

9

West Virginia

WVGSA

GRADE 5 MATHEMATICS PRACTICE TESTS

Full-Length Standards-Aligned Practice
for Strong Math Performance

$$A = l \times w$$

$$x^2 + 3x - 4 = 0$$

$$y = 2x + 1$$



9
FULL-LENGTH
PRACTICE
TESTS

$$2,345 \times 6 = 14,070$$



$$\frac{3}{4} + \frac{1}{8} = \frac{7}{8}$$

$$7.2 \div 0.8 = 9$$



$$(12 + 8) \div 4 = 5$$



Build Confidence



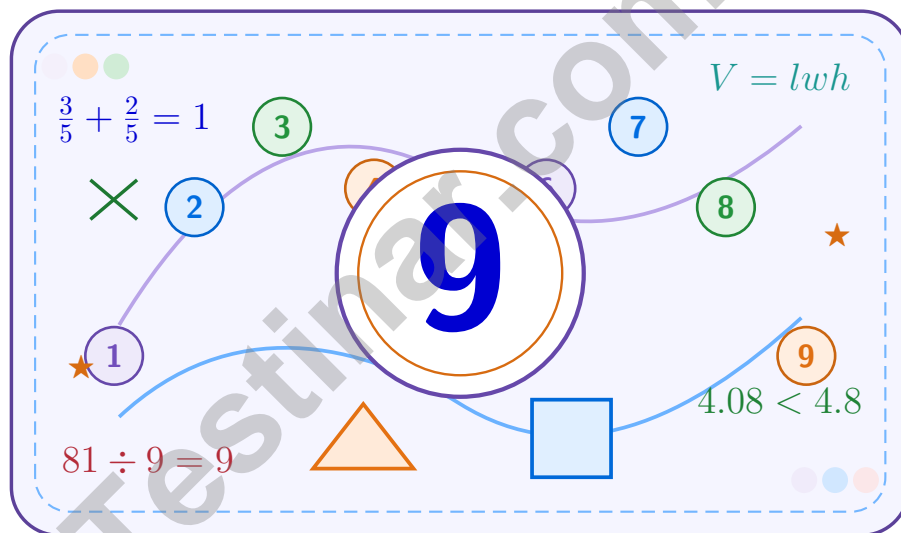
Improve Math Skills



Achieve Success

9 West Virginia WVGSA Grade 5 Math Practice Tests

A nine-step confidence climb with clear review, smart strategy, and practice that gets stronger every round



Nine full tests, focused skill boosters, and student-friendly support from start to finish for Grade 5 mathematicians who want to climb higher.

Jay Daie and Reza Nazari



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Welcome to the Confidence Climb

This book is here to help you practice with purpose and rise step by step

To the Grade 5 Mathematician

This practice book is a place to think, try, fix, and grow. You do not have to be perfect on the first question or the first test. What matters most is careful effort, clear work, and learning from each round of practice.

Use these nine tests like stepping-stones. Take one test at a time, check your answers honestly, and notice which skills need more attention. Small improvements add up fast.

Try

Give each problem your best thinking.

Check

Study mistakes and learn what happened.

Rise

Bring that lesson into the next round.

A strong habit for every page: read carefully, estimate when it helps, show your steps, and keep going even when a question feels tricky. That is how steady math confidence is built.

How to Use This Book

A simple practice routine that turns nine tests into steady growth

A Nine-Session Climb Map

Session	Mission Focus
1	Take Test 1; review place value and operation slips.
2	Take Test 2; keep work neat and easy to read.
3	Take Test 3; give extra time to fractions and decimals.
4	Take Test 4; slow down on word problems and units.
5	Take Test 5; compare scores and habits with earlier rounds.
6	Take Test 6; notice which habits are now automatic.
7	Take Test 7; explain open-ended answers clearly.
8	Take Test 8; review topics that still need attention.
9	Take Test 9; finish with calm, careful, confident work.

Step 1: Warm Up

Start with the quick review.
Spend a few minutes refreshing the ideas before you start a test.

Step 2: Take the Test

Take one full practice test.
Work in a quiet space and let accuracy matter more than speed.

Step 3: Study the Pattern

Check your work honestly.
Circle missed questions and notice patterns in the mistakes.

Step 4: Learn, Then Retry

Read the explanation and try again.
Learning happens after the test too. Fixing mistakes is one of the smartest parts of practice.



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Test Overview

What this practice book helps students do

These practice tests are designed to help Grade 5 students get comfortable with the kind of thinking used on the West Virginia WVGSA. The goal is bigger than only getting answers right. Students are practicing how to read closely, choose a strategy, solve carefully, and explain their work when needed.

Selected-Response Questions

Students solve the problem and choose the best answer. Estimating first and crossing out weak choices can save time and points.

Constructed-Response Questions

Students show their thinking, steps, models, or explanations. Even when unsure, writing what they know can help organize the problem.

Grade 5 Skills You Will Practice Often

- place value, comparing numbers, and rounding
- multi-digit addition, subtraction, multiplication, and division
- fractions, decimals, and mixed numbers
- perimeter, area, volume, and measurement conversions
- coordinate points, patterns, graphs, and tables
- geometry and multi-step word problems

What strong work looks like: the answer is correct, the steps are clear, the labels or units are included, and the final result makes sense.



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Grade 5 Mathematics Reference Materials

PERIMETER AND AREA

Perimeter of Rectangle $P = 2l + 2w$ or $P = 2(l + w)$

Area of Rectangle $A = l \times w$

Area of Triangle $A = \frac{1}{2} \times b \times h$

Volume of Rectangular Prism $V = l \times w \times h$

LENGTH

Customary

1 foot (ft) = 12 inches (in.)

1 yard (yd) = 3 feet (ft)

1 yard (yd) = 36 inches (in.)

Metric

1 meter (m) = 100 centimeters (cm)

1 centimeter (cm) = 10 millimeters (mm)

1 kilometer (km) = 1,000 meters (m)

CAPACITY

Customary

1 cup (c) = 8 fluid ounces (fl oz)

1 pint (pt) = 2 cups (c)

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WEIGHT AND MASS

Customary

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TIME

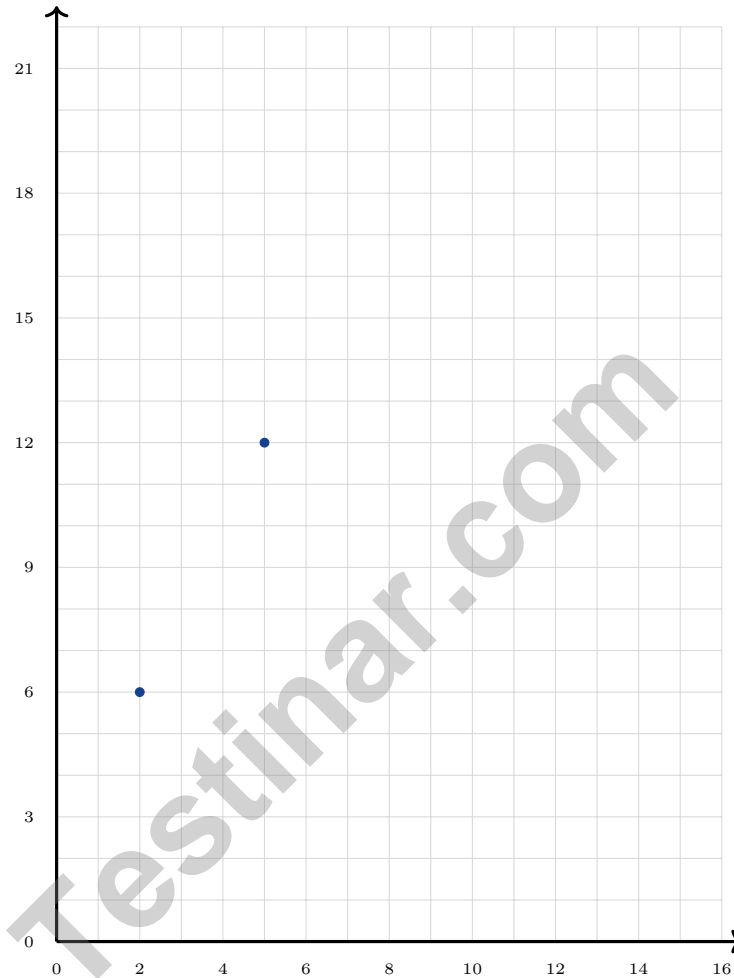
1 minute (min) = 60 seconds (sec) 1 week = 7 days

1 hour (hr) = 60 minutes (min) 1 year = 12 months

1 day = 24 hours (hr) 1 year = 52 weeks



- 1) A pattern's y -value can be found from its x -value using the rule. If the first ordered pair is $(2, 6)$ and the pattern adds 3 to x and 6 to y each time, what is the third ordered pair?



- A. $(8, 18)$
 C. $(9, 18)$
 B. $(11, 24)$
 D. $(8, 17)$



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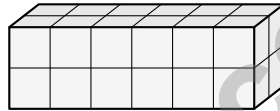
1) A plant grew 0.35 inches in week 1 and 0.53 inches in week 2. In which week did it grow more?

- A. Week 1 C. Equal growth
 B. Week 2 D. Cannot determine

2) Which expression does NOT equal 0.73?

- A. $73 \div 100$ C. $730 \div 1000$
 B. $7.3 \div 10$ D. $73 \div 10$

3) A rectangular prism has a length of 6 units, width of 2 units, and height of 2 units. What is its volume in unit cubes?



- A. 10 unit cubes C. 24 unit cubes
 B. 18 unit cubes D. 30 unit cubes

4) A place-value chart shows the number 24.6. Which value results from multiplying by 100?

Thousands	Hundreds	Tens	Ones	.	Tenths
		2	4	.	6

- A. 246 C. 24,600
 B. 2,460 D. 0.246

5) A restaurant has 8 tables with 4 legs each. It also has 10 chairs, but 2 chairs are moved away. Evaluate: $8 \times 4 + (10 - 2)$

- A. 40 C. 48
 B. 42 D. 50



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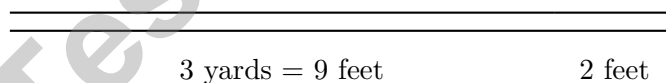
- 1) The model shows $\frac{1}{4}$ of a whole split into 5 equal parts. What fraction of the whole is each small part?

$\frac{1}{4}$ split into 5



1 whole split into 4 equal parts

- A. $\frac{1}{4}$
 C. $\frac{1}{20}$
 B. $\frac{1}{5}$
 D. $\frac{1}{9}$
- 2) What is $5 \times \frac{2}{7}$?
- A. $\frac{2}{35}$
 C. $\frac{7}{10}$
 B. $\frac{10}{7}$
 D. $\frac{2}{12}$
- 3) If you start at (2, 4) and move 3 units right, what point do you land on?
- A. (2, 7)
 C. (3, 4)
 B. (5, 4)
 D. (5, 7)
- 4) A fence is 3 yards and 2 feet long. How many feet total?



- A. 11 feet
 C. 12 feet
 B. 9 feet
 D. 10 feet
- 5) Tim had \$50. He spent \$5 on each of 3 items and \$7 for lunch. Which expression represents the money he has left?
- A. $50 - [(3 \times 5) + 7]$
 C. $50 - (3 + 5 + 7)$
 B. $(50 - 3) \times (5 + 7)$
 D. $50 - 3 + 5 \times 7$



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- 1) Compare $\frac{6}{5} \times 20$ to $20 \times \frac{5}{6}$. Which is greater?



- A. $\frac{6}{5} \times 20$
 C. They are equal
 B. $20 \times \frac{5}{6}$
 D. Cannot be determined
- 2) Match the decimal shift diagram to the operation.



Which operation matches?

- A. 9.1×100
 C. 9.1×10
 B. $9.1 \div 100$
 D. $9.1 \div 10$
- 3) A triangle has sides of 8 cm, 8 cm, and 8 cm. Each angle is less than 90° . How should the triangle be classified by its sides and by its angles?
- A. Equilateral acute
 C. Scalene acute
 B. Isosceles right
 D. Equilateral obtuse
- 4) Without calculating, compare: $(12 + 4) \times 10$ $(12 + 4) \times 9$
- A. $>$
 C. $=$
 B. $<$
 D. Cannot tell



Practice Test Answer Keys

How to use this section:

1. check your answer
2. circle missed questions
3. rework them before reading the explanation

Good correction habits build strong West Virginia scores.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- Choice A is correct.** (M.5.24) Starting at (2, 6): add 3 to x and 6 to y gives (5, 12); then (8, 18).
- Choice C is correct.** (M.5.13) $3 \div \frac{1}{4} = 3 \times 4 = 12$.
- Choice D is correct.** (M.5.13) The first coordinate, 8, matches the x-axis label: laps completed. The second coordinate, 16, matches the y-axis label: minutes elapsed. So the point means minutes elapsed is 16 when laps completed is 8.
- Choice C is correct.** (M.5.22) Choose the operation from the story, then keep the unit with the answer. Multiply: $125 \times 6 = 750$ miles. This confirms the answer.
- Choice C is correct.** (M.5.22) The crate has $2 \times 3 = 6$ cubic meters in each layer and 2 layers. So $6 \times 2 = 12$ cubic meters.
- Choice B is correct.** (M.5.12) The bar for $\frac{1}{2}$ divides into 2 parts; the bar for $\frac{1}{4}$ divides into 4 parts. Common denominator is 4.
- Choice D is correct.** (M.5.16) Start with one unit fraction, $\frac{1}{4}$, and share it into 3 equal parts. Each part is $\frac{1}{4} \div 3 = \frac{1}{12}$ of the whole.
- The correct answer is $5 \div \frac{1}{4} = n$.** (M.5.16) The total is 5 cups and each serving is one fourth cup, so divide total by serving size.
- Choice D is correct.** (M.5.16) Each output increases by 3. For input 4, $3 \times 4 + 1 = 13$.
- Choice B is correct.** (M.5.24) Week 1: 5 plants. Add 3 each week. Week 8: $5 + 7(3) = 5 + 21 = 26$ plants.
- Choice C is correct.** (M.5.3) Count X marks above $\frac{3}{8}$ on the line plot. There are 4 X marks.
- Choice D is correct.** (M.5.10) Each meter has two half-meter pieces. So 5.5 meters has $5.5 \times 2 = 11$ half-meter pieces, enough for 11 customers.
- Choice B is correct.** (M.5.5) The nonzero parts make $6 \times 7 = 42$, which has no trailing zero. The three factor zeros give 42,000, so there are 3 zeros.
- The correct answer is $\frac{1}{3}$.** (M.5.5) Dividing the whole amount (6 + 9) by 3 splits it into 3 equal parts. One part is $\frac{1}{3}$ of the original value.
- Choice C is correct.** (M.5.2) $\text{LCM}(6,4) = 12$. $\frac{5}{6} = \frac{10}{12}$ and $\frac{3}{4} = \frac{9}{12}$. $\frac{10}{12} + \frac{9}{12} = \frac{19}{12} = 1\frac{7}{12}$.
- Choice C is correct.** (M.5.11) The tenths place is 7, hundredths is 6. Since $6 \geq 5$, round up: 7 becomes 8. Maria uses 8.8 meters.
- The correct answer is 0.07.** (M.5.4) The digit 7 is in the hundredths place, so it represents $7 \times 0.01 = 0.07$.
- Choice A is correct.** (M.5.4) $\frac{2}{5} \times \frac{5}{6} = \frac{10}{30}$, which simplifies to $\frac{1}{3}$ pound.
- Choice C is correct.** (M.5.21) Volume = $16 \times 12 \times 8 = 192 \times 8 = 1536 \text{ in}^3$.
- The correct answer is 3645.** (M.5.8) $135 \times 7 = 945$ and $135 \times 20 = 2,700$. Sum: $945 + 2,700 = 3,645$.
- Choice A is correct.** (M.5.8) There are 12 equal cells. The double-shaded overlap covers 4 cells, so the product is $\frac{4}{12} = \frac{1}{3}$.
- Choices A, C are correct.** (M.5.1) A uses parentheses to group $3 + 2$ before subtracting. C uses parentheses to group $4 + 2$ before multiplying by 3. B and D do not use grouping symbols, so they follow the usual order of operations.
- Choice B is correct.** (M.5.3) Pattern Q is always 3 times Pattern P: $2 \times 3 = 6$, $4 \times 3 = 12$, $6 \times 3 = 18$.
- Choice B is correct.** (M.5.22) The base area is $18 \times 7 = 126$ square centimeters. Since $252 \div 126 = 2$, the height is 2 cm.
- Choice A is correct.** (M.5.22) Divide the numerator and denominator by 2: $\frac{2}{10} = \frac{1}{5}$.
- Choice B is correct.** (M.5.12) The blue region is 1 out of 5. The red region is 3 out of 4. The overlap is 3 out of 20 squares: $\frac{1}{5} \times \frac{3}{4} = \frac{3}{20}$.
- Choice C is correct.** (M.5.15) Any positive number multiplied by a factor less than 1 always produces a smaller result.
- Choice A is correct.** (M.5.15) 55 out of 100 squares shaded represents $\frac{55}{100} = 0.55$.
- Choice D is correct.** (M.5.20) Work one prism at a time: $8 \times 3 \times 5 = 120$, $6 \times 2 \times 4 = 48$, and $5 \times 2 \times 1 = 10$. Add the non-overlapping volumes: $120 + 48 + 10 = 178$ cubic centimeters.



Mathematical Explorer's Journey

Welcome, Brave Explorer!

◇ Phenomenal expedition! You've successfully navigated through 9 mathematical territories, exploring every concept and discovering new strategies along the way! You've mapped out the landscape of Grade 5 math with the courage of a true adventurer. Each problem was uncharted territory, and you charted it with skill and determination! ◇

★ **Wisdom from veteran explorers:** the most rewarding journeys are the ones that challenge you most. Through 9 comprehensive practice tests, you've climbed mathematical mountains, crossed conceptual rivers, and discovered solutions in places you didn't know existed. Your exploration skills are strong, your map is detailed, and you're ready for any test-day adventure! ★

Explorer's Achievement Map

- **Territory Covered:** You've explored every major mathematical concept thoroughly!
- **Navigation Skills:** You can find your way through any problem with multiple solution paths!
- **Equipment Mastered:** You know exactly which strategies to use in different situations!
- **Expedition Ready:** You're fully prepared for the ultimate test day adventure!

Important explorer wisdom: experienced adventurers always review their maps before important journeys. Take a few moments before test day to mentally review your successful strategies. Visualize yourself confidently tackling each type of problem. You've already proven you can handle the expedition!

If you'd like to share your experience or have questions, please email me at reza@testinar.com. I'd love to hear from you!

Reza Nazari & Jay Daie

Your Math Teacher and Test-Day Coach

PRACTICE MORE. ACHIEVE MORE.

Give your child the edge they need to excel in **Grade 5 Math!** This book includes **9 full-length** practice tests designed to build confidence, sharpen skills, and improve test performance.

9

**FULL-LENGTH
PRACTICE
TESTS**

- ✓ Realistic.
- ✓ Rigorous.
- ✓ Results-Driven.

More practice today for a **stronger** tomorrow.



THIS BOOK HELPS YOUR CHILD:



Build Confidence

Familiar, focused practice reduces anxiety and boosts self-belief.



Strengthen Skills

Reinforces key math concepts through high-quality, standards-aligned questions.



Improve Test Readiness

Full-length tests help students understand test format, pacing, and question types.



Track Progress

Identify strengths and target areas with purposeful practice.



Achieve Success

Better preparation leads to higher scores and bright futures.

COVERS ALL ESSENTIAL TOPICS

- ✓ Whole Numbers & Operations
- ✓ Fractions & Decimals
- ✓ Algebraic Thinking
- ✓ Geometry
- ✓ Measurement & Data
- ✓ Graphing & Data Analysis
- ✓ Number Patterns
- ✓ Word Problems
- ✓ Ratio & Proportion
- ✓ Perimeter, Area & Volume
- ✓ And More!



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Aligned to Standards



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