

# 7 West Virginia WVGSA

## Grade 6 MATH PRACTICE TESTS

7  
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



7 Full-Length  
Printed Tests



Standards-Aligned  
Math Practice



Detailed Answer Keys  
and Explanations



Build Confidence.  
Achieve Success.



You've  
Got  
This!



PREPARE  
PRACTICE  
SUCCEED



PRACTICE  
WITH PURPOSE



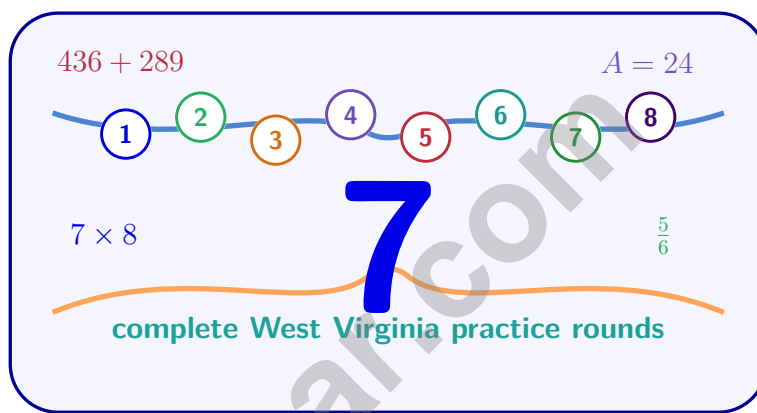
STRENGTHEN  
MATH SKILLS



REVIEW, IMPROVE,  
AND SUCCEED

# 7 West Virginia WVGSA Grade 6 Math Practice Tests

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



Seven 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 seven 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 seven-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.
Test 7	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 builder needs 3,675 nails distributed equally among 25 construction projects. How many nails per project?

- A. 147                                       C. 155  
 B. 150                                       D. 160

2) A box plot for Dataset X shows  $Q1 = 20$ , median = 25,  $Q3 = 35$ . A box plot for Dataset Y shows  $Q1 = 22$ , median = 26,  $Q3 = 32$ . Which statement is true?

- A. Dataset X has a larger interquartile range.       C. Both have the same interquartile range.  
 B. Dataset Y has a larger interquartile range.       D. The IQR cannot be compared.

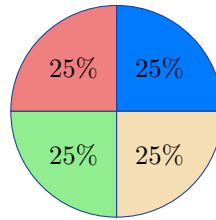
3) A fitness app records heart rates (bpm). The stem-and-leaf plot shows:

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

Which range contains the most recorded heart rates?

- A. 80 – 89 bpm                                       C. 60 – 69 bpm  
 B. 70 – 79 bpm                                       D. 90 – 99 bpm





4)

A baker made 560 cookies. The circle graph shows  $\frac{1}{4}$  are chocolate chip. How many chocolate chip cookies did the baker make?

 A. 140 C. 180 B. 100 D. 200

5) A painter charges \$40 per hour. If the painter works for 3.5 hours, what is the total charge? Show that the relationship between hours and cost is proportional by checking that the equation  $c = 40h$  passes through the origin.



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1) What is  $|-8| + |3|$ ?

A. -11

C. 5

B. -5

D. 11

2) A baker needs 8 cups of flour. How many fluid ounces is this? (Use 1 cup = 8 fluid ounces.)

A. 64 fl oz

C. 16 fl oz

B. 56 fl oz

D. 32 fl oz

3) A comparison of two phone plans shows: Plan A: \$30 per month with no additional fees Plan B: \$10 per month plus a \$20 one-time activation fee  
Which plan's cost is proportional to the number of months?

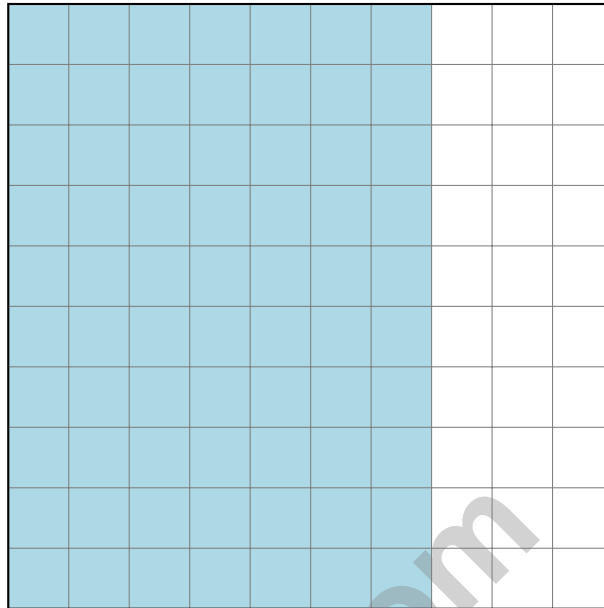
A. Plan A only

C. Both plans

B. Plan B only

D. Neither plan





4)

What percent of the grid is shaded blue?

- A. 30%                       C. 60%  
 B. 50%                       D. 70%

5) In a survey, 72% of 250 people prefer coffee. How many people prefer coffee?

- A. 108                       C. 162  
 B. 144                       D. 180

6) A student incorrectly solved  $\frac{2}{3} \div \frac{1}{4}$  by writing  $\frac{2}{3} \times \frac{1}{4} = \frac{2}{12} = \frac{1}{6}$ . What was the error?

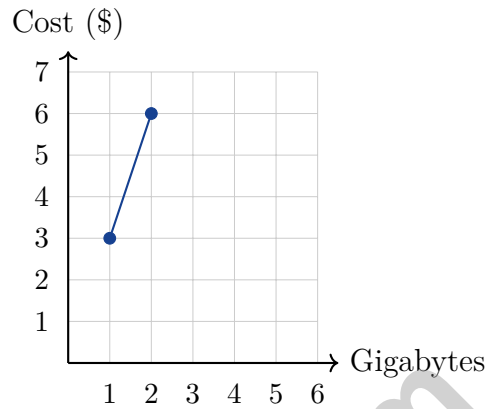
- A. Forgot to invert the divisor  $\frac{1}{4}$                        C. Subtracted instead of dividing  
 B. Inverted the dividend instead of the divisor                       D. Forgot to simplify



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- 4) A cell phone plan charges a constant rate per gigabyte of data used. The graph below shows this relationship.



What does the point (1, 3) represent?

- A. 1 GB costs 3 dollars
- B. 3 GB costs 1 dollar
- C. 1 dollar buys 3 GB
- D. 1 GB costs 1 dollar
- 5) Convert  $\frac{3}{4}$  to a percent.
- A. 34%
- B. 0.75%
- C. 75%
- D. 340%
- 6) A store item is marked \$64. The sales tax is 8%. What is the total cost including tax?
- A. \$67.52
- B. \$69.12
- C. \$72.00
- D. \$77.12



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**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 seven printed WVGSA tests with determined, steady, and ready for the next ridge habits.

### Practice Test 1 Answers and Explanations

- Choice A is correct.** (M.6.5, M.6.6)  $3,675 \div 25 = 147$ . Each project receives 147 nails.
- Choice A is correct.** (M.6.29) IQR for X =  $35 - 20 = 15$ ; IQR for Y =  $32 - 22 = 10$ . Dataset X is larger.
- Choice A is correct.** (M.6.28) Stem 8 has 5 leaves, which is more than any other stem. Thus, the 80 – 89 range contains the most heart rates.
- Choice A is correct.** (M.6.13)  $\frac{1}{4} = 25\%$ . So  $0.25 \times 560 = 140$  chocolate chip cookies.
- The correct answer is 140 dollars.** (M.6.20) Use the hourly rate as the unit rate:  $c = 40 \times 3.5 = 140$ . The equation  $c = 40h$  is proportional because when  $h = 0$ ,  $c = 0$ , so it passes through the origin (0,0).
- Choice B is correct.** (M.6.3) Counting the dots: 0 books (1 student), 1 book (4 students), 2 books (5 students), 3 books (3 students), 4 books (2 students), 5 books (1 student). Total = 16 students. The median is the average of the 8th and 9th values. Listing in order: 0, 1, 1, 1, 1, 2, 2, 2, 2, 2, 3, 3, 3, 4, 4, 5. The 8th value is 2 and the 9th value is 2, so the median is 2.
- Choice D is correct.** (M.6.3) The 1 loss part stands for 4 losses, so each ratio part is worth 4. Wins are 4 parts, and  $4 \times 4 = 16$  wins.
- Choice B is correct.** (M.6.26) Distances from mean 5 are 4, 2, 0, 2, 4. Their sum is 12, so the MAD is  $12 \div 5 = 2.4$ .
- Choice C is correct.** (M.6.6) Students who do not ride the bus =  $28 - 7 = 21$ . Probability =  $\frac{21}{28} = \frac{3}{4}$ .
- Choice B is correct.** (M.6.6) A drop of  $4^\circ$  repeated 3 times:  $(-4) \times 3 = -12^\circ$ .
- Choice A is correct.** (M.6.11) Temperature drop means subtraction:  $15 - 25 = -10^\circ$  C.
- Choice A is correct.** (M.6.12) Inside the parentheses:  $4 + 1 = 5$ . After Step 1, the expression becomes  $5^2 \times 2$ , which is now ready for the exponent in Step 2.
- Choice C is correct.** (M.6.16) Add 3 to both sides:  $x = 9 + 3 = 12$ .
- Choice C is correct.** (M.6.19) The grade requires  $g \geq 80$ . Since  $79.9 < 80$ , it does not meet the requirement for a B.
- Choice D is correct.** (M.6.19) A closed (filled) circle shows that the boundary value is included in the solution set, corresponding to  $\leq$  or  $\geq$  inequalities.
- Choice B is correct.** (M.6.20) Pages read depends on time spent reading at a constant rate. Time is independent; pages is dependent.
- Choice D is correct.** (M.6.21)  $A = \frac{1}{2} \times 30 \times 4 = 60 \text{ m}^2$ .
- Choice B is correct.** (M.6.22)  $V = 2.25 \times 2 \times 3 = 4.5 \times 3 = 13.5 \text{ in}^3$ .
- Choice B is correct.** (M.6.28) The highest frequency is 18 for Comedy, which would have the tallest bar in the bar graph.
- The correct answer is B: 2 kg = 2000 g; C: 0.5 miles = 2640 feet.** (M.6.3) A is incorrect:  $10 \times 8 = 80 \text{ fl oz}$ , not 60. B is correct:  $2 \times 1000 = 2000 \text{ grams}$ . C is correct:  $0.5 \times 5280 = 2640 \text{ feet}$ . D is incorrect:  $1.5 \times 1000 = 1500 \text{ mL}$ , not 150. E is incorrect:  $8 \times 2 = 16 \text{ pints}$ , not 32.
- Choice D is correct.** (M.6.20)  $350 \div 14 = 25$  miles per gallon.
- The correct answer is 50.** (M.6.20) Entertainment percentage:  $100\% - 40\% - 35\% = 25\%$  of  $\$200 = 0.25 \times 200 = \$50$ .
- Choice A is correct.** (M.6.3) The unit rate is  $\frac{45}{1} = 45$  miles per hour. Since the ratio is constant ( $\frac{90}{2} = 45$ ,  $\frac{135}{3} = 45$ ), the relationship is proportional. A proportional relationship through the origin has all ratios equal.
- Choice A is correct.** (M.6.3)  $0.006 \times 100 = 0.6\%$ .
- Choice C is correct.** (M.6.3)  $35\%$  of  $\$60 = 0.35 \times 60 = \$21$ . Sale price is  $\$60 - \$21 = \$39$ .



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**From Your Math Family**

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**Hi, Math Family Member,**

◇ Welcome to a special note from your math family. You finished 7 full practice tests, and that hard work matters more than any score. We see you. We are proud of you. ◇

★ **Our math family knows:** math is a journey. You have taken many steps already. The test is just one stop. Every skill you built is yours forever. ★

**What Your Math Family Sees**

- **Hard Work:** You keep showing up.
- **Real Growth:** You can do problems today you couldn't before.
- **Brave Heart:** You face hard problems with brave thinking.
- **Bright Future:** Your math journey is just beginning.

**Family tip:** on test day, picture us standing behind you, smiling and rooting for you. You are not alone. Your math family is with you!

If you want to share something or ask a question, please email me at [jay@testinar.com](mailto:jay@testinar.com).

**Jay Daie**

Your Math Family

# MASTER TODAY. SUCCEED TOMORROW.

This Grade 6 Math Practice Tests book is designed to help students strengthen their math skills, master important concepts, and build the confidence they need to excel on comprehensive assessments.

With 7 full-length printed tests and 2 online tests, students get the review, practice, and realistic test experience they need to improve accuracy, develop problem-solving abilities, and reach their full potential.

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.



### Deeper Understanding

Reinforce key concepts aligned with standards through meaningful practice.



### Test Confidence

Become familiar with test formats and improve accuracy and speed.



### Achieve Success

Build confidence and perform your best on test day.

## TOPICS COVERED

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



7 FULL-LENGTH  
PRINTED TESTS



STANDARDS-  
ALIGNED PRACTICE



DETAILED ANSWER  
KEYS & EXPLANATIONS