

West Virginia

WVGSA

GRADE 6

MATH

PRACTICE TESTS

Standards Aligned Problem Solving
For Comprehensive Assessment Programs



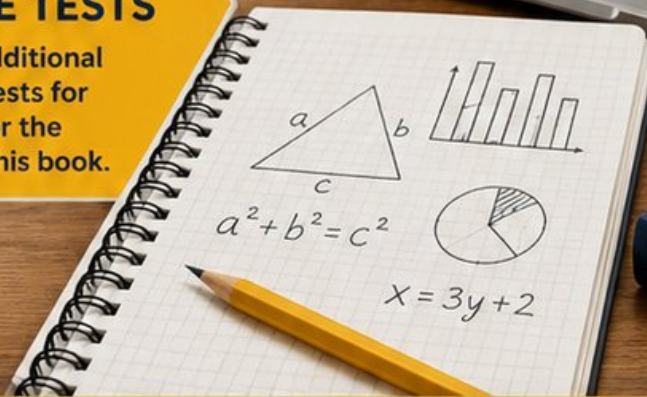
5 PRINTED TESTS

- ✓ Full-Length Practice Tests
- ✓ Realistic Questions
- ✓ Answer Key & Explanations



+ 2 ONLINE TESTS

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



PREPARE • PRACTICE • SUCCEED



5 West Virginia WVGSA Grade 6 Math Practice Tests

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

$436 + 289$ $A = 24$

1 2 3 4 5 6 7 8

5×8 $\frac{5}{6}$

5

complete West Virginia practice rounds

Five 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 five 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 five-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 1–2	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Tests 3–4	Skill-building rounds with expressions, equations, geometry, data, and problem models.
Test 5	Final stamina round 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) A trapezoid has bases of 20 m and 8 m with a height of 6 m. What is the area?

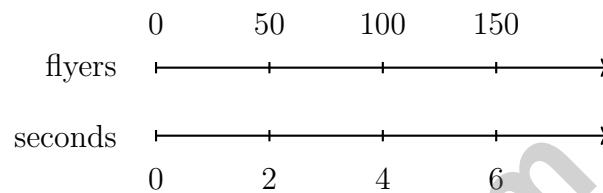
A. 28 m²

C. 84 m²

B. 56 m²

D. 168 m²

2) A copy machine prints flyers at a constant rate.



How many flyers are printed per second?

A. 15 flyers/sec

C. 25 flyers/sec

B. 20 flyers/sec

D. 30 flyers/sec

3) Convert 0.09 to a percent.

A. 0.9%

C. 90%

B. 900%

D. 9%

4) A jacket costs \$80 after a 20% discount. What was the original price?

A. \$96

C. \$120

B. \$160

D. \$100



- 5) Find the mean of 48, 50, 52, 49, 51, 50, 48. Round to the nearest tenth.

- 6) The receipt below shows items from a store with 6% sales tax.

Item	Price
Notebook	\$5.00
Pen pack	\$3.50
Folder	\$2.00
Subtotal	\$10.50
Tax (6%)	?
Total	?

What is the sales tax on this purchase?

- A. \$0.42 C. \$0.78
 B. \$0.63 D. \$1.05
- 7) A water bottle contains $\frac{5}{6}$ liter. How many $\frac{1}{12}$ -liter cups can be filled?
- A. 5 C. 10
 B. 8 D. 12

- 8) ○ ○ ○ ○ ○ ○ ○ ○

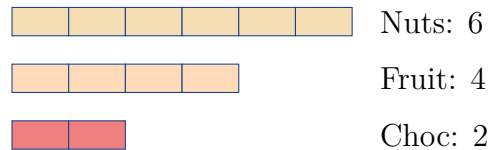
The dots show lavender and cyan counters. Write the ratio of lavender to total in simplest form.

- A. 5 : 2 C. 2 : 5
 B. 7 : 5 D. 5 : 7



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- 9) A snack mix uses nuts, dried fruit, and chocolate in a 6 : 4 : 2 ratio. The diagram models this.



What is the simplified ratio of nuts to (dried fruit plus chocolate)?

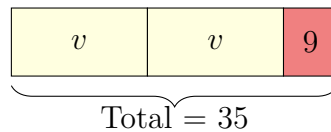
- A. 1 : 1 C. 6 : 2
 B. 6 : 4 D. 3 : 2
- 10) A teacher records the number of pages read by 11 students in a class. The stem-and-leaf plot shows:

Stem	Leaf
10	2, 5, 8
11	0, 3, 6, 9
12	1, 4, 7, 8

How many more students read at least 110 pages than read fewer than 110 pages?

- 11) A farmer can plow 8 acres in $\frac{1}{2}$ day. At this rate, how many acres can the farmer plow in 3 days?
- A. 12 acres C. 36 acres
 B. 24 acres D. 48 acres





1)

The bar model shows two equal parts of v and one part of 9. If the total is 35, what is the value of v ?

- A. 13 C. 44
 B. 26 D. 17.5

2) A dataset has the five-number summary: min = 6, $Q_1 = 10$, median = 13, $Q_3 = 18$, max = 25. Which represents the IQR?

- A. 4 C. 13
 B. 8 D. 19

3) A company loses money at a rate of \$500 per month. How much money does the company lose over 6 months?

4) Corn plant heights (inches) from 9 plants: {24, 26, 28, 30, 32, 34, 36, 38, 40}. What is the shape?

- A. Symmetric C. Skewed left
 B. Skewed right D. Bimodal



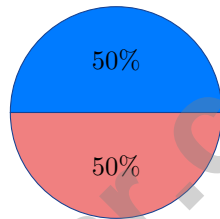
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5) A weather station records daily humidity (as a percent):

Stem	Leaf
5	8, 9
6	1, 2, 5, 7
7	0, 3, 8
8	2, 5, 9

Approximately what percent of readings were between 60% and 79%?

- A. 40% C. 60%
- B. 50% D. 70%



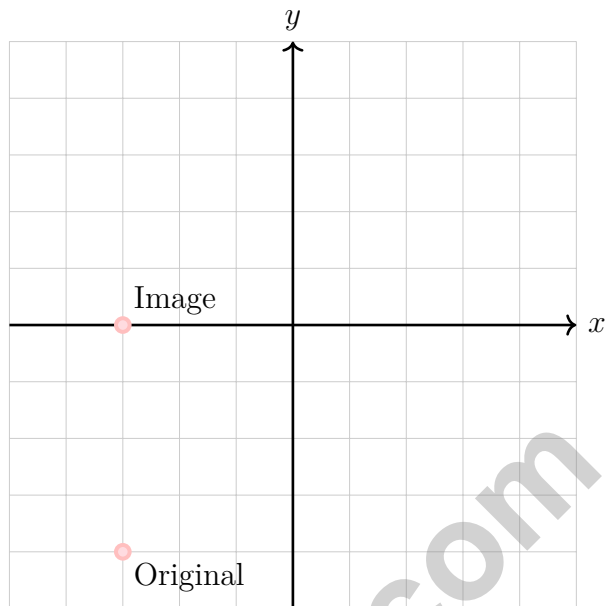
6)

A music store polled 200 customers about preferred instruments. If the circle graph shows 50% prefer guitar, how many customers prefer guitar?

- A. 100 C. 50
- B. 75 D. 150

7) A bank account started with a balance of \$150. After a withdrawal of \$75 and another withdrawal of \$40, what is the final balance?





1)

A point is translated and moves from $(-3, -4)$ to $(-3, 0)$. What is the translation vector?

- A. 0 units horizontally, 4 units up C. 4 units right, 3 units up
 B. 3 units left, 0 units vertically D. 3 units right, 4 units down

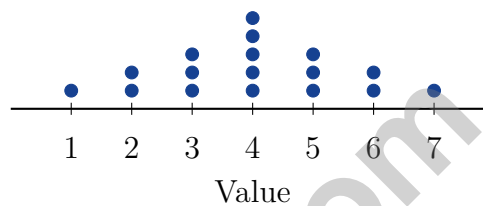
2) Which statement is true about finding the median?

- A. Always take the middle value D. With odd count, take the middle value; with even, average two middle values
 B. Add all values and divide by count
 C. Find the most frequently occurring value

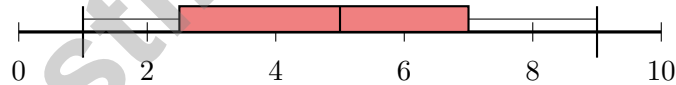


3) Solve for x : $x - 4 = 14$.

4) A dot plot represents data with a clear peak at one value, with frequencies gradually decreasing on both sides. Which term best describes this shape?



- A. Bimodal
- B. Symmetric
- C. Skewed left
- D. Skewed right
- 5) Use the box plot below. If the minimum value is 5 and $Q_1 = 12$, what is the length of the lower whisker?



- A. 5
- B. 7
- C. 8
- D. 12
- 6) A dataset contains: 10, 12, 14, 18, 20, 22. What is the interquartile range (IQR)?
- A. 6
- B. 8
- C. 10
- D. 15



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For more practice
& answers

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 five 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.6.21) Area = $\frac{1}{2}(20 + 8) \times 6 = \frac{1}{2}(28)(6) = 84 \text{ m}^2$.
- 2) **Choice C is correct.** (M.6.20) From the double number line, 50 flyers are printed in 2 seconds, so $50 \div 2 = 25$ flyers per second.
- 3) **Choice D is correct.** (M.6.3) $0.09 \times 100 = 9\%$.
- 4) **Choice D is correct.** (M.6.3) If the discount is 20%, the customer pays 80% of the original price. So $0.80 \times \text{original} = \80 . Original = $\$80 \div 0.80 = \100 .
- 5) **The correct answer is 49.7.** (M.6.29) The sum is 348, and $348 \div 7 \approx 49.7$.
- 6) **Choice B is correct.** (M.6.6) Sales tax: 6% of $\$10.50 = 0.06 \times 10.50 = \0.63 .
- 7) **Choice C is correct.** (M.6.4) $\frac{5}{6} \div \frac{1}{12} = \frac{5}{6} \times 12 = \frac{60}{6} = 10$.
- 8) **Choice D is correct.** (M.6.3) Count the lavender counters first: there are 5. The total is $5 + 2 = 7$, so lavender to total is $5 : 7$.
- 9) **Choice A is correct.** (M.6.3) Nuts have 6 parts. Dried fruit plus chocolate also has $4 + 2 = 6$ parts, so the ratio is $6 : 6$, which simplifies to $1 : 1$.
- 10) **The correct answer is 5.** (M.6.28) Fewer than 110 pages: 102, 105, 108, so 3 students. At least 110 pages: 110, 113, 116, 119, 121, 124, 127, 128, so 8 students. The difference is $8 - 3 = 5$.
- 11) **Choice D is correct.** (M.6.3) Find the unit rate: $8 \div \frac{1}{2} = 8 \times 2 = 16$ acres per day. Multiply by 3 days: $16 \times 3 = 48$ acres.
- 12) **Choice C is correct.** (M.6.3) The rate is $5 : 2$ or 2.5 clients per week. In 6 weeks: $2.5 \times 6 = 15$ clients.
- 13) **Choice C is correct.** (M.6.3) The unit rate is $\frac{72}{6} = 12$ dollars per person. Verify: $\frac{120}{10} = 12$ dollars per person ✓.
- 14) **Choice C is correct.** (M.6.3) Unit rate: $6 \div \frac{1}{2} = 6 \times 2 = 12$ dollars per kilogram.
- 15) **Choice C is correct.** (M.6.3) Multiply: $4 \times 2 = 8$ pints.
- 16) **Choice A is correct.** (M.6.20) The ratio of distance to time is $100/2 = 50$ and $200/4 = 50$ mph, confirming constant speed. The proportional equation is $d = 50t$, not $d = 100t$.
- 17) **Choice B is correct.** (M.6.20) Remainder: $100\% - 40\% - 35\% - 15\% = 10\%$ of $\$360 = 0.10 \times 360 = \36 .
- 18) **Choice C is correct.** (M.6.3) Actual dimensions: $5 \times 2 = 10$ m and $3 \times 2 = 6$ m. Perimeter: $2(10 + 6) = 32$ m.
- 19) **Choice D is correct.** (M.6.6) Multiply: $3.8 \times 2 = 7.6$ liters.
- 20) **Choice B is correct.** (M.6.7) $100 = 4 \times 25 = (2 \times 2) \times (5 \times 5) = 2^2 \times 5^2$. Options A, C, and D use composite numbers.
- 21) **Choice A is correct.** (M.6.7) Distributive property: $8(6 + 2) = 8 \cdot 6 + 8 \cdot 2 = 48 + 16 = 64$. Choice A shows the expanded form.
- 22) **The correct answer is The box shows the middle 50% (from Q_1 to Q_3), and the whiskers extend to min and max.** (M.6.28) B is correct: the box spans from Q_1 to Q_3 , the middle 50% of the data. E is correct: the whiskers extend out to the minimum and maximum. A is wrong because the median splits the data by count, not necessarily at the numerical center. C is wrong because IQR is $Q_3 - Q_1$, not $\text{max} - \text{min}$. D is wrong because Q_1 is at most equal to the median, not strictly below it (they can be equal when many values cluster at the lower end).
- 23) **Choice B is correct.** (M.6.8) Below sea level is represented by a negative integer. A depth of 25 meters below sea level is -25 meters.
- 24) **Choice A is correct.** (M.6.28) Computing: $|-2| = 2$, $|-5| = 5$, $|6| = 6$, $|-9| = 9$. In order: $2 < 5 < 6 < 9$.
- 25) **Choice B is correct.** (M.6.28) Closest to zero means smallest absolute value. $|-0.4| = 0.4$, which is less than all other absolute values.



Math Detective at Work

Hi, Math Detective!

◇ You did such a great job! You finished 5 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 MORE. ACHIEVE MORE.

This book provides **5 full-length Math practice tests** designed to help Grade 6 students strengthen their skills, build confidence, and excel on standardized assessments.

Each test is carefully crafted to reflect the latest standards and covers a wide range of math topics with realistic questions and detailed answer explanations.



BUILD CONFIDENCE

Practice builds familiarity and reduces test anxiety.



IMPROVE ACCURACY

Sharpen skills and avoid common mistakes.



ACHIEVE SUCCESS

Consistent practice leads to greater results.

WHAT'S INSIDE?



5 Full-Length Practice Tests

Realistic tests designed to mirror actual exam conditions.



Realistic Questions

A variety of question types to strengthen problem-solving skills.



Answer Keys & Explanations

Detailed solutions to help students learn and improve.



Performance Tracking

Track progress and identify areas that need improvement.



Comprehensive Coverage

All essential topics aligned with Grade 6 math standards.



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SOLVE
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SUCCEED
BRIGHTLY

PREPARE TODAY. **SUCCEED TOMORROW!**