

5

FULL-LENGTH

West Virginia

WVGSA

GRADE 5 MATH

★ PRACTICE TESTS ★



**5 FULL-LENGTH
PRACTICE TESTS**



**COMPLETE
STANDARDS
REVIEW**



**SKILL PRACTICE,
WORD PROBLEMS,
AND MORE!**

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



$$12 \times 3 = 36$$



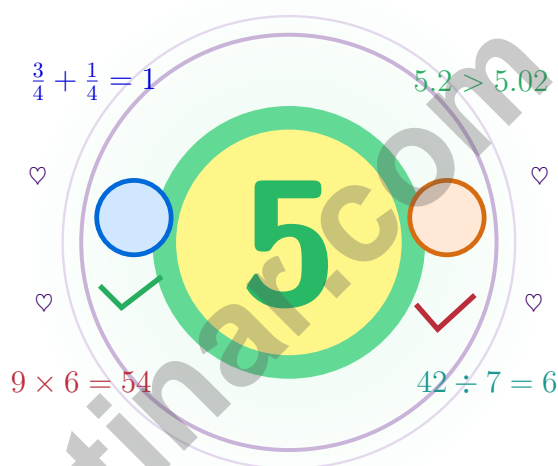
$$\frac{7}{10} = 0.7$$



BUILT FOR SUCCESS. DESIGNED TO HELP EVERY STUDENT.

5 West Virginia WVGSA Grade 5 Math Practice Tests

A five-checkpoint expedition for curious Grade 5 thinkers



Five full tests, a friendly quick review, smart strategy pages, and student-tested support that turn Grade 5 practice in The Mountain State into a steady quest of real growth.

Jay Daie and Reza Nazari



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Suit Up, West Virginia – Five Checkpoints Ahead

A five-checkpoint expedition for curious Grade 5 thinkers

For Every Curious Mind in West Virginia

This book is your practice zone, not a place to be perfect. Each of the five tests gives you a chance to notice clues, choose a strategy, check your thinking, and come back stronger for the next round. Math is a lot like the Appalachian ridges – they rise one careful slope at a time, and so does your thinking.

Some questions will feel easy right away. Some will make you slow down, draw, estimate, or retry. That is excellent news. It means your math brain is doing real work.

Spot Clues

Notice the numbers, units, and tricky words.

Make a Plan

Choose the strategy or model that fits.

Bounce Back

Mistakes show you exactly where to grow next.

A strong quest habit for West Virginia: slow down, write neatly, estimate before you solve, and keep going even when a problem looks tricky at first. That is exactly how confident math students are built.

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Five Tests, Five Lessons

A simple routine that turns five tests into real growth

Step 1: Warm Up

Sharpen your math brain with the quick review.

Wake up important ideas before you begin so your brain is ready to use them.

Step 2: Quest Run

Take a full practice test in a calm spot.

Find a quiet space, work carefully, and let accuracy matter more than speed.

Step 3: Debrief

Score honestly and circle missed questions.

Circle missed questions and look for patterns. Which skill or habit needs another try?

Step 4: Repair Kit

Fix the missed work and lock the lesson in.

Read the explanation, repair the work, and carry that lesson into the next test.

A Five-Week West Virginia Quest Map

Week	Mission Focus
Week 1	Take Test 1 like the first rise on an Appalachian ridge.
Week 2	Take Test 2 and notice one habit that grew steadier.
Week 3	Take Test 3 and lift fractions, decimals, and conversions.
Week 4	Take Test 4 and slow down on multi-step problems.
Week 5	Take Test 5 with calm, careful, mountain-steady focus.



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

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LENGTH

Customary

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

1 yard (yd) = 3 feet (ft)

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Metric

1 meter (m) = 100 centimeters (cm)

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CAPACITY

Customary

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

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



1) Base area 32 in^2 , height 9 in. Volume =?

A. 288 in^3

C. 41 in^3

B. 256 in^3

D. 23 in^3

2) Evaluate the expression: $\{36 \div (3 + 3)\} + \{(2 \times 3) \times 4\}$

Record your answer in the space provided.

3) The triangle shown has one angle that opens wider than a right angle. What type of triangle is it?

 A. Acute triangle C. Obtuse triangle B. Right triangle D. Straight triangle

4) Which expression equals 0.042?

A. $42 \div 10$

C. $42 \div 100$

B. $4.2 \div 10$

D. $4.2 \div 100$

5) Pattern: $15 \times 10 = 150$; $15 \times 100 = 1,500$; $15 \times 1,000 = ?$

A. 150

C. 15,000

B. 1,500

D. 150,000



6) Subtract: $\frac{9}{10} - \frac{1}{5}$

- A. $\frac{8}{10}$
 B. $\frac{10}{15}$

- C. $\frac{7}{10}$
 D. $\frac{8}{5}$

7) Money amounts on a receipt:

Item	Price
Toy	\$4.56
Book	\$3.28
Total	?

What is the total?

- A. \$7.74
 B. \$8.84

- C. \$7.94
 D. \$7.84



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$$14 \times 16$$

Choose which student's method is correct:

Student A

$$\begin{aligned} &14 \times 16 \\ &= (14 \times 10) + (14 \times 6) \\ &= 140 + 84 = 224 \end{aligned}$$

Student B

$$\begin{aligned} &14 \times 16 \\ &= (10 + 4) \times (10 + 6) \\ &= 100 + 24 = 124 \end{aligned}$$

1)

- A. Student A is correct.
 B. Student B is correct.

- C. Both are correct.
 D. Neither is correct.

2) A container holds $\frac{8}{9}$ gallon of water. You use $\frac{1}{4}$ of the water. How much water do you use? Give the answer in simplest form.

- A. $\frac{8}{13}$ gallon C. $\frac{7}{13}$ gallon
 B. $\frac{1}{2}$ gallon D. $\frac{2}{9}$ gallon

3) Convert: $0.6 \text{ m} = ? \text{ cm}$.

Record your answer in the space provided.

4) Nora starts at $(1, 2)$. She adds 2 to the x -coordinate and 3 to the y -coordinate to get her next point. If she continues this pattern, what will be her fourth point?

- A. $(8, 14)$ C. $(7, 11)$
 B. $(6, 10)$ D. $(5, 8)$



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- 1) Which expression represents a number with the digit 5 in the ten-thousands place?
- A. 5×10^3 C. 5×10^2
 B. 5×10^1 D. 5×10^4
- 2) A pitcher holds 1.5 liters of water. How many milliliters is needed to fill it completely?
- A. 150 mL C. 15,000 mL
 B. 150,000 mL D. 1,500 mL
- 3) A fabric store has $\frac{5}{12}$ yard cotton and $\frac{1}{4}$ yard wool. Which amount is more, and by how much?
- A. Cotton by $\frac{1}{12}$ yard C. Cotton by $\frac{2}{12}$ yard
 B. Wool by $\frac{1}{12}$ yard D. They are equal
- 4) Pattern X is 1, 2, 3, 4. Pattern Y is 4, 8, 12, 16. Each Y value is how many times X?

Record your answer in the space provided.

- 5) A recipe calls for $\frac{2}{3}$ cup of flour. You want to make $\frac{1}{2}$ of the recipe. How much flour do you need?
- A. $\frac{2}{5}$ cup C. $\frac{3}{5}$ cup
 B. $\frac{1}{3}$ cup D. 1 cup



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1) Watering can had $\frac{7}{10}$ gallon. After use, $\frac{1}{2}$ gallon spent. How much is left in simplest form?

A. $\frac{1}{5}$ gallon

C. $\frac{6}{10}$ gallon

B. $\frac{1}{10}$ gallon

D. $\frac{3}{10}$ gallon

2) Which expression would produce a result 10 times as much as $24 \div 4$?

A. $24 \div 4 + 10$

C. $24 \div (4 + 10)$

B. $10 \times (24 \div 4)$

D. $(24 - 10) \div 4$

3) Error Analysis: Maya said the pattern 2, 6, 18, 54, ... adds 4 each time. What's wrong with her rule?

 A. The pattern actually multiplies by 3 each time, not adds 4 B. The pattern divides by 2 each time C. There is no pattern at all D. The pattern only works for odd numbers

4) Pattern: $2.5 \times 10 = 25$; $2.5 \times 100 = 250$; $2.5 \times 1,000 = ?$

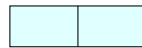
A. 25

C. 2,500

B. 250

D. 25,000

5) What is $\frac{1}{8} \div 2$?



$\frac{1}{8}$ split in 2

A. $\frac{2}{8}$

C. $\frac{1}{6}$

B. $\frac{1}{16}$

D. $\frac{4}{1}$



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 scores.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- Choice A is correct.** (M.5.21) $V = B \times h = 32 \times 9 = 288 \text{ in}^3$.
- The correct answer is 30.** (M.5.1) Left: $3 + 3 = 6$, $36 \div 6 = 6$. Right: $2 \times 3 = 6$, $6 \times 4 = 24$. Sum: $6 + 24 = 30$.
- Choice C is correct.** (M.5.25) A triangle with one angle wider than a right angle is an obtuse triangle.
- Choice D is correct.** (M.5.5) $4.2 \div 100 = 0.042$. A equals 4.2, while C and D each equal 0.42. B matches.
- Choice C is correct.** (M.5.5) The pattern adds one zero each time the multiplier grows by a factor of 10. With 1,000, the product is 15,000.
- Choice C is correct.** (M.5.11) $\frac{1}{5} = \frac{2}{10}$, $\frac{9}{10} - \frac{2}{10} = \frac{7}{10}$.
- Choice D is correct.** (M.5.10) Add: $\$4.56 + \$3.28 = \$7.84$ (hundredths: $6 + 8 = 14$, regroup; tenths: $5 + 2 + 1 = 8$; dollars: $4 + 3 = 7$).
- Choice C is correct.** (M.5.24) The distance is $8 - 4 = 4$ grid squares. Since each square is 10 miles, the total distance is $4 \times 10 = 40$ miles.
- The correct answer is 9.** (M.5.22) The known width and height make groups of $5 \times 4 = 20$ cubic inches. Since $180 \div 20 = 9$, the length is 9 in.
- Choice C is correct.** (M.5.15) From the table: $\frac{1}{3} < 1$ gives $4 < 12$ (shrinks), 1 gives $12 = 12$ (unchanged), and $\frac{5}{4} > 1$ gives $15 > 12$ (grows).
- Choice C is correct.** (M.5.2) Difference: $(14 - 5) = 9$; multiply by 8: $8 \times 9 = 72$.
- Choice A is correct.** (M.5.12) Divide both numerator and denominator by 4: $\frac{8}{100} = \frac{2}{25}$.
- Choice C is correct.** (M.5.24) To be in the pattern, the y -value must be double the x -value. For $(7, 13)$, $2 \times 7 = 14$, not 13, so that pair does not fit.
- Choice B is correct.** (M.5.12) $5\frac{3}{4} \approx 6$. So $12 - 5\frac{3}{4} \approx 12 - 6 = 6$.
- Choice A is correct.** (M.5.15) Since $\frac{7}{8}$ is less than 1, $\frac{7}{8} \times 16$ is less than 16. So Expression A is less than Expression B.
- Choice A is correct.** (M.5.5) Multiplying by 10,000 moves the decimal four places right. From 0.12, the missing value is 1,200.
- Choice D is correct.** (M.5.19) At 80: 3 marks, At 90: 3 marks, At 100: 2 marks. Total: $3 + 3 + 2 = 8$ students scored 80 or higher.
- Choice C is correct.** (M.5.22) Total cost: $42.75 + 38.50 + 55.25 = 136.50$ dollars. Change: $150.00 - 136.50 = 13.50$ dollars.
- Choices A, B are correct.** (M.5.21) Both A and B work: you can multiply length, width, and height, or multiply the base area by the height. C and D do not multiply all three dimensions correctly.
- Choice C is correct.** (M.5.5) $10^2 = 100$, so $75 \times 10^2 = 75 \times 100 = 7500$.
- Choice B is correct.** (M.5.5) $6 \times 1000 = 6000$. Append three zeros to 6.
- Choice D is correct.** (M.5.10) Compare the tenths place first: 0.25 has 2 tenths and 0.52 has 5 tenths. Since $5 > 2$, we know $0.52 > 0.25$.
- The correct answer is 3.** (M.5.18) $36 \div 12 = 3$ feet. Since 12 inches make 1 foot, 36 inches makes 3 full feet.
- Choice D is correct.** (M.5.1) Start with the parentheses: $8 + 2 = 10$. Then $10 \div 5 = 2$, and subtracting gives $25 - 2 = 23$.
- Choice D is correct.** (M.5.3) Start with 5 as the 1st term. To reach the 10th term, add 6 nine times: $5 + 54 = 59$.
- Choice C is correct.** (M.5.23) A vertical line segment has the same x -coordinate for both points. Options A, B, and D have different x -coordinates. Only C has both points with the same x -value ($x = 2$).
- Choice C is correct.** (M.5.14) Two groups of $\frac{3}{8}$ give $\frac{6}{8}$. Since both 6 and 8 can be divided by 2, $\frac{6}{8} = \frac{3}{4}$.
- Choice B is correct.** (M.5.16) Use total amount divided by the size of one piece. The equation is $12 \div \frac{1}{4} = n$.
- Choice C is correct.** (M.5.13) Dividing by $\frac{1}{3}$ asks how many one-third pieces are in 5 wholes. Each whole has 3 thirds, so $5 \div \frac{1}{3} = 5 \times 3 = 15$.



Conductor's Final Rehearsal Notes

Greetings, Master Conductor!

★ Brilliant performance! You've conducted five complete mathematical symphonies, orchestrating solutions with precision and harmony like a world-class conductor! Each problem required you to coordinate multiple mathematical elements, maintain tempo, and create elegant solutions. Your mathematical musicianship has developed beautifully through this intensive rehearsal period! ★

◇ **Here's what great conductors know:** they don't just read the notes they understand the entire composition and how every part connects. You've developed that same comprehensive understanding through these five tests! You see how mathematical concepts relate to each other and how to bring them together into coherent solutions. That's mathematical mastery! ◇

Orchestra Performance Review

- **Rhythm and Timing:** You pace yourself effectively through tests without rushing!
- **Harmony:** You balance different problem-solving methods beautifully!
- **Technical Mastery:** You execute mathematical procedures with confidence!
- **Performance Ready:** You're prepared for opening night on test day!

Remember this musical wisdom: the best performances happen when musicians stop thinking about technique and simply play from the heart. After five complete rehearsals, your mathematical techniques have become second nature. On test day, trust your preparation and let your knowledge flow naturally. You're ready for a standing ovation!

Want to share your mathematical compositions or discuss a particularly elegant solution? Send your musical insights to reza@testinar.com. I appreciate mathematical artistry!

Reza Nazari & Jay Daie

Your Math Coaches for Confident Test Days

5 FULL-LENGTH TESTS. STRONG SKILLS. BRIGHTER RESULTS.



Build confidence and master math with **5 full-length** practice tests designed to reflect the real test experience. This book provides the practice, review, and support students need to succeed in Grade 5 and beyond!

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5 FULL-LENGTH PRACTICE TESTS

Realistic tests that build familiarity, boost focus, and improve test readiness.



COMPLETE STANDARDS REVIEW

Covers all essential Grade 5 math topics with clear explanations and examples.



SKILL PRACTICE

Strengthen key math skills through a wide variety of practice questions.



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Build critical thinking and problem-solving skills with real-world questions.



FULL ANSWER KEY

Step-by-step explanations for every question to help students learn and improve.



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Build Confidence
with consistent
practice



Improve Accuracy
and problem-
solving skills



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