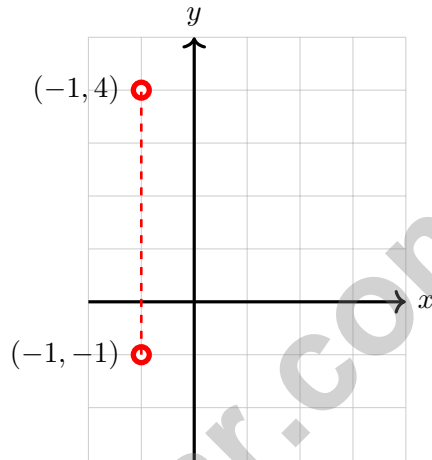
5) Compare -1.2 and -1.5 . Which is true?

- A. $-1.2 < -1.5$
- B. $-1.2 > -1.5$
- C. $-1.2 = -1.5$
- D. They are opposites



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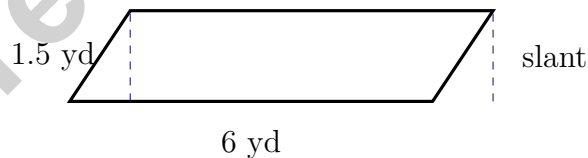
6) A 10×10 grid has 52 shaded squares. What percent of the grid is shaded?



7)

Find the distance between $(-1, -1)$ and $(-1, 4)$.

- | | |
|-------------------------------------|-------------------------------------|
| <input type="checkbox"/> A. 3 units | <input type="checkbox"/> C. 5 units |
| <input type="checkbox"/> B. 4 units | <input type="checkbox"/> D. 6 units |



8)

A parallelogram has a base of 6 yd and height of 1.5 yd. What is its area?

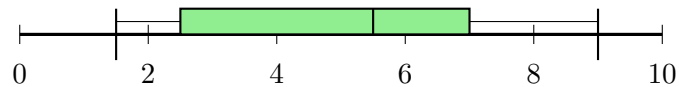
- | | |
|--|---|
| <input type="checkbox"/> A. 4.5 yd^2 | <input type="checkbox"/> C. 9 yd^2 |
| <input type="checkbox"/> B. 7.5 yd^2 | <input type="checkbox"/> D. 15 yd^2 |

1) Which fraction is equivalent to 72%?

A. $\frac{72}{1000}$
 B. $\frac{28}{100}$

C. $\frac{100}{72}$
 D. $\frac{72}{100}$

2) Which value represents Q_1 in the box plot shown?



A. 1.5
 B. 2.5

C. 5.5
 D. 9

3) A histogram shows weights of 20 students. The shape is roughly symmetric. Which summary best describes the center?

A. The mean, because symmetric data has mean \approx median.
 B. The median, because it is resistant to outliers.

C. The mode, because it is the most common value.
 D. The range, because it spans the entire data.

4) A number from 1 to 20 is selected at random. What is the probability that the number is even?

A. $\frac{1}{20}$
 B. $\frac{10}{20}$

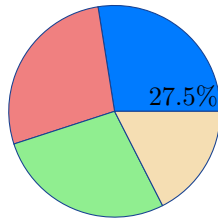
C. $\frac{9}{20}$
 D. $\frac{1}{2}$



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5) A dataset in a stem-and-leaf plot has 8 data points, with the median value being 67. This means:

- A. The 4th and 5th values average to 67
- B. The 5th value is exactly 67
- C. Half the data is above 67 and half is below
- D. The value 67 appears twice in the data



6)

A survey asked 360 people about favorite season. The circle graph shows 27.5% prefer summer. How many people prefer summer?

- A. 99
- B. 90
- C. 108
- D. 117

7) Calculate the mean of the following temperatures: 72°F, 68°F, 75°F, 71°F, 74°F.

8) Why might a data analyst choose a line graph over a bar graph to display monthly sales data across a year?

- A. To show parts of a whole more clearly
- B. To display categorical information better
- C. To reduce the amount of ink used in printing
- D. To emphasize the trend and flow over time



- 1) Which pair of terms can be combined into a single term?
- A. $3x^2$ and $3x$ C. $2y$ and $8y$
 B. $5p$ and $5q$ D. $6a^2$ and $6ab$
- 2) A classmate subtracts and writes $9.4 - 3.8 = 5.6$. Which statement is true?
- A. The work is correct; 5.6 matches the subtraction.
 B. Decimals cannot be subtracted unless you line up the \$ symbol.
 C. Because $9 > 5$, no borrowing is allowed.
 D. Subtracting decimals always lowers the quotient.
- 3) Which pair of numbers are coprime (GCF = 1)?
- A. 12 and 18 C. 10 and 20
 B. 8 and 15 D. 6 and 9
- 4) The table shows $h = 2, 4, 6$ and $s = 8, 16, 24$. What is the constant of proportionality?
-
- 5) Factor $8 + 12$ using the GCF.
- A. $2(4 + 6)$ C. $3(2.67 + 4)$
 B. $4(2 + 3)$ D. $8(1 + 1.5)$



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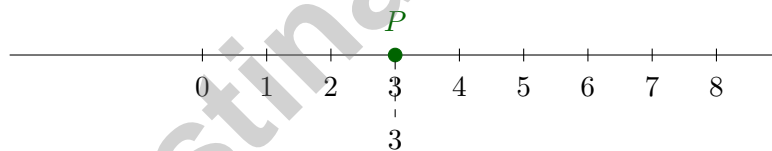
6) A thermometer shows the temperature is -12°C . Which sentence best describes this situation?

- A. The temperature is 12°C above zero C. The temperature rose by 12°C
 B. The temperature is exactly zero D. The temperature is 12°C below zero

7) A student saves \$15 per week. If she wants to save a total of \$180, how many weeks will it take?

8) What are the coordinates of a point on the positive x -axis?

- A. $(0, 5)$ C. $(-3, 0)$
 B. $(0, -2)$ D. $(4, 0)$



9)

Which number is less than P ?

- A. 5 C. 2
 B. 4 D. 6



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.



West Virginia Practice Test Answers and Explanations

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

Practice Test 1 Answers and Explanations

- 1) **Choice C is correct.** (M.6.6) Brand X costs $\$3.00 \div 12 = \0.25 per ounce. Brand Y costs $\$4.50 \div 15 = \0.30 per ounce. Brand X has the lower unit price.
- 2) **Choice A is correct.** (M.6.28) Zero is its own opposite. $0 = -0$.
- 3) **Choice B is correct.** (M.6.28) Point F is at $2 + \frac{3}{8} = 2\frac{3}{8}$, which equals 2.375.
- 4) **Choice B is correct.** (M.6.11) Point A is at $(-1, 2)$ and point B is at $(1, 2)$. The y -coordinate stays the same while the x -coordinate changes sign, which is a reflection across the y -axis.
- 5) **Choice B is correct.** (M.6.10) -1.2 is closer to zero than -1.5 , so -1.2 is greater.
- 6) **The correct answer is 52%.** (M.6.3) A 10×10 grid has 100 squares total. If 52 are shaded, the percent is $\frac{52}{100} = 52\%$.
- 7) **Choice C is correct.** (M.6.11) Same x -coordinate (-1) : $|4 - (-1)| = |4 + 1| = 5$ units.
- 8) **Choice C is correct.** (M.6.21) Area = $6 \times 1.5 = 9$ yd².
- 9) **Choice D is correct.** (M.6.22) $V = 6 \times 4 \times 2 = 24 \times 2 = 48$ in³.
- 10) **Choice C is correct.** (M.6.21) Width: $9 - 2 = 7$ units. Height: $8 - 3 = 5$ units. Area = $7 \times 5 = 35$ square units.
- 11) **Choice C is correct.** (M.6.24) Lateral SA = $2(12)(4) + 2(8)(4) = 96 + 64 = 160$ cm².
- 12) **The correct answer is 120.** (M.6.3) 25% of 480 = $0.25 \times 480 = 120$ products were sold online.
- 13) **Choice A is correct.** (M.6.11) Translate left by subtracting from x : $3 - 4 = -1$. Translate down by subtracting from y : $5 - 2 = 3$. So $A' = (-1, 3)$.
- 14) **Choice A is correct.** (M.6.6) "The product of 3 and 4" is $3 \cdot 4 = 12$. "The sum of r and" that product is $r + 3 \cdot 4$.
- 15) **Choice B is correct.** (M.6.13) For each x value: $x = 1 \rightarrow 2(1) - 1 = 1$; $x = 2 \rightarrow 2(2) - 1 = 3$; $x = 3 \rightarrow 2(3) - 1 = 5$; $x = 4 \rightarrow 2(4) - 1 = 7$. Option B is correct.
- 16) **Choice A is correct.** (M.6.23) All angles are right angles and opposite sides are equal. This is a rectangle.
- 17) **Choice D is correct.** (M.6.20) For months 1, 2, 3: cost/months = $40/1 = 80/2 = 120/3 = 40$. The constant ratio (ignoring the 0,0 point) shows proportionality. The equation is $c = 40m$.
- 18) **The correct answer is 9.** (M.6.3) Ratio 5 : 3 with 15 red marbles: each part is $15 \div 5 = 3$ marbles. Blue marbles: $3 \times 3 = 9$.
- 19) **Choice C is correct.** (M.6.20) Shortfall: 15% of $\$20000 = 0.15 \times 20000 = \3000 .
- 20) **The correct answer is The constant of proportionality is 4, and the cost per unit is \$4.** (M.6.3) A is correct because $k = \frac{8}{2} = 4$. B is correct because the cost per unit is \$4. The equation is $y = 4x$, so Choice C is false; Choice D is false because the graph passes through $(0, 0)$; Choice E gives the wrong unit rate.
- 21) **Choice D is correct.** (M.6.3) The pattern shows $1'' = 9$ ft. So $4'' = 4 \times 9 = 36$ ft.
- 22) **Choice A is correct.** (M.6.5, M.6.6) $2,805 \div 15 = 187$. Check: $15 \times 187 = 2,805$.
- 23) **Choice A is correct.** (M.6.6) Round: $19.8 \approx 20$ and $4.1 \approx 4$. Then $20 \div 4 = 5$. The exact answer is ≈ 4.83 .
- 24) **The correct answer is 1.8.** (M.6.3) Divide: $180 \text{ cm} \div 100 \text{ cm/meter} = 1.8$ meters.
- 25) **Choice B is correct.** (M.6.7) Factors of 24: 1, 2, 3, 4, 6, 8, 12, 24. Factors of 60: 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60. Common factors: 1, 2, 3, 4, 6, 12. GCF is 12.
- 26) **Choice A is correct.** (M.6.7) The rectangle has height 3 and is divided horizontally into two widths: 2 and 5. The total area is $3 \times 2 + 3 \times 5 = 3(2 + 5)$.
- 27) **Choice C is correct.** (M.6.8) Absolute value is the distance from zero. Both 7 and -7 are 7 units away from zero, so $|7| = |-7| = 7$.



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& answers

Math Detective at Work

Hi, Math Detective!

◇ You did such a great job! You finished 4 tests like a real detective. You found the clues, used your tools, and solved the math. ◇

★ **Detectives know:** good work takes time. You took your time. You looked carefully. You found the answers! ★

Your Detective Skills

- **Sharp Eyes:** You notice the small details.
- **Smart Plans:** You pick the right way to solve.
- **Brave Heart:** You try even when it's tricky.
- **Steady Work:** You finish what you start.

Detective tip: on test day, look carefully at each problem. Underline important words. Then solve like the detective you are!

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

Jay Daie

Your Math Detective Helper

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes 4 full-length Math practice tests and 2 online tests to help Grade 6 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:

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



2 ONLINE TESTS

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AND LEARNING RESOURCES



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REGULARLY



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