

# 4

# West Virginia WVGSA

## Grade 3

# MATH

## PRACTICE TESTS

### Standards-Aligned Practice



#### STANDARDS-ALIGNED

Practice to build skills and boost confidence



#### 4 FULL-LENGTH TESTS

Realistic questions to prepare for test day



#### ANSWER KEYS & EXPLANATIONS

Detailed solutions to learn and improve



# 4 West Virginia WVGSA Grade 3 Math Practice Tests

*Standards-Aligned Review with Mixed Practice and Answer Key*



Four focused 30-question missions for Grade 3 math: number facts, fractions, measurement, data, area, shapes, answer keys, and clear explanations for every item.

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# Welcome to the West Virginia Math Launch

Four missions, careful work, and a stronger Grade 3 thinker



Read the mission. Show the work. Check the answer. Launch again.

## To the Grade 3 Mission Leader

This book is a four-mission practice launch for the West Virginia WVGSA. Each test gives you a fresh chance to multiply, divide, read graphs, compare fractions, measure, find area, and explain math in a way someone else can follow.

West Virginia has mountain roads, river curves, and strong paths built one step at a time. Good math uses the same habit: pause, check the details, and move forward with a steady plan.

### Notice

Find the numbers, units, and question before choosing a path.

### Model

Draw an array, number line, table, or quick equation.

### Verify

Ask whether your answer fits the story and the unit.

**Launch promise:** I will slow down at the important moments, show the work I can, and use every miss as a clue for the next mission.

# How to Use This Book

A four-mission routine for steady Grade 3 growth

## 1. Warm Up the System

Read the review pages first. Remind your brain how equal groups, fractions, clocks, graphs, and area models work.

## 2. Fly One Mission

Take one complete 30-question test. Keep your work neat enough that you can check it later.

## 3. Review the Flight

Use the answer key, then pause. A wrong answer is useful when you can name what happened.

## 4. Repair and Relaunch

Rework a few missed questions before starting the next test. The repair step is where the score begins to move.

### A Four-Session Plan

<b>Session 1</b>	Take Test 1 and mark the topics that need attention.
<b>Session 2</b>	Take Test 2 and focus on showing every step clearly.
<b>Session 3</b>	Take Test 3 and watch for units, labels, and two-step problems.
<b>Session 4</b>	Take Test 4 and finish with calm, careful checking.

**Best mission habit:** After checking answers, write one sentence: “Next time I will pay attention to \_\_\_\_\_.”



# Test Overview

## What each Grade 3 math mission asks you to do

Each practice test has 30 questions. Across four tests, you will practice the kind of Grade 3 math thinking used on the West Virginia WVGSA: reading carefully, choosing a strategy, doing accurate computation, and explaining enough work to make your answer clear.

### Multiple Choice

Look for the best answer. Estimate first when you can, cross out choices that do not fit, and reread the question before you choose.

### Open Response

Write the answer and show the reason. A good Grade 3 response may use a drawing, equation, table, number line, or a few clear words.

### Math Ideas Inside the Four Tests

- multiplication, division, arrays, missing factors, and two-step word problems
- place value, rounding, addition, subtraction, and multiplying by tens
- unit fractions, number lines, equivalent fractions, and comparing fractions
- time, mass, liquid volume, picture graphs, bar graphs, and line plots
- area, perimeter, unit squares, rectangles, and shape categories

**What strong WVGSA work looks like:** the answer matches the question, the units make sense, and the work is clear enough to check.



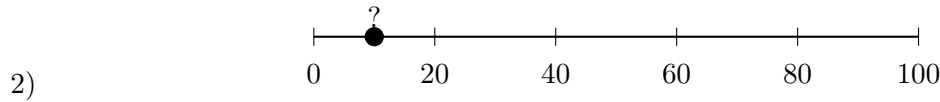
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1) Which tiling correctly shows  $9 \times (2 + 5)$ ?

- A. Two rectangles stacked with dimensions  $9 \times 2$  and  $9 \times 5$ 
 C. One rectangle  $9 \times 7$   
 B. Two rectangles side by side with dimensions  $2 \times 5$  and  $9 \times 5$ 
 D. A rectangle split with one part being  $9 \times 5$



The point on the number line is closer to which number when rounded to the nearest 10?

- A. 0
  C. 20  
 B. 30
  D. 10
- 3) This shape shows a  $2 \times 5$  rectangle:

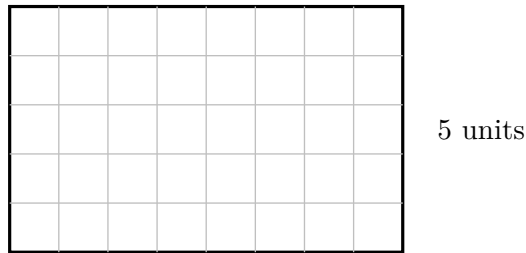


What is the total area?

- A. 14 sq units
  C. 20 sq units  
 B. 7 sq units
  D. 10 sq units
- 4) What fraction is the third tick on a number line split into 6 equal parts?







10) 8 units

Count the unit squares. What is the area of the rectangle?

- A. 40 sq units
- B. 32 sq units
- C. 13 sq units
- D. 64 sq units

11) Mia tiles a rectangle that is 3 tiles wide and 6 tiles tall. Jordan tiles a rectangle that is 2 tiles wide and 9 tiles tall. Whose rectangle has a bigger area?

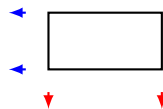
- A. Mia's rectangle
- B. Jordan's rectangle
- C. They have the same area
- D. Cannot tell from this information

12)



What is the area of this rectangle in unit squares?

- A. 2 square units
- B. 3 square units
- C. 4 square units
- D. 5 square units



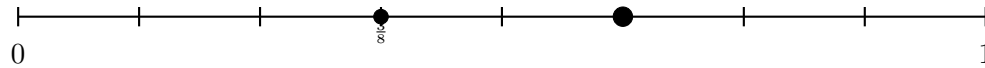
Parallel

13)

Which statement about parallel sides is true?

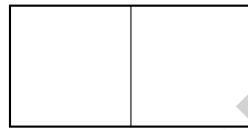
- A. All triangles have parallel sides
- B. All rectangles have parallel sides
- C. No quadrilaterals have parallel sides
- D. Only circles have parallel sides

- 1) A number line from 0 to 1 has 8 equal parts. If you start at  $\frac{3}{8}$  and move 2 parts to the right, where do you land?



- A.  $\frac{3}{8}$ 
 C.  $\frac{5}{8}$   
 B.  $\frac{4}{8}$ 
 D.  $\frac{6}{8}$

- 2) A shape is divided into equal parts so that each part is  $\frac{1}{2}$  of the whole. How many equal parts is the shape divided into?



- A. 1 part
  C. 3 parts  
 B. 2 parts
  D. 4 parts

- 3) Eli has two shapes. Shape 1 is a  $2 \times 10$  rectangle. Shape 2 is a  $4 \times 5$  rectangle. Do the shapes have the same area?

- A. Yes, both are 20 square units
  C. No, Shape 2 has 9 square units  
 B. No, Shape 1 has 12 square units
  D. Cannot determine

- 4) Look at this number line with 0 to 1 divided into 6 equal parts:



What fraction is the first tick labeled by the question mark?

- A.  $\frac{1}{6}$ 
 C.  $\frac{1}{3}$   
 B.  $\frac{1}{5}$ 
 D.  $\frac{2}{6}$



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5) Quinn has 3 baskets with 5 apples in each. Quinn gives away 3 apples. How many apples does Quinn have left?

A. 8

C. 15

B. 12

D. 18

6) A composite shape is divided by dashed lines. Part A has area 7 sq units. Part B has area 9 sq units. What is the total?

A. 9 sq units

C. 63 sq units

B. 16 sq units

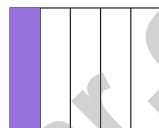
D. 2 sq units

7) Which picture shows  $\frac{1}{4}$  shaded?

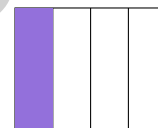
A



B



C



A. Picture A

C. Picture C

B. Picture B

D. None of these

8) Which multiplication fact helps solve  $42 \div 7$ ?

A.  $6 \times 7 = 42$

C.  $5 \times 7 = 35$

B.  $7 \times 7 = 49$

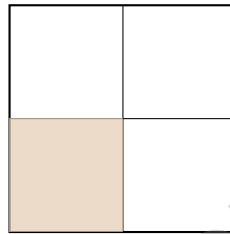
D.  $8 \times 7 = 56$



1) A line plot shows eraser weights in grams:  $10$ ,  $10\frac{1}{2}$ ,  $11$ ,  $11\frac{1}{2}$ . At  $10$  grams there are 2 X's. At  $10\frac{1}{2}$  there are 4 X's. At  $11$  there are 2 X's. How many erasers total?

- A. 6  C. 10  
 B. 8  D. 12

2) A square chocolate bar is divided equally into 4 parts. Ben eats  $\frac{1}{4}$  of the bar. How many parts does Ben eat?



- A. 1 part  C. 3 parts  
 B. 2 parts  D. 4 parts

3) A rectangular poster has an area of 72 square inches. If the width is 8 inches, what is the height?

- A. 9 inches  C. 64 inches  
 B. 80 inches  D. 10 inches

4) A rectangle uses 5 unit squares in each row. If there are 7 rows, how many unit squares are used in all?



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## Practice Test Answer Keys

**How to use this section with a Grade 3 student:**

1. check the answer first
2. mark questions to try again
3. rework the problem before reading the full explanation

**A calm correction routine turns every missed item into useful practice.**

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## Practice Test Answers and Explanations

### Practice Test 1 Answers and Explanations

- Choice A is correct.** **(3.MD.C.7c)** Both rectangles share the dimension 9. When stacked or side by side, they show  $9 \times (2 + 5) = 9 \times 7 = 63$ .
- Choice D is correct.** **(3.NBT.A.1)** The point is at position 1 on the line from 0 to 10, representing a number like 8–14 closer to 10.
- Choice D is correct.** **(3.MD.C.5b)**  $2 \times 5 = 10$  square units.
- The correct answer is  $\frac{3}{6}$ .** **(3.NF.A.2)** The third tick out of 6 equal parts is  $\frac{3}{6}$ .
- Choice D is correct.** **(3.OA.D.8)** Step 1: Pencils:  $3 \times 7 = 21$  items. Step 2: Pens:  $4 \times 2 = 8$  items. Total:  $21 + 8 = 29$  items.
- Choice A is correct.** **(3.MD.A.1)** From 6 : 15 PM to 8 : 15 PM is 2 hours. From 8 : 15 PM to 8 : 30 PM is 15 more minutes. Total: 2 hours 15 minutes. Distractor C adds incorrectly; B over-counts hours.
- Choice D is correct.** **(3.OA.B.5)**  $6 \times 2 = 12$ . She has 12 stickers.
- Choice B is correct.** **(3.MD.B.3)** Blue:  $5 \times 2 = 10$  ribbons. Red:  $3 \times 2 = 6$  ribbons. More:  $10 - 6 = 4$ .
- Choice B is correct.** **(3.NF.A.2a)** One tick in the middle divides into 2 equal parts.
- Choice A is correct.** **(3.MD.C.7)** The grid has 8 columns and 5 rows. Area =  $8 \times 5 = 40$  square units. You can also add:  $8 + 8 + 8 + 8 + 8 = 40$  (five rows of eight).
- Choice C is correct.** **(3.MD.C.7a)** Mia:  $3 \times 6 = 18$  square units. Jordan:  $2 \times 9 = 18$  square units. Different dimensions, same area—shows that tiling result depends on both dimensions, not just one.
- Choice B is correct.** **(3.MD.C.5a)** The rectangle is 3 units wide and 1 unit tall:  $3 \times 1 = 3$  unit squares.
- Choice B is correct.** **(3.G.A.1)** Rectangles have opposite sides that are parallel (they never meet). Triangles have no parallel sides, and not all quadrilaterals have them.
- Choices A and C are correct.** **(3.MD.C.5)** A is correct: area uses square units (sq in, sq cm, etc.). C is correct: the formula is  $A = \ell \times w$ . B is wrong: that is perimeter. D is wrong: they measure different things. E is wrong: perimeter and area are independent.
- The correct answer is 4.** **(3.NF.A.3b)** The numerator doubles from 2 to 4.
- Choice B is correct.** **(3.NF.A.3d)** With the same numerator, a LARGER denominator means SMALLER pieces. So  $\frac{4}{8} < \frac{4}{6}$ , not greater.
- Choice A is correct.** **(3.NBT.A.3)** Since  $8 \times 20 = 160$ , the missing number is 8. Check:  $8 \times 2 = 16$ , add a zero to get 160.
- Choice C is correct.** **(3.MD.C.7b)** Area = width  $\times$  height =  $6 \times 9 = 54$  square inches.
- Choice D is correct.** **(3.OA.A.4)** Use the inverse:  $35 \div 5 = 7$ . Check:  $7 \times 5 = 35$ .
- Choice D is correct.** **(3.OA.A.1)**  $8 \times 3$  means 8 groups of 3, so  $3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 = 24$ . Both equal 24.
- Choice A is correct.** **(3.MD.C.7d)** Part A:  $8 \times 4 = 32$  sq units. Part B:  $6 \times 2 = 12$  sq units. Total:  $32 + 12 = 44$  sq units.
- Choice D is correct.** **(3.NF.A.3c)** 6 thirds means  $6 \div 3 = 2$  wholes. The bar shows two whole units.
- Choice D is correct.** **(3.OA.B.6)** A bar model dividing a total into equal parts shows division. 30 split into 5 equal parts means each part is  $30 \div 5 = 6$ .
- Choice D is correct.** **(3.OA.A.2)**  $15 \div 5 = 3$ . Sharing means dividing the total into equal groups.
- Choice A is correct.** **(3.NF.A.2b)** Point C at 2 is 4 halves:  $\frac{4}{2} = 2$ .
- The correct answer is 2 X's.** **(3.MD.B.4)** Two leaves measured exactly  $2\frac{1}{4}$  inches, so there would be 2 X's above the  $2\frac{1}{4}$  mark.
- Choice B is correct.** **(3.G.A.2)** If 5 out of 8 parts are colored, then  $8 - 5 = 3$  parts are not colored, which is  $\frac{3}{8}$ .
- Choice A is correct.** **(3.MD.A.2)** On Scale 1, the left side is 500 g and the right side is 400 g, so the left side weighs more. On Scale 2, both sides are equal.
- Choice A is correct.** **(3.MD.C.6)** Area =  $8 \times 4 = 32$  square centimeters.
- Choice D is correct.** **(3.OA.D.9)** Even  $\times$  even = even, and even  $\times$  odd = even. Only odd  $\times$  odd = odd.



From a Friend Who Believes in You

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## Hi, Friend!

◇ I just want to say something important: I am proud of you. You did 4 full practice tests. That takes time, hard work, and heart. ◇

★ **Friendly truth:** a test is just one part of your math journey. You are SO much more than a score. The work you did is the real win! ★

### What I Want You to Know

- **You are smart.** Every test you finished proves it.
- **You are brave.** You tried hard problems.
- **You are growing.** Mistakes taught you new things.
- **You are ready.** The skills are inside you.

**One more thing:** on test day, take a deep breath. Smile. Remember that someone (me!) believes in you. You can do this!

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 Friend

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