

# 6

## Virginia SOL

# GRADE 5 MATH

## PRACTICE TESTS

Complete Standards-Based Practice  
— for Grade 5 Math Success —



**6 FULL-LENGTH  
PRACTICE TESTS**

Realistic style questions



**STANDARDS-BASED  
PRACTICE**

Covers all Grade 5  
Math standards



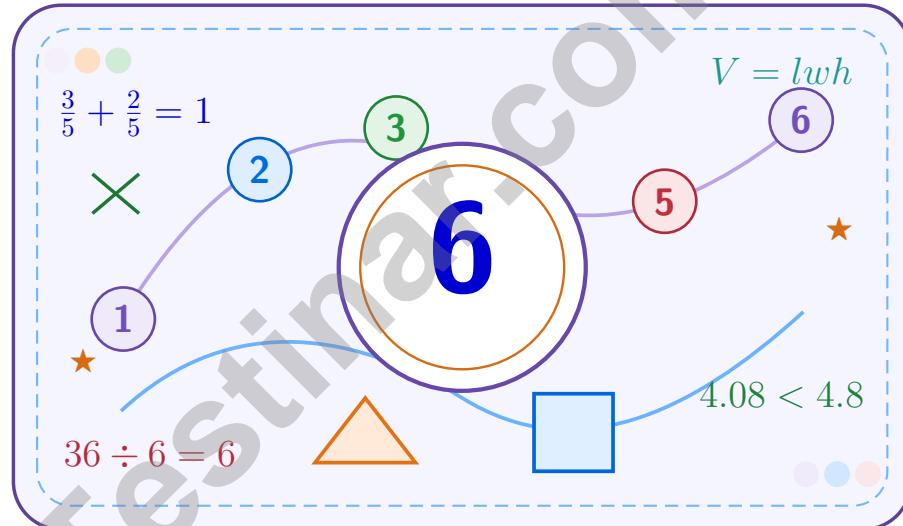
**BUILD CONFIDENCE.  
IMPROVE SCORES.**

Target weak areas and  
achieve success

★ **STRONG PRACTICE. BRIGHT FUTURE.** ★

# 6 Virginia SOL Grade 5 Math Practice Tests

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



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

Jay Daie and Reza Nazari



# Copyright ©

**Testinar Inc**



Published by Testinar Inc

[Testinar.com](http://Testinar.com)

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of the author, except in the case of brief quotations embodied in critical reviews and certain other noncommercial uses permitted by copyright law, including Section 107 or 108 of the 1976 United States Copyright Act.

This publication is independently produced and has no official connection to any state, district, or national testing program.

Test names and organizational names used herein are the property of their respective trademark holders.



*Copyright ©*

# 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 six 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 six tests into steady growth

## 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.

## A Six-Week Climb Map

Week	Mission Focus
<b>Week 1</b>	Take Test 1 and review any place-value or operation slips.
<b>Week 2</b>	Take Test 2 and focus on showing neat, easy-to-read work.
<b>Week 3</b>	Take Test 3 and give extra time to fractions or decimals if needed.
<b>Week 4</b>	Take Test 4 and slow down on word problems and units.
<b>Week 5</b>	Take Test 5 and compare your score and habits with earlier rounds.
<b>Week 6</b>	Take Test 6 and finish with calm, careful, confident work that uses everything you practiced before.



Scan me

# 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 Virginia SOL. 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.



# Table of Contents

★ Practice Test 1	_____	13
★ Practice Test 2	_____	28
★ Practice Test 3	_____	41
★ Practice Test 4	_____	58
★ Practice Test 5	_____	74
★ Practice Test 6	_____	90
<b>Practice Test Answer Keys</b>	_____	<b>105</b>
<b>Practice Test Answers and Explanations</b>	_____	<b>109</b>

Grade 5 Mathematics

1

Questions: 40 Duration: No time limit

Calculator Policy: Calculators are not allowed



## 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)

1 quart (qt) = 2 pints (pt)

1 gallon (gal) = 4 quarts (qt)

#### Metric

1 liter (L) = 1,000 milliliters (mL)

### WEIGHT AND MASS

#### Customary

1 pound (lb) = 16 ounces (oz)

#### Metric

1 kilogram (kg) = 1,000 grams (g)

1 gram (g) = 1,000 milligrams (mg)

### 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 seed tray measures 9 feet long, 7 feet wide, and 2 feet tall. What is its volume?

A. 63 cubic feet

C. 126 cubic feet

B. 18 cubic feet

D. 14 cubic feet

2) Look at the pattern: 100, 90, 80, 70, ... What is the 10th term?

*Record your answer in the space provided.*

3) Estimate the product of  $47 \times 21$  by rounding to the nearest ten for each factor.

A. 900

C. 1,000

B. 950

D. 1,050

4) If a rectangular prism measures  $9 \text{ m} \times 5 \text{ m} \times 4 \text{ m}$ , what is its volume?

A.  $160 \text{ m}^3$

C.  $200 \text{ m}^3$

B.  $170 \text{ m}^3$

D.  $180 \text{ m}^3$



## 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)

1 quart (qt) = 2 pints (pt)

1 gallon (gal) = 4 quarts (qt)

#### Metric

1 liter (L) = 1,000 milliliters (mL)

### WEIGHT AND MASS

#### Customary

1 pound (lb) = 16 ounces (oz)

#### Metric

1 kilogram (kg) = 1,000 grams (g)

1 gram (g) = 1,000 milligrams (mg)

### 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) Round 4.5 to the nearest whole number.

A. 4

C. 5

B. 4.5

D. 6

2) Is the difference  $7 - 4\frac{1}{12}$  closer to 2 or 3?

A. Closer to 2

C. Exactly between 2 and 3

B. Closer to 4

D. Closer to 3

3) Find the difference:  $\frac{3}{4} - \frac{1}{6}$ .

*Record your answer in the space provided.*

4) Without calculating, compare:  $(55 + 17) \times 6$    $(55 + 17)$

A. Cannot tell

C. =

B. <

D. >

5) A grain storage bin is a rectangular prism with a base of 30 m by 20 m and a height of 4 m. What is the capacity?

A.  $1800 \text{ m}^3$

C.  $2400 \text{ m}^3$

B.  $2200 \text{ m}^3$

D.  $2600 \text{ m}^3$



## 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)

1 quart (qt) = 2 pints (pt)

1 gallon (gal) = 4 quarts (qt)

#### Metric

1 liter (L) = 1,000 milliliters (mL)

### WEIGHT AND MASS

#### Customary

1 pound (lb) = 16 ounces (oz)

#### Metric

1 kilogram (kg) = 1,000 grams (g)

1 gram (g) = 1,000 milligrams (mg)

### 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





## 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)

1 quart (qt) = 2 pints (pt)

1 gallon (gal) = 4 quarts (qt)

#### Metric

1 liter (L) = 1,000 milliliters (mL)

### WEIGHT AND MASS

#### Customary

1 pound (lb) = 16 ounces (oz)

#### Metric

1 kilogram (kg) = 1,000 grams (g)

1 gram (g) = 1,000 milligrams (mg)

### 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 triangle has sides measuring 3 cm, 4 cm, and 5 cm. What type of triangle is this based on its sides?
- A. Equilateral  C. Scalene  
 B. Isosceles  D. Obtuse
- 2) A jewelry item weighs 5.024 grams. Round to the nearest whole gram.
- A. 5 g  C. 5.1 g  
 B. 5.02 g  D. 6 g
- 3) Pattern:  $8.1 \div 10 = 0.81$ ;  $8.1 \div 100 = 0.081$ ;  $8.1 \div 1,000 = ?$
- A. 81  C. 8.1  
 B. 0.081  D. 0.0081
- 4) Which decimal is equivalent to  $\frac{8}{10}$ ?
- A. 0.08  C. 8.0  
 B. 0.8  D. 0.008
- 5) Box A measures 8 feet by 5 feet by 4 feet. Box B measures 7 feet by 5 feet by 4 feet. Which has the greater volume, and by how much?
- A. Box A by 30 cubic feet  C. They have the same volume.  
 B. Box B by 25 cubic feet  D. Box A by 20 cubic feet
- 6) Which is “the quotient of 36 and 4, increased by 9”?
- A.  $36 + 4 \div 9$   C.  $9 + 36 \div (4 + 1)$   
 B.  $36 \div (4 + 9)$   D.  $(36 \div 4) + 9$



## 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.**

Testinar.com



## Practice Test Answers and Explanations

### Practice Test 1 Answers and Explanations

- 1) **Choice C is correct.** (5.MG.1) Use the rectangular-prism volume formula:  $9 \times 7 \times 2 = 126$ . So the volume is 126 cubic feet.
- 2) **The correct answer is 10.** (5.CE.4) Each term decreases by 10. Term 10:  $100 - 9 \times 10 = 100 - 90 = 10$ .
- 3) **Choice C is correct.** (5.MG.2) Round 47 to 50 and 21 to 20. Then  $50 \times 20 = 1,000$ .
- 4) **Choice D is correct.** (5.MG.2) Volume =  $9 \times 5 \times 4 = 45 \times 4 = 180 \text{ m}^3$ .
- 5) **Choice A is correct.** (5.MG.1) The student reversed the order of the coordinates. Instead of writing the  $x$ -coordinate first and  $y$ -coordinate second, the student switched them.
- 6) **Choice C is correct.** (5.NS.1) Adding a trailing zero does not change the value:  $0.7 = 0.70$  (both equal 7 tenths).
- 7) **Choice D is correct.** (5.MG.1) Since 12 inches = 1 foot,  $\frac{1}{2}$  foot =  $12 \div 2 = 6$  inches.
- 8) **The correct answer is 4.1.** (5.CE.2) Choose the operation from the story, then keep the unit with the answer.  $24.6 \div 6 = 4.1$  m. This confirms the answer.
- 9) **Choice B is correct.** (5.CE.1)  $2,288 \div 52 = 44$  remainder 0 (divides evenly). Check:  $52 \times 44 = 2,288$ .
- 10) **Choice A is correct.** (5.MG.1) The base has  $5 \times 7 = 35$  unit cubes. Since the total volume is 35 unit cubes, the prism has 1 layer, so the height is 1 unit.
- 11) **Choice A is correct.** (5.PFA.1)  $0.8 \times 5 = 4$ . The area model shows 0.8 (width) times 5 (height) equals 4 square units.
- 12) **Choice C is correct.** (5.MG.2) First cyclist's total:  $15.5 + 8.25 = 23.75$  km. Second cyclist's total:  $9.75 + 12 = 21.75$  km. The first cyclist traveled  $23.75 - 21.75 = 2$  km farther.
- 13) **Choice C is correct.** (5.NS.2)  $23 \times 10 = 230$ . When multiplying by 10, append one zero.
- 14) **Choice C is correct.** (5.CE.2) The student found  $4 \times \frac{1}{2} = 2$ . But  $4 \div \frac{1}{2}$  asks how many halves are in 4 wholes. There are 2 halves in each whole, so 4 wholes contain  $4 \times 2 = 8$  halves.
- 15) **Choice B is correct.** (5.CE.2) Use total amount divided by the size of one piece. The equation is  $2 \div \frac{1}{5} = n$ .
- 16) **Choice A is correct.** (5.CE.2)  $3\frac{1}{4} = \frac{13}{4}$ . Then  $\frac{13}{4} \times 2 = \frac{26}{4} = 6\frac{2}{4} = 6\frac{1}{2}$ .
- 17) **Choice B is correct.** (5.MG.1) Compare each pair:  $1 \times 7 = 7$ ,  $2 \times 7 = 14$ ,  $3 \times 7 = 21$ , and  $4 \times 7 = 28$ .
- 18) **Choice C is correct.** (5.CE.2) The denominator 4 becomes 8 (multiply by 2). Multiply numerator by 2:  $3 \times 2 = 6$ .
- 19) **Choices A, B are correct.** (5.CE.2) Multiply numerators and denominators:  $\frac{3}{4} \cdot \frac{4}{5} = \frac{12}{20} = \frac{3}{5}$ . Choice C adds instead of multiplying, and D is not true.
- 20) **Choice A is correct.** (5.MG.1) The base area is  $8 \times 6 = 48$  square centimeters. Since  $240 \div 48 = 5$ , the height is 5 cm.
- 21) **Choice A is correct.** (5.CE.2)  $\text{LCM}(7,3) = 21$ .  $\frac{2}{7} = \frac{6}{21}$  and  $\frac{1}{3} = \frac{7}{21}$ .  $\frac{6}{21} + \frac{7}{21} = \frac{13}{21}$  of the project.
- 22) **The correct answer is 36000.** (5.NS.2) Move the decimal point four places right:  $3.6 \rightarrow 36,000$ .
- 23) **Choice C is correct.** (5.CE.2)  $8 \times 1 = 8$ , while  $8 \times \frac{3}{2} = 12$ . Since  $\frac{3}{2} > 1$ , the second length is larger.
- 24) **The correct answer is 2.** (5.MG.1)  $30 \div (5 \times 3) = 30 \div 15 = 2$ .
- 25) **Choice D is correct.** (5.NS.2) Total items divided by items per box:  $6,400 \div 100 = 64$  boxes.
- 26) **Choice B is correct.** (5.CE.2) LCM of 5, 3, 6 is 30.  $\frac{3}{5} = \frac{18}{30}$ ,  $\frac{2}{3} = \frac{20}{30}$ ,  $\frac{5}{6} = \frac{25}{30}$ . Order: A, B, C.
- 27) **Choice A is correct.** (5.MG.2)  $V = B \times h = 32 \times 9 = 288 \text{ in}^3$ .
- 28) **Choice C is correct.** (5.CE.4) Choice C translates correctly: the product of 2 and 8 is  $2 \times 8$ , and 5 more gives  $2 \times 8 + 5$ . The other pairs change the grouping or order.
- 29) **Choice B is correct.** (5.PFA.1) Each value in Pattern Y is double the matching value in Pattern X:  $3 \times 2 = 6$ ,  $6 \times 2 = 12$ , and  $9 \times 2 = 18$ .
- 30) **Choice D is correct.** (5.CE.2) A half-pound bag is one of 2 equal parts of a pound. So  $15 \div \frac{1}{2} = 15 \times 2 = 30$  bags.
- 31) **Choice A is correct.** (5.CE.1) Write  $12.30 - 4.56 = 7.74$ . Annex zero to match place values.
- 32) **Choice B is correct.** (5.CE.4) The correct work multiplies before adding. Student B finds  $2 \times 5 = 10$  first, then adds  $6 + 10 = 16$ .



### A Message From Your Math Partner

#### Hey there, Problem Solver!

◇ Incredible work! You've journeyed through six complete practice tests, and that's no small accomplishment! Each question you tackled strengthened your mathematical thinking. When you began, some problems might have felt overwhelming, but now you've developed the skills to break them down systematically. You've transformed into a confident mathematician who understands that persistence beats perfection every single time! ◇

★ **Here's something mathematicians understand:** mistakes are simply opportunities to learn something new. The greatest problem-solvers in history made countless errors before their breakthroughs. Through these six tests, you've practiced that same growth mindset. You've discovered that every challenging problem teaches you something valuable, and that knowledge stays with you forever! ★

#### Your Mathematical Growth Journey

- **Problem-Solving Skills:** EXCEPTIONALLY DEVELOPED! You can analyze complex situations with confidence!
- **Strategic Thinking:** SIGNIFICANTLY STRENGTHENED! You recognize patterns and apply effective strategies!
- **Persistence Level:** REMARKABLY HIGH! You've proven you can work through any challenge!
- **Test Readiness:** COMPLETELY PREPARED! You have all the tools you need to succeed!

**Remember this:** test day is your opportunity to demonstrate everything you've learned! You've completed six comprehensive practice tests; that's substantial preparation! You've analyzed problems, applied strategies, and developed mathematical confidence. Now it's time to showcase your abilities! Take a calming breath, trust your preparation, and remember that every skill you've built is ready to support you. You've got this!

I'm genuinely proud of your dedication and effort! If you'd like to share your experiences, ask questions, or simply need encouragement, please email me at [reza@testinar.com](mailto:reza@testinar.com). I'd be delighted to hear from you!

**Reza Nazari & Jay Daie**

# 6 FULL-LENGTH TESTS. ENDLESS POTENTIAL.

PRACTICE TODAY. SUCCEED TOMORROW.

Give your child the tools they need to build strong math skills and test-taking confidence! This book includes **6 full-length practice tests** along with standards-based practice, mixed review, word problems, and a complete answer key.

★★★  
PRACTICE  
WITH PURPOSE.  
ACHIEVE WITH  
CONFIDENCE.

## WHAT'S INSIDE:



### 6 FULL-LENGTH PRACTICE TESTS

Realistic tests designed to reflect the actual test format and help build confidence.



### STANDARDS-BASED PRACTICE

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



### MIXED REVIEW

Reinforces key concepts with a variety of question types and review exercises.



### WORD PROBLEMS

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



### COMPLETE ANSWER KEY

Step-by-step explanations for every question to support learning and growth.



### IMPROVE. PRACTICE. ACHIEVE.

Consistent practice leads to stronger skills, higher scores, and greater success.



## WHY PRACTICE MAKES A DIFFERENCE



### BUILD CONFIDENCE

Feel prepared and ready for any challenge.



### IMPROVE ACCURACY

Strengthen skills and reduce careless mistakes.



### THINK STRATEGICALLY

Develop problem-solving skills and deepen understanding.



### MANAGE TIME

Practice under timed conditions to build stamina.



### STAY MOTIVATED

Track progress and celebrate every win.



### ACHIEVE SUCCESS

Reach goals and unlock your full potential!



Visit [testinar.com/math5](https://testinar.com/math5)

for more Grade 5 math resources and practice materials!



**Testinar**

Smart Practice. Stronger Results.