

8

West Virginia

WVGSA

GRADE 7

MATH

PRACTICE TESTS



**Standards Aligned
Problem Solving**

For Comprehensive
Assessment Programs



8 PRINTED TESTS



2 ONLINE TESTS



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



BUILD CONFIDENCE



STRENGTHEN SKILLS



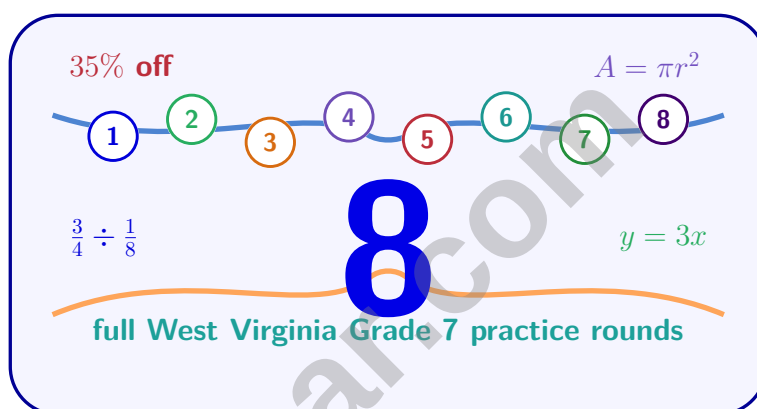
THINK SMARTER



BE TEST-READY

8 West Virginia WVGSA Grade 7 Math Practice Tests

A polished preparation set for West Virginia Grade 7 equations, inequalities, circle measures, volume, statistics, and probability



Eight complete 40-question Grade 7 WVGSA 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, West Virginia Grade 7 Problem Solver!

Eight focused rounds for sharper WVGSA math thinking

This book gives you eight full Grade 7 WVGSA 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 West Virginia 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.

West Virginia 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 WVGSA tests, 320 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.

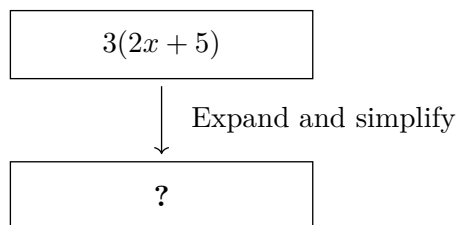
The tests are mixed on purpose. Grade 7 success means recognizing which idea is being tested even when the next question changes format.



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Table of Contents

★ Practice Test 1	_____	14
★ Practice Test 2	_____	28
★ Practice Test 3	_____	42
★ Practice Test 4	_____	57
★ Practice Test 5	_____	70
★ Practice Test 6	_____	85
★ Practice Test 7	_____	100
★ Practice Test 8	_____	114
Practice Test Answer Keys	_____	130
Practice Test Answers and Explanations	_____	135



1)

What expression goes in the box marked ??

☐ A. $3 + 2x + 5$

☐ C. $5x + 8$

☐ B. $6x + 15$

☐ D. $2x + 5 + 3$

- 2) Starting with \$600, an account earns 8% annual compound interest. How much interest is earned after 3 years?

- 3) What is the correct factorization of $-6m + 18$?

☐ A. $6(-m + 3)$

☐ C. $-6(m + 3)$

☐ B. $-6(m - 3)$

☐ D. $6(m - 3)$

- 4) Solve: $3 - \frac{x}{2} \geq 9$

☐ A. $x \leq -12$

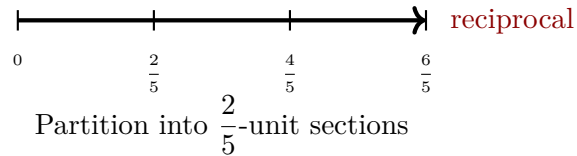
☐ C. $x > 12$

☐ B. $x \geq -12$

☐ D. $x < -6$



- 5) Reciprocal partitioning: To divide by $\frac{2}{5}$, multiply by _____.



- ☐ A. $\frac{2}{5}$
☐ C. $\frac{1}{5}$
- ☐ B. $\frac{5}{2}$
☐ D. 2
- 6) What is $\frac{9}{20}$ as a decimal?
- ☐ A. 0.45
 ☐ C. 0.59
- ☐ B. 0.49
 ☐ D. 0.94
- 7) A contractor charges \$12.50 per hour. For a job that takes 7.5 hours, what is the total cost?
- ☐ A. \$25.00
 ☐ C. \$93.75
- ☐ B. \$87.50
 ☐ D. \$96.25
- 8) Expand and simplify $-2(5 - 3m) + 4m$, then evaluate when $m = 3$.



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9) Maria's bank account has a balance of \$85.50. She withdraws \$12.75 twice in one week. What is her new balance?

☐ A. \$59.00

☐ C. \$60.00

☐ B. \$72.75

☐ D. \$97.00

10) If a number in standard form is 0.000000125, what is the value of the exponent when written in scientific notation?

☐ A. -7

☐ C. -9

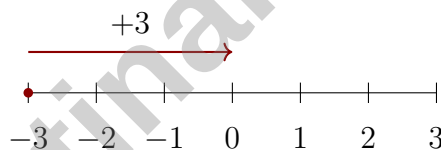
☐ B. -8

☐ D. -10

11) An online store charges \$9.99 per item plus a fixed shipping cost of \$5.99. If the total order is \$54.95, how many items were ordered? Which equation is correct?

☐ A. $5.99x + 9.99 = 54.95$
☐ C. $9.99x + 5.99 = 54.95$
☐ B. $9.99 + 5.99x = 54.95$
☐ D. $x(9.99 + 5.99) = 54.95$

12)



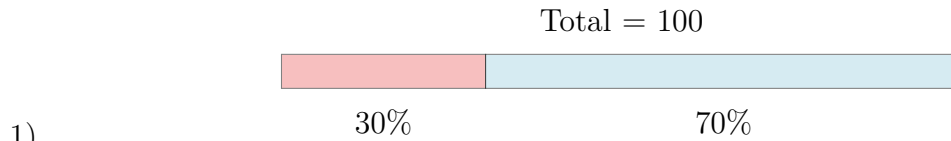
The number line shows a number increased by 3 equals 0. What is the original number?

☐ A. -3

☐ C. 0

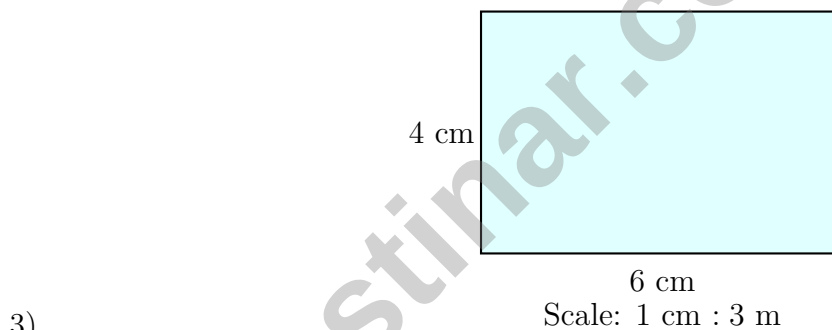
☐ B. -2

☐ D. 3

The bar model shows 30% and 70% of a total. If the total is 100, how much is 30%?

- ☐ A. 25 ☐ C. 35
- ☐ B. 40 ☐ D. 30
- 2) An art supplier sells canvas rolls at \$7 each. A shop owner spends \$84 on canvas rolls and pays a \$12 handling fee. Which equation finds r , the number of rolls purchased?
- ☐ A. $7r + 12 = 84$ ☐ C. $12r + 7 = 84$
- ☐ B. $7r = 84$ ☐ D. $7 + 12r = 84$



A scale drawing shows a field with dimensions 6 cm by 4 cm. What is the perimeter of the actual field in meters?

- ☐ A. 20 m ☐ C. 60 m
- ☐ B. 30 m ☐ D. 120 m



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4) Expand: $5(3y - 2) + 4y$.

☐ A. $15y - 10 + 4y = 19y - 10$

☐ B. $19y - 2$

☐ C. $15y + 4y$

☐ D. $20y - 10$

5) Solve: $\frac{x}{4} + 5 = 9$

☐ A. $x = 8$

☐ B. $x = 12$

☐ C. $x = 16$

☐ D. $x = 20$

6) What is $(2 \times 3) \times (-5)$?

☐ A. -30

☐ B. -10

☐ C. 10

☐ D. 30

7) A merry-go-round has radius 5 meters. A child rides on it and goes around 4 complete times. How far does the child travel? Use $\pi \approx 3.14$. Round to the nearest tenth.

8) A spinner with sections 1, 2, 3, 4, 5 is spun, and a coin is flipped. How many outcomes have an odd number and Heads?

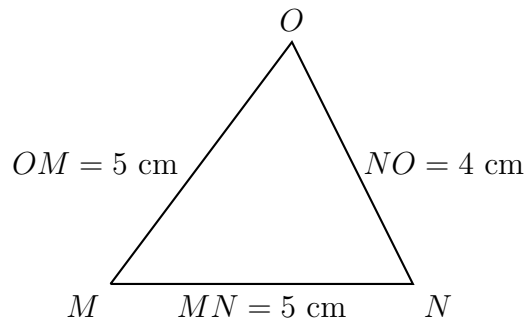
☐ A. 2

☐ B. 3

☐ C. 5

☐ D. 10





1)

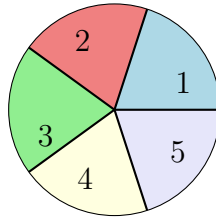
Triangle MNO has sides $MN = 5 \text{ cm}$, $NO = 4 \text{ cm}$, and $OM = 5 \text{ cm}$. What type of triangle is MNO ?

☐ A. Scalene☐ C. Equilateral☐ B. Isosceles☐ D. Right triangle

2) A poster is enlarged to 1.5 times its original size. If the original poster was 20 inches by 30 inches, what is the new area in square inches?

3) A circle graph shows the breakdown of how students spend their day: Sleep 33%, School 25%, Homework 17%, Recreation 15%, Other 10%. If a student sleeps 8 hours, how many hours does the student spend in school (assuming the percentages hold)?

☐ A. 4 hours☐ C. 8 hours☐ B. 6 hours☐ D. 10 hours

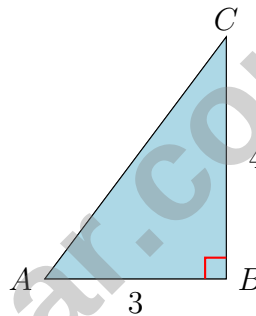


4)

A spinner has five equal sectors numbered 1 through 5. What is $P(2 \text{ or } 4)$?

- ☐ A. $\frac{2}{10}$
☐ B. $\frac{1}{5}$

- ☐ C. $\frac{2}{5}$
☐ D. $\frac{3}{5}$



5)

In the right triangle, one leg is 3 and the other is 4. Which choice is the length of the hypotenuse?

- ☐ A. 5
☐ B. 6

- ☐ C. 7
☐ D. $\sqrt{7}$

6) Jordan invests \$2000 at a simple interest rate of 3.5% per year for 5 years. How much interest will he earn?

- ☐ A. \$70
☐ B. \$175

- ☐ C. \$350
☐ D. \$700



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West Virginia WVGSA 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 West Virginia WVGSA practice test.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice B is correct.** (7.EE.1-7.EE.2) Expanding $3(2x + 5)$ gives $3 \cdot 2x + 3 \cdot 5 = 6x + 15$.
- 2) **The correct answer is \$155.83.** (7.RP.3) Final balance: $600(1.08)^3 = 600 \times 1.2597 = 755.83$. Interest earned: $755.83 - 600 = 155.83$.
- 3) **Choice B is correct.** (7.EE.1-7.EE.2) Factor out the GCF 6 and the negative: $-6m + 18 = -6(m - 3)$. Check: $-6(m - 3) = -6m + 18$.
- 4) **Choice A is correct.** (7.EE.4b) Subtract 3: $-\frac{x}{2} \geq 6$. Multiply by -2 and flip: $x \leq -12$.
- 5) **Choice B is correct.** (7.NS.1-7.NS.3) The reciprocal of $\frac{2}{5}$ is $\frac{5}{2}$. Division by a fraction equals multiplication by its reciprocal.
- 6) **Choice A is correct.** (7.NS.2d) Divide $9 \div 20 = 0.45$. Since $20 = 4 \times 5 = 2^2 \times 5$, this is terminating.
- 7) **Choice C is correct.** (7.NS.1-7.NS.3) Total cost: $12.50 \times 7.5 = 93.75$ dollars.
- 8) **The correct answer is 20.** (7.EE.1-7.EE.2) The expression simplifies to $10m - 10$. With $m = 3$, the value is $30 - 10 = 20$.
- 9) **Choice A is correct.** (7.NS.1-7.NS.3) Two withdrawals: $-\$12.75 - \$12.75 = -\$25.50$. New balance: $\$85.50 - \$25.50 = \$59.00$.
- 10) **Choice C is correct.** (7.NS.1-7.NS.3) $0.000000125 = 1.25 \times 10^{-9}$. Move decimal 9 places right to reach first nonzero digit.
- 11) **Choice C is correct.** (7.EE.4a) Each item costs \$9.99 and shipping is \$5.99 (fixed). Equation: $9.99x + 5.99 = 54.95$.
- 12) **Choice A is correct.** (7.EE.3-7.EE.4) If $x + 3 = 0$, then $x = -3$. The diagram starts at -3 , arrow moves right 3 units to reach 0. Check: $-3 + 3 = 0$ ✓.
- 13) **Choice B is correct.** (7.G.1-7.G.5) Under a 180° rotation, $(0, 1) \rightarrow (0, -1)$, $(2, 0) \rightarrow (-2, 0)$, and $(2, 2) \rightarrow (-2, -2)$. Adjusting for the triangle's position, this matches Triangle 2.
- 14) **Choice B is correct.** (7.NS.1-7.NS.3) The student made an error. The correct answer is $\sqrt{144} = 12$ because $12 \times 12 = 144$, not $11 \times 11 = 121$.
- 15) **Choice B is correct.** (7.EE.3-7.EE.4) Set up: $12h + 25 = 121 \Rightarrow 12h = 96 \Rightarrow h = 8$.
- 16) **Choice B is correct.** (7.EE.4a) Distribute: $6x - 4 = 14$. Add 4: $6x = 18$. Divide by 6: $x = 3$.
- 17) **Choice B is correct.** (7.NS.2) $-\frac{3}{5} \times (-2.5) = \frac{3}{5} \times 2.5 = 0.6 \times 2.5 = 1.5$. Negative times negative is positive.
- 18) **Choice A is correct.** (7.SP.5-7.SP.8) Since all probabilities sum to 1: $P(Z) = 1 - 0.45 - 0.35 = 0.2$.
- 19) **Choice C is correct.** (7.RP.3) Shipping cost = $3 + (2.50 \times 4) = 3 + 10 = \13.00 .
- 20) **The correct answer is A,D.** (7.NS.1-7.NS.3) Statement A is true: the opposite of -5 is 5 (positive). Statement D is true: -5 and 5 are each 5 units from zero. Statement B is false because opposites have the same absolute value. Statement C is false: $5 + (-5) = 0$, not 10.
- 21) **Choice C is correct.** (7.SP.1-7.SP.4) Scores in range $[72, 86]$: 72, 72, 74, 78, 81, 83, 86 (from stems 7 and 8). Total: 7 scores.
- 22) **Choice B is correct.** (7.G.4-7.G.6) Rectangle: $25 \times 16 = 400 \text{ in}^2$. Two triangles: $2 \times \frac{1}{2} \times 5 \times 4 = 20 \text{ in}^2$. Remaining: $400 - 20 = 380 \text{ in}^2$.
- 23) **Choice C is correct.** (7.RP.1-7.RP.3) Ratio 5 : 3 means $5x + 3x = 64$, so $8x = 64$ and $x = 8$. Vegetables area = $5x = 5 \times 8 = 40 \text{ m}^2$.
- 24) **Choice B is correct.** (7.G.4-7.G.6) $h = \frac{V}{l \times w} = \frac{360}{10 \times 6} = \frac{360}{60} = 6$ inches.
- 25) **The correct answer is 22.** (7.EE.1-7.EE.2) The perimeter expression is $10t + 2$. With $t = 2$, the value is 22.
- 26) **Choice C is correct.** (7.G.1-7.G.5) The sum of the two smaller sides equals (not exceeds) the largest side, violating the strict Triangle Inequality.
- 27) **Choice B is correct.** (7.G.4-7.G.6) By definition, a chord connects two points on the circle. It need not pass through the center.
- 28) **Choice B is correct.** (7.G.1-7.G.5) When constructing a right triangle with a known right angle, hypotenuse, and one leg, the RHS condition guarantees a unique triangle. This is a special case applicable only to right triangles.



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The Power of Showing Work

Hi, Organized Solver!

◇ You practiced Grade 7 skills that often require more than one step. That means your written work matters. ◇

★ **Remember this:** Showing work is not extra. It is how you track your thinking, find errors, and prove that your answer did not happen by luck. You practiced across 8 full Grade 7 practice tests, and that repeated effort matters. ★

Organized Work Habits

- **One Line Per Step:** Keep the path readable.
- **Box the Answer:** Make the final result easy to find.
- **Use Labels:** Tell what each value represents.
- **Check the Path:** Follow your steps backward if needed.

Grade 7 test-day tip: When a problem has several steps, write less on each line. Space makes checking easier.

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

Jay Daie

Your Organized-Work Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **8** 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:

8 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!



2 ONLINE TESTS

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



2 EXTRA ONLINE TEST ACCESS CODE IS INSIDE THE BOOK!

Don't lose it—your extra practice and success start here!



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