

7

West Virginia

WVGSA

Grade 3 MATH

PRACTICE TESTS

Standards-Aligned Practice with
Review, Answer Keys, and Explanations



7 Full-Length
Practice Tests



Standards-Aligned
Math Practice



Detailed Answer Keys
and Explanations



Build Confidence.
Achieve Success.

PREPARE
PRACTICE
SUCCEED



$4 \times 6 = 24$

$2 + 3 = 5$

7 West Virginia WVGSA Grade 3 Math Practice Tests

Standards-Aligned Practice with Review, Answer Keys, and Explanations



Seven complete 30-question practice trails for Grade 3 math:
operations, fractions, measurement, data, area, shapes, answer keys,
and clear explanations for every item.

Jay Daie and Reza Nazari



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Welcome to the Seven Math Trails

Seven full tests, seven fresh chances, and one braver Grade 3 thinker



Read the trail. Mark the clues. Solve with care.

To the Grade 3 Math Trail Leader

This book gives you seven complete practice trails for the West Virginia WVGSA. Each trail is a full 30-question test, so students can practice accuracy, stamina, and clear explanations over time.

West Virginia has mountain hollows, river rapids, forest roads, coal-town history, and patient practice, where careful steps matter. Strong math follows that same path: notice the question, choose a tool, show the work, and show each step so the answer can be trusted.

Scout

Find what the problem is asking before you calculate.

Solve

Pick an equation, model, array, graph, or number line.

Prove

Check the answer and explain the thinking clearly.

Seven-trail promise: I will work with patience, use my scratch space wisely, and let every correction make my next test stronger.

How to Use This Book

A seven-trail routine for steady Grade 3 growth

Use one practice trail at a time. The goal is not to rush through more pages. The goal is to finish, check, repair, and bring a stronger habit to the next test. For West Virginia students, each trail moves through mountain hollows, river rapids, forest roads, coal-town history, and patient practice: steady, alert, and ready for the next clue.

1. **Preview the tools.** Skim the reference page before each test.
2. **Take one test.** Work steadily and mark problems that need another look.
3. **Check the key.** Use the compact answer boxes first.
4. **Study explanations.** Read missed items and lucky guesses.
5. **Redo three problems.** Rewrite the work cleanly without copying.
6. **Name one habit.** Choose a focus such as labels, facts, fractions, or checking.
7. **Start the next trail.** Bring that habit into the next full test.

Best review habit: A missed problem is a trail marker. It shows where to slow down, look again, and choose a better step.



What Is Inside?

Seven complete practice tests with review support

Part	What You Do	Why It Helps
Practice Tests 1–7	Solve seven different 30-question tests.	Build stamina and see Grade 3 skills mixed together.
Reference Materials	Review measurement and time facts before each test.	Keep common tools close without turning pages backward.
Answer Keys	Check each answer in compact boxes.	Find mistakes quickly without losing your place.
Explanations	Read why each answer works.	Turn missed items into a clear next step.
Standards Reference	See how West Virginia Grade 3 standards connect to practice.	Understand the skills behind the questions.

Each test has 26 multiple-choice questions, 1 select-all question, and 3 open-ended questions. This gives students practice with quick decisions, careful reading, and short written math answers for the West Virginia WVGSA path.



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& answers

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1) Which fraction is equivalent to $\frac{3}{4}$?

- A. $\frac{3}{8}$
- B. $\frac{4}{8}$

- C. $\frac{6}{8}$
- D. $\frac{5}{8}$

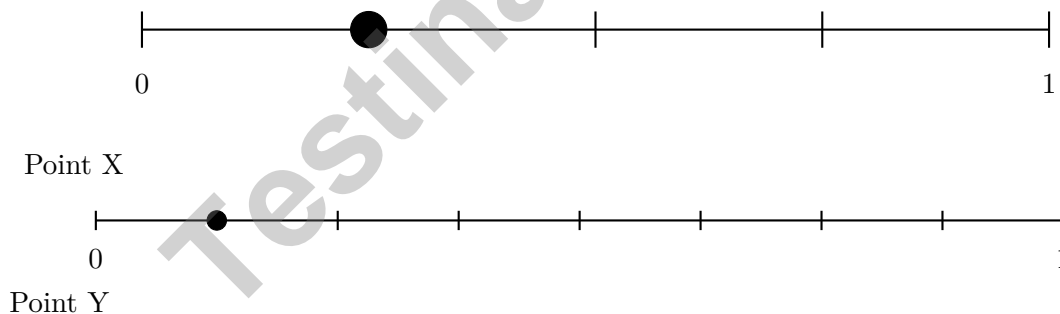
2) Eli has 3 boxes with 7 pencils in each box. How many pencils does Eli have?

- A. 10 pencils (adds 3 + 7)
- B. 11 pencils (miscounting: forgets one group)
- C. 14 pencils (multiplies first number by itself and second: 3 + 3 + 3 + 7)
- D. 21 pencils

3) A 7×6 rectangle is shown with one dimension split. Which equation matches?

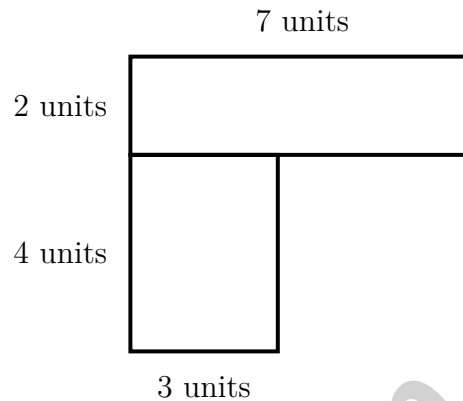
- A. $7 \times 6 = 7 \times (4 + 2) = (7 \times 4) + (7 \times 2) = 28 + 14 = 42$
- B. $7 \times 6 = 6 \times (3 + 3) = 18 + 18$
- C. $7 \times 6 = 7 + 6 + 4 + 2 = 19$
- D. $7 + 6 = 13$

4) A number line from 0 to 1 has two unlabeled points. Point X is at the first tick of a 4-part line. Point Y is at the first tick of an 8-part line. Which is farther from 0?



- A. Point X
- B. Point Y
- C. They are equidistant
- D. Cannot be determined

- 5) An L-shaped kitchen floor plan shows two rectangular sections. Upper: 7 units by 2 units. Lower left: 3 units by 4 units. What is the total floor area?



- A. 26 sq units C. 12 sq units
 B. 14 sq units D. 56 sq units
- 6) A tabletop measures 10 feet by 4 feet. What is the area of the tabletop?
- A. 14 square feet C. 28 square feet
 B. 40 square feet D. 50 square feet
- 7) Which is equivalent to $\frac{1}{4}$?
- A. $\frac{2}{4}$ C. $\frac{2}{8}$
 B. $\frac{1}{8}$ D. $\frac{4}{8}$
- 8) Noah is designing a playground. He wants to cover a rectangular area using square meter mats. The playground is 10 meters by 7 meters. How many square meter mats will Noah need to cover the entire playground? Show your counting.



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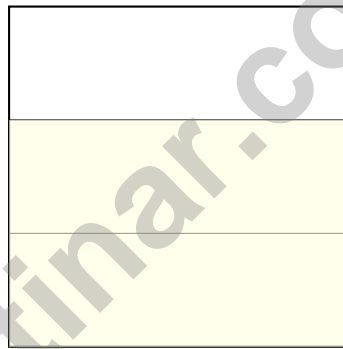
9) Look at this part of the 2×2 multiplication table:

\times	1	2	3
2	2	4	6
4	4	8	12

Which pattern do you see in the row for 2?

- A. Goes up by 2 each time C. Goes up by 3 each time
 B. Goes up by 1 each time D. Goes up by 4 each time

10) A square is divided into 3 equal parts. Sam colors $\frac{2}{3}$ of the square. How many parts does he color?



- A. 1 part C. 3 parts
 B. 2 parts D. 0 parts

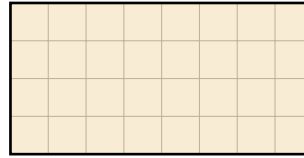
11) What number makes the equation true?

$$\square \div 4 = 6$$

- A. 10 C. 28
 B. 18 D. 24



- 1) This shape is made of unit squares on a grid.

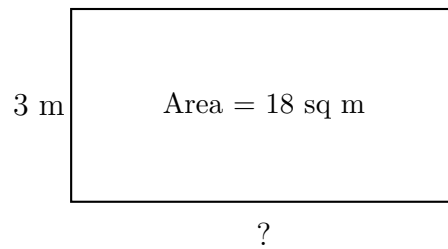


Count all the unit squares. What is the area?

- A. 12 sq units C. 32 sq units
 B. 24 sq units D. 36 sq units
- 2) A floor has unit tiles arranged in 4 rows and 8 columns. How many unit tiles cover the floor?
- A. 12 C. 24
 B. 32 D. 48
- 3) Ava makes 5 sets of picture cards. Each set has 20 cards. How many cards does Ava make?
- A. 25 C. 100
 B. 52 D. 1000
- 4) A rectangle is broken into $3 \times (4 + 5)$. Which is NOT a correct next step?
- A. $3 \times 9 = 27$ C. $3 + 4 + 5 = 12$
 B. $(3 \times 4) + (3 \times 5) = 12 + 15 = 27$ D. $(3 \times 4) + (3 \times 5)$
- 5) If Ava eats $\frac{2}{4}$ of a bar divided into halves, how many halves did she eat?



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6)

A rectangular field has an area of 18 square meters and a height of 3 meters. What is the length?

- | | |
|---------------------------------------|---------------------------------------|
| <input type="checkbox"/> A. 6 meters | <input type="checkbox"/> C. 21 meters |
| <input type="checkbox"/> B. 15 meters | <input type="checkbox"/> D. 9 meters |

7) A square has perimeter 40 feet. What is the length of one side?



8) Look at this number line divided equally from 0 to 1. What is the unit fraction?



- | | |
|---|---|
| <input type="checkbox"/> A. $\frac{1}{3}$ | <input type="checkbox"/> C. $\frac{1}{4}$ |
| <input type="checkbox"/> B. $\frac{1}{2}$ | <input type="checkbox"/> D. $\frac{1}{5}$ |



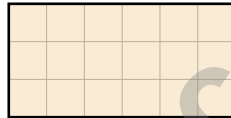
1) A bar graph shows books checked out from the library. One bar is 4 units tall, the other is 2 units tall. Each unit represents 5 books. How many more books does the first bar show?

- A. 2 C. 15
 B. 10 D. 20

2) Which fraction represents 5 whole items?

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

3) This grid shows a shape made of unit squares.

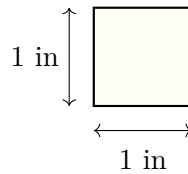


The area is how many square units?

- A. 18 sq units C. 9 sq units
 B. 15 sq units D. 20 sq units
- 4) There are 18 apples in a basket. 7 apples are eaten. Then 4 new apples are added. How many apples are in the basket now?
- A. 11 C. 15
 B. 14 D. 18
- 5) How many minutes after 6 : 15 is 6 : 35?



6) Which measurement describes a unit square in inches?



- A. Side length 2 inches, area 2 square inches
- B. Side length 1 inch, area 1 square inch
- C. Side length 1 inch, area 2 square inches
- D. Side length 2 inches, area 4 square inches
- 7) Find $30 \div 5$.

8) A rectangle has length 4 units and width 3 units. There are 4 rows with 3 unit squares in each row. Find the area by adding: $3 + 3 + 3 + 3 = ?$

- A. 7 sq units
- B. 9 sq units
- C. 12 sq units
- D. 10 sq units
- 9) Which statement is true about rectangles and rhombuses?
- A. All rectangles are rhombuses
- B. All rhombuses are rectangles
- C. Both are quadrilaterals (4-sided figures)
- D. Rectangles have equal sides like rhombuses do



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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

- 1) **Choice C is correct.** (M.3.17) $\frac{3}{4}$ and $\frac{6}{8}$ both equal three-fourths of a whole.
- 2) **Choice D is correct.** (M.3.1) 3 boxes with 7 pencils in each box means 3 groups of 7. So $3 \times 7 = 21$ pencils.
- 3) **Choice A is correct.** (M.3.16) Splitting 6 into $4 + 2$ and using the distributive property gives the same total area of 42.
- 4) **Choice A is correct.** (M.3.16) Point X is at $\frac{1}{4}$, while Point Y is at $\frac{1}{8}$. Since $\frac{1}{4} = \frac{2}{8}$, Point X is farther from 0.
- 5) **Choice A is correct.** (M.3.22) Upper: $7 \times 2 = 14$ sq units. Lower: $3 \times 4 = 12$ sq units. Total: $14 + 12 = 26$ sq units.
- 6) **Choice B is correct.** (M.3.22) Multiply length by width: $10 \times 4 = 40$ square feet.
- 7) **Choice C is correct.** (M.3.17) Multiply numerator and denominator by 2: $\frac{1 \times 2}{4 \times 2} = \frac{2}{8}$.
- 8) **The correct answer is 70 mats.** (M.3.22) Count the rows: 7 rows of mats. Count across: 10 mats per row. Total: $10 + 10 + 10 + 10 + 10 + 10 + 10 = 70$ square meter mats are needed.
- 9) **Choice A is correct.** (M.3.9) The products 2, 4, 6 each increase by 2 because we multiply 2 by 1, then 2, then 3.
- 10) **Choice B is correct.** (M.3.27) $\frac{2}{3}$ of a square divided into 3 parts means coloring 2 parts.
- 11) **Choice D is correct.** (M.3.4) Use the inverse: $6 \times 4 = 24$, so $24 \div 4 = 6$. Check: $24 \div 4 = 6$.
- 12) **The correct answer is 1.** (M.3.27) When numerator = denominator, the fraction equals 1 whole. $\frac{5}{5} = 1$.
- 13) **Choice D is correct.** (M.3.5) The associative property changes the grouping but keeps the factors in the same order. So $4 \times (3 \times 2)$ can be regrouped as $(4 \times 3) \times 2$.
- 14) **Choices A and B are correct.** (M.3.2) $20 \div 5$ has two equivalent meanings: “20 items shared among 5 groups” (partitive, answer is 4 per group) and “How many groups of 5 fit in 20” (quotitive, answer is 4 groups). Choice E describes the same idea as A. Choices C and D are incorrect operations.
- 15) **Choice C is correct.** (M.3.14) Multiply $6 \times 5 = 30$, then add one zero: $6 \times 50 = 300$.
- 16) **Choice D is correct.** (M.3.26) Both squares and rectangles have 4 right angles (90 degrees). A square also has all equal sides, but a rectangle does not require this.
- 17) **Choice B is correct.** (M.3.8) Step 1: Multiply: $2 \times 4 = 8$ tomato plants. Step 2: Add: $8 + 3 = 11$ plants. (Choice A is step 1 only.)
- 18) **Choice C is correct.** (M.3.20) Rio: $8 \times 3 = 24$. Alex: $5 \times 3 = 15$. Fewer: $24 - 15 = 9$.
- 19) **Choice B is correct.** (M.3.25) Area = width \times height = $10 \times 8 = 80$ square inches.
- 20) **The correct answer is $\frac{1}{4}$.** (M.3.15) Each part has length $\frac{1}{4}$.
- 21) **Choice B is correct.** (M.3.17) The blue dot is halfway between 0 and $\frac{1}{3}$, so it represents $\frac{1}{6}$. Since $\frac{1}{6} < \frac{1}{3}$, the dot is to the left of $\frac{1}{3}$.
- 22) **Choice D is correct.** (M.3.13) Subtract: ones ($2 - 8$ requires regrouping, so $12 - 8 = 4$), tens ($3 - 1 = 2$), hundreds ($5 - 2 = 3$). Answer: 324.
- 23) **Choice A is correct.** (M.3.18) At 9 : 33, the minute hand points to 33 minutes, just past the 6. The hour hand is between 9 and 10. Clock A shows this correctly.
- 24) **Choice A is correct.** (M.3.3) Multiply: 2 groups \times 9 items per group = 18 total.
- 25) **Choice A is correct.** (M.3.23) $3 \times 5 = 15$ unit squares. Option B is 16, C is 14, D is 12.
- 26) **Choice D is correct.** (M.3.6) If $28 \div \square = 7$, then $7 \times \square = 28$. Since $7 \times 4 = 28$, the missing number is 4.
- 27) **Choice C is correct.** (M.3.24) The grid has 7 columns and 4 rows. Area = $7 \times 4 = 28$ square cm. You can also add: $7 + 7 + 7 + 7 = 28$ (four rows of seven).
- 28) **Choice C is correct.** (M.3.16) $\frac{3}{6} = \frac{1}{2}$. Both represent one-half of the circle.
- 29) **Choice C is correct.** (M.3.19) Read directly from the measuring cup: 500 mL.
- 30) **Choice A is correct.** (M.3.12) The tens digit is 3. Since $3 < 5$, round down: 137 rounds to 100.

Practice Test 2 Answers and Explanations



Star Player Pep Talk

Hi, Star Player!

◇ 7 practice tests. Every one of them was a chance to grow. You took every chance. That's why you're a math star today! ◇

★ **Star players know:** confidence comes from practice. You can't fake it. You build it. You built yours over 7 tests. It's real now! ★

Star Player Stats

- **Practice:** OFF THE CHARTS!
- **Skills:** BROAD! You can do many problem types.
- **Toughness:** HIGH! You don't quit on hard problems.
- **Game Plan:** READY! You know your strategies.

Star tip: on test day, take it one play at a time. One problem. Then the next. You will earn your stars!

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

Jay Daie

Your Math Coach

PRACTICE TODAY. MASTER TOMORROW.

This book is designed to help **Grade 3** students strengthen their math skills through focused practice and real progress.

- ✓ 7 full-length practice tests
- ✓ Aligned to Grade 3 standards
- ✓ Build confidence and achieve success
- ✓ Review, answer keys, and explanations



EACH PRACTICE TEST INCLUDES:



Standards-
Aligned
Questions



Variety of
Question
Types



Real-World
Math
Applications



Step-by-Step
Progress
Tracking



Build Skills
and Boost
Confidence

COVERS ALL ESSENTIAL TOPICS

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- ✓ Fractions & Decimals
- ✓ Algebraic Thinking
- ✓ Geometry
- ✓ Measurement & Data
- ✓ Number Patterns
- ✓ Word Problems
- ✓ Ratio & Proportion
- ✓ Perimeter, Area & Volume
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