

# 5 Full-Length Virginia SOL Grade 6 Math Practice Tests

*Extra Practice for Test Day Success*

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EXPLORER'S JOURNEY

# 5 Practice Tests to Map Your Math Skills!



Welcome, Math Explorer! 

This book is your map through **5 full practice tests**, each one a new trail through every Grade 6 topic — from ratios and integers to geometry and statistics.

Discover what you already know!

Explore the topics that need more work!

Chart your path to test-day confidence!

Every explorer needs a plan. Let's start mapping yours!



“ Five tests means five chances to discover something new about your math skills. Enjoy the journey! ”

# Your Exploration Guide

*Five trails to discover, five weeks to grow*

## What's Inside This Book

- **5 Full-Length Practice Tests** — each covers all Grade 6 topics: ratios, integers, expressions, geometry, and statistics.
- **Detailed Answer Explanations** — understand the why behind every answer, not just the what.
- **Formula Reference Sheet** — your trusty map of key formulas.
- **Explorer's Log** — chart your scores and track discoveries!

## Your 5-Week Exploration Schedule

One test per week keeps the journey manageable:

**Trail 1:** Take Test 1 untimed. Explore the terrain and note what you find.

**Trail 2:** Review weak spots. Take Test 2 with a gentle timer (75 min).

**Trail 3:** Test 3 timed (60 min). Compare with Test 1 — see the progress!

**Trail 4:** Deep-focus on remaining tricky topics. Test 4 timed.

**Trail 5:** Full test conditions. Your final exploration — celebrate the finish!

## Multiple Choice

Choose the **best answer** from A, B, C, or D.

 **Explorer's tip:** Read every option before deciding. The correct answer sometimes hides in the last choice!

## Open Response

**Show your work** and write your answer clearly.

 **Explorer's tip:** Think of your solution as a trail map — show every step so someone else could follow your path!

**“ After Each Trail ”**

Check the Answer Key and read every explanation — especially for questions you missed. Write the tricky topics in your Explorer's Log. If you need a deeper dive, grab our **Grade 6 Math Study Guide!**

PREVIEW



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# The Explorer's Toolkit

Essential strategies for navigating every test

## Pack Your Gear (Before the Test)

- ✓ Clear your workspace — remove distractions.
- ✓ Gather pencils, eraser, scratch paper.
- ✓ Take 3 deep breaths.
- ✓ Set your goal: "I'll read carefully and show my work."

## Navigate the Trail (During the Test)

1. **Scout first.** Flip through the test to see what's ahead.
2. **Start with what you know.** Answer confident questions first.
3. **Mark the unknowns.** Put a  by tricky ones and return later.
4. **Show every step.** Your solution path matters as much as the answer.
5. **Check the map.** Does your answer make sense in context?

## Navigation Tips by Topic

- **Ratios:** Set up a proportion and cross-multiply
- **Integers:** Use a number line to check signs
- **Expressions:** Follow PEMDAS step by step
- **Equations:** Inverse operations to isolate  $x$
- **Geometry:** Draw and label diagrams
- **Statistics:** Order data before finding median

## Trail Hazards

- Confusing ratio 3:5 with  $\frac{3}{5}$
- Wrong signs when adding integers
- Forgetting exponents in PEMDAS
- Mixing up area formulas
- Reading the wrong axis
- Finding mean instead of **median**



**Explorer's Debrief:** After each test, go through the answer key carefully. For every wrong answer, ask: did I make a careless mistake, or do I need to study this topic more? Write your findings in the Explorer's Log. That's how real explorers improve — they learn from every expedition!

# Pack Your Explorer's Kit

Gather everything you need before each expedition

## Your Expedition Gear

- ✓ **Two sharpened pencils** *so you never have to stop mid-trail*
- ✓ **A good eraser** *every explorer course-corrects!*
- ✓ **Scratch paper** *for drawing diagrams and working out steps*
- ✓ **A quiet workspace** *your base camp for concentration*
- ✓ **A timer** *start using around Trail 3*
- ✓ **Curiosity and confidence!** *the explorer's greatest tools*

## Allowed on Real Tests

- ✓ Pencil and eraser
- ✓ Scratch paper (provided)
- ✓ Ruler (if specified)
- ✓ Reference sheets (in this book)

## Not Allowed

- ✗ Calculator
- ✗ Phone or tablet
- ✗ Textbooks or notes
- ✗ Help from others

## For Parents & Teachers

- Spread the 5 tests across **5 weeks** for best results. This gives time to review and study between expeditions.
- Test 1 should be untimed to establish a baseline.
- After each test, review the Answer Key together. Focus on **reasoning**, not just scores.
- Pair this book with our **Grade 6 Math Study Guide** for topics that need extra attention.
- Celebrate progress — every improvement, no matter how small, is a discovery worth noting!

# Formula Reference Sheet

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## Area Formulas

**Rectangle**  $A = l \times w$

**Parallelogram**  $A = b \times h$

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

**Trapezoid**  $A = \frac{1}{2}(b_1 + b_2) \times h$

## Volume

**Rectangular**  $V = l \times w \times h$

**Prism**

## Surface Area

Find the area of each face, then add them all up.

**Rectangular Prism:**

$$SA = 2lw + 2lh + 2wh$$

## Order of Operations

**P** Parentheses first

**E** Exponents

**M/D** Multiply & Divide (left to right)

**A/S** Add & Subtract (left to right)

## Ratios & Percents

**Ratio:**  $a : b$  or  $\frac{a}{b}$

**Unit rate:** amount per 1 unit

**Percent:** a ratio out of 100

$$\text{Part} = \text{Percent} \times \text{Whole}$$

## Integers & Absolute Value

**Integers:**

$\dots, -3, -2, -1, 0, 1, 2, 3, \dots$

$$|-5| = 5 \quad |5| = 5$$

**Absolute value** = distance from 0

## Expressions & Equations

**Exponent:**  $3^4 = 3 \times 3 \times 3 \times 3 = 81$

**Variable:** a letter that stands for a number

**Equation:** two expressions joined by =

**Inequality:** uses  $<$ ,  $>$ ,  $\leq$ ,  $\geq$

## Coordinate Plane

**Ordered pair:**  $(x, y)$

**x-axis:** horizontal    **y-axis:** vertical

**Origin:**  $(0, 0)$

**Four quadrants** (I, II, III, IV)

## Statistics

**Mean:** sum of values  $\div$  count

**Median:** middle value (sorted)

**Range:** max – min

# My Explorer's Log

Record each expedition's results and discoveries

Explorer's Name: \_\_\_\_\_

Trail	 Date	 Score	 Confidence
1	_____	____ / ____	
2	_____	____ / ____	
3	_____	____ / ____	
4	_____	____ / ____	
5	_____	____ / ____	

PREVIEW

 *My Discovery Journal*

*Topics I explored with confidence:*

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*Uncharted territory (topics I need to study more):*

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*My biggest improvement from Trail 1 → Trail 5:*

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*One new strategy I discovered along the way:*

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*One strategy that helped me the most:*

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*Let's learn and have fun!*

PREVIEW



PRACTICE TEST

1

## Practice Test 1

 30 Questions

### Before You Start

- ✓ *Read each question carefully before choosing your answer.*
- ✓ *Show your work on scratch paper when you need to.*
- ✓ *Skip hard questions and come back to them later.*
- ✓ *Check your answers when you're done.*
- ✓ *Take your time — there's no rush!*

★ *You've Got This!* ★

*Do your best and show what you know!*









12. The table below shows the cost of renting a bike using the expression  $C = 8 + 3h$ , where  $h$  is the number of hours. Fill in the missing values  $A$  and  $B$ .

Hours ( $h$ )	Cost ( $C$ )
1	\$11
2	$A$
3	\$17
5	$B$

Your Answer:

13. The algebra tile model below represents an expression. Which simplified expression matches the tiles?

$$\boxed{x} \boxed{x} \boxed{x} \boxed{x} \boxed{x} + \boxed{1} \boxed{1} \boxed{1}$$

- (A)  $5x + 3$                       (B)  $3x + 5$   
 (C)  $8x$                               (D)  $5x \times 3$

14. A pizza costs \$14 and is split equally among  $f$  friends. Which expression shows each friend's share?

- (A)  $14f$                               (B)  $14 + f$   
 (C)  $14 - f$                           (D)  $14 \div f$

15. Which inequality represents "you need more than \$25 to buy the video game"?

- (A)  $d \leq 25$                           (B)  $d < 25$   
 (C)  $d > 25$                           (D)  $d \geq 25$



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16. Write an inequality whose graph has a closed circle at 10 and shading to the right.

(A)  $x > 10$

(B)  $x < 10$

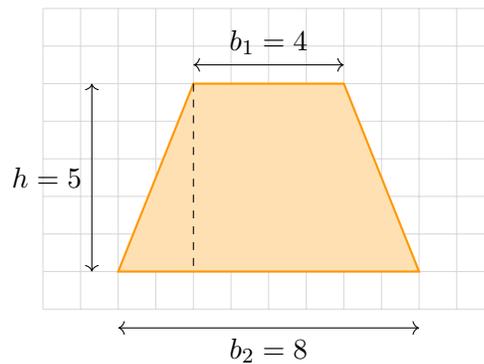
(C)  $x \geq 10$

(D)  $x \leq 10$

17. Find the area of a triangle with base 16 cm and height 11 cm.

Your Answer:

18. What is the area of the trapezoid shown below?



(A) 20 square units

(B) 40 square units

(C) 60 square units

(D) 30 square units

19. A swimming pool is 25 m long, 10 m wide, and 2 m deep. How many cubic meters of water does it hold when full?

Your Answer:



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★ *End of Practice Test 1* ★

*Great job finishing the test!*

 *My Score*

*I got \_\_\_\_\_ out of 30 questions right.*

*Check your answers in the **Answer Key** at the back of the book.*

 *Review any questions you missed. That's how we learn!*

THANK YOU

## Enjoyed This Preview?

### Get the Full Book!

*This preview shows just a small sample of what's inside.*

*The complete book includes:*

- ✓ *All chapters and topics*
- ✓ *Hundreds of practice problems*
- ✓ *Complete answer key with explanations*
- ✓ *Colorful visuals and step-by-step examples*
- ✓ *Reference sheets and progress trackers*

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