

$\frac{2}{3}$

0,25



%

FULL-LENGTH

Virginia

Aligned to State Standards

SOL

MATH

Grade

5

$\frac{2}{4}$

$7 \times 8 =$



7×8

$56 \div 7$

$(a+b)^2$

PRACTICE TESTS

Complete State Standards Review
with Answer Key and
Essential Math Skills Practice



3 Full-Length Practice Tests
Aligned to State Standards



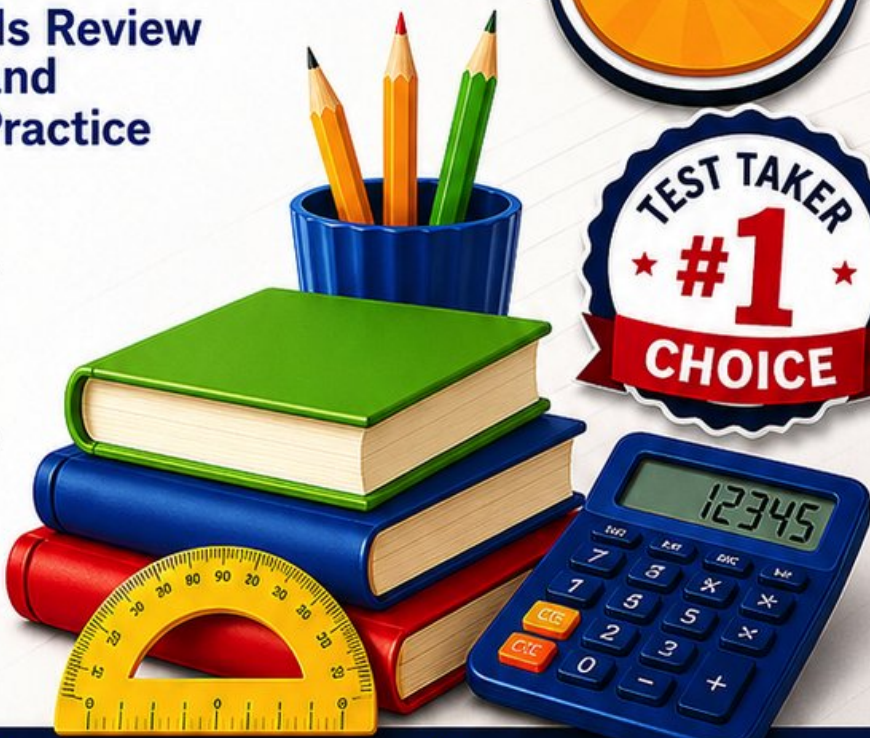
Covers All Grade 5 Math Topics
Numbers & Operations, Fractions,
Decimals, Geometry, Measurement,
Data & Problem Solving



Build Confidence
Strengthen Skills • Improve Accuracy
• Boost Test Readiness



Detailed Answer Key
Step-by-Step Explanations
for All Questions



WRITTEN FOR
GRADE 5 STUDENTS



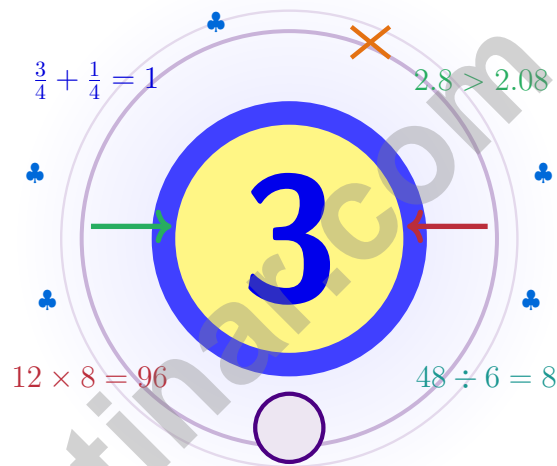
PERFECT FOR
TEST PREP & REVIEW



CLASSROOM, HOME,
OR SELF-STUDY USE

3 Virginia SOL Grade 5 Math Practice Tests

Old-dominion math for thinkers who think long term



Three full tests, a friendly quick review, smart strategy pages, and student-tested support that help Grade 5 mathematicians from The Old Dominion walk in ready to think.

Jay Daie and Reza Nazari



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Welcome, Virginia Math Explorer

Old-dominion math for thinkers who think long term

A Note to Grade 5 Mathematicians of Virginia

Math is like the Blue Ridge Parkway – the careful drive rewards every curve with a wider view.

Some questions will feel easy from the very first read. Others will ask you to pause, sketch, estimate, or try again. That is not a problem. That is practice doing exactly what it should do. Every honest attempt grows your math brain a little stronger.

See

See the question fully
before you start the
math.

Plan

Pick a strategy that fits
the numbers in front of
you.

Build

Build the answer step
by step, no shortcuts.

A Virginia promise to yourself: I will pace each problem like a parkway drive – slow turns, careful curves, beautiful views.

How to Use This Book

A simple game plan that turns practice into real progress

Step 1: Set

Set the table – pencil ready, distractions gone.

Wake up the big Grade 5 ideas before the test starts so your brain is already warmed up.

Step 2: Solve

Take one whole test in one quiet sitting.

Find a calm corner, settle in, and aim for careful, honest choices before quick ones.

Step 3: Look Back

Walk through your answers without rushing.

Circle missed questions, sort out what went sideways, and notice which skills are calling for more attention.

Step 4: Climb

Pick one or two skills to sharpen before next time.

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

A Strong 3-Week Virginia Routine

Week 1	Test 1 sets your baseline. Notice what feels easy and what wobbles.
Week 2	Test 2 is for repair. Slow down on the topics that tripped you up.
Week 3	Test 3 is for proof. Show how steady your thinking has become.



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Test Overview

What these practice tests help Grade 5 students build

These three practice tests prepare Grade 5 students in the Old Dominion for the Virginia SOL with the steady focus of a long drive home. The goal is bigger than getting answers right. Students are practicing how to read with care, choose a strategy, solve step by step, and explain their reasoning clearly – the same way mathematicians do every single day.

Selected-Response Questions

Students solve the problem and choose the best answer. Estimating first, ruling out weak choices, and checking for reasonableness can save both time and points.

Constructed-Response Questions

Students show their steps, explain a method, or back up an answer with clear math. Clean reasoning matters because it shows how the answer was actually found.

Grade 5 Ideas That Show Up Again and Again

- place value, comparing numbers, and rounding
- multi-digit addition, subtraction, multiplication, and division
- fractions, mixed numbers, and decimals
- perimeter, area, volume, and measurement conversions
- line plots, tables, numerical patterns, and coordinate points
- geometry and multi-step real-world problems

What strong work looks like on the SOL: the math is correct, the steps are readable, the labels and units match the problem, and the final answer truly answers the question being asked.



Table of Contents

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

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

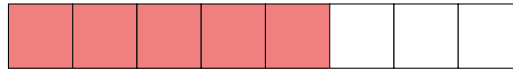
1 minute (min) = 60 seconds (sec) 1 week = 7 days

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

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



- 1) Bar shows 8 parts, 5 shaded. Remove 2 parts. $\frac{5}{8} - \frac{2}{8} = ?$



- A. $\frac{3}{8}$
 C. $\frac{2}{8}$
 B. $\frac{7}{8}$
 D. $\frac{5}{16}$
- 2) A teacher drew a place-value chart for 5.693 and asked students to identify which place is 10 times the hundredths place.

Ones	Tenths	Hundredths	Thousandths
5	6	9	3

Which place satisfies this condition?

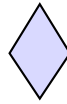
- A. Thousandths
 C. Hundredths
 B. Ones
 D. Tenths
- 3) Is the product of 0.7×0.8 greater than, less than, or equal to both factors?

Factor	Compare to Product
0.7	?
0.8	?

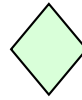
- A. Product is greater than both
 C. Product equals one factor
 B. Product is less than both
 D. Product is between them
- 4) A rectangular tank holds 480 m^3 of water. Its length is 16 m and its height is 6 m. What is the width?
- A. 4 m
 C. 6 m
 B. 5 m
 D. 7 m



5) Look at the two shapes. Which statement correctly compares their attributes?



Kite



Rhombus

- A. Both are quadrilaterals, but only the rhombus must have two pairs of parallel sides.
 - B. Both have exactly 3 sides.
 - C. Both must have four right angles.
 - D. Both must have exactly one pair of parallel sides.
- 6) Two patterns: “Subtract 1” (start 10) and “Divide by 2” (start 16). Create ordered pairs (S, D) for term 1 and term 2:
- A. Term 1: $(10, 16)$; Term 2: $(9, 8)$
 - B. Term 1: $(1, 1)$; Term 2: $(2, 2)$
 - C. Term 1: $(10, 8)$; Term 2: $(9, 4)$
 - D. Term 1: $(10, 16)$; Term 2: $(10, 8)$
- 7) A recipe uses $1\frac{1}{5}$ cups of oats for one batch. Nora makes $2\frac{1}{4}$ batches. How many cups of oats does she use?

	2	$\frac{1}{4}$
1	2×1	$\frac{1}{4} \times 1$
$\frac{1}{5}$	$2 \times \frac{1}{5}$	$\frac{1}{4} \times \frac{1}{5}$

$2\frac{1}{4}$ batches \times $1\frac{1}{5}$ cups per batch

- A. $2\frac{2}{3}$ cups
- B. $2\frac{7}{10}$ cups
- C. 3 cups
- D. $1\frac{4}{5}$ cups



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1 yard (yd) = 3 feet (ft)	1 centimeter (cm) = 10 millimeters (mm)
1 yard (yd) = 36 inches (in.)	1 kilometer (km) = 1,000 meters (m)

CAPACITY

Customary	Metric
1 cup (c) = 8 fluid ounces (fl oz)	1 liter (L) = 1,000 milliliters (mL)
1 pint (pt) = 2 cups (c)	
1 quart (qt) = 2 pints (pt)	
1 gallon (gal) = 4 quarts (qt)	

WEIGHT AND MASS

Customary	Metric
1 pound (lb) = 16 ounces (oz)	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
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1) A trail crew checks 3 miles of track. Each section is $\frac{1}{6}$ mile long. How many sections does the crew check?

A. 18 sections

B. 15 sections

C. 27 sections

D. 30 sections

2) Convert 5,000 milliliters to liters.

A. 0.5 L

B. 500 L

C. 50 L

D. 5 L

3) A box has $V = 210 \text{ ft}^3$, $l = 7 \text{ ft}$, $w = 5 \text{ ft}$. Find its height.

Record your answer in the space provided.

4) Container A holds 36 cubic inches. Container B holds 48 cubic inches. How much more does Container B hold?

Container A
36 cu. in.

Container B
48 cu. in.

A. 12 cubic inches

B. 24 cubic inches

C. 84 cubic inches

D. 112 cubic inches

5) Evaluate: $\{[(12 \div 3) + 1] \times 2\} - 3$

A. 5

B. 7

C. 9

D. 13



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

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



1) Compare: $(47 + 13) - 10$ \square $47 + (13 - 10)$

A. $>$

C. $=$

B. $<$

D. Cannot tell

2) What is the least common denominator for $\frac{4}{7}$ and $\frac{2}{9}$?

A. 16

C. 28

B. 63

D. 36

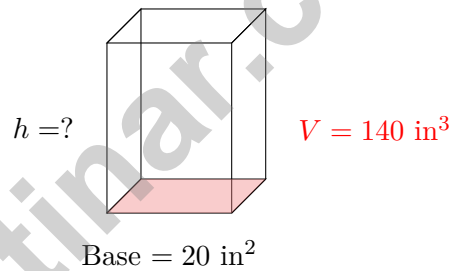
3) A hardware store ordered 7,000 screws. They will pack them equally into 10 boxes. How many screws are in each box?

A. 70,000

C. 70

B. 700

D. 7



4)

Find the height.

A. 7 in

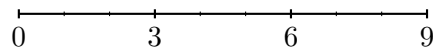
C. 5 in

B. 120 in

D. 2800 in

5) A seamstress has 9 yards of thread. How many $\frac{1}{3}$ -yard pieces can she cut?

9 yards of thread



A. 9

C. 27

B. 18

D. 36



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

- 1) **Choice A is correct.** (5.CE.2) Same denominator: $5 - 2 = 3$ parts remaining. Answer: $\frac{3}{8}$.
- 2) **Choice D is correct.** (5.PFA.1) Moving one place to the left makes a place value 10 times as large. The place to the left of hundredths is tenths.
- 3) **Choice B is correct.** (5.PFA.1) $0.7 \times 0.8 = 0.56$. When multiplying two decimals both less than 1, the product is smaller than either factor.
- 4) **Choice B is correct.** (5.MG.1) The known length and height make groups of $16 \times 6 = 96$ cubic meters. Since $480 \div 96 = 5$, the width is 5 m.
- 5) **Choice A is correct.** (5.MG.3) Both shapes have 4 sides and 4 vertices. A rhombus must have two pairs of parallel sides, while a kite does not have to.
- 6) **Choice A is correct.** (5.MG.1) Subtract 1 (start 10): 10, 9, 8... Divide by 2 (start 16): 16, 8, 4...
- 7) **Choice B is correct.** (5.CE.2) $2\frac{1}{4} = \frac{9}{4}$ and $1\frac{1}{5} = \frac{6}{5}$. Multiply: $\frac{9}{4} \times \frac{6}{5} = \frac{54}{20} = 2\frac{14}{20} = 2\frac{7}{10}$ cups.
- 8) **Choice A is correct.** (5.CE.4) Each term is made by multiplying the previous term by 3: $1 \times 3 = 3$, $3 \times 3 = 9$, and $9 \times 3 = 27$. Continue the rule: $27 \times 3 = 81$.
- 9) **The correct answer is $\frac{1}{20}$.** (5.CE.2) $\frac{1}{5} \times \frac{1}{4} = \frac{1}{20}$.
- 10) **Choice A is correct.** (5.MG.3) A rectangle is a quadrilateral with four right angles and two pairs of parallel sides. It does not need to have four equal sides.
- 11) **Choice C is correct.** (5.CE.4) Evaluate inside the parentheses first: $15 - 7 = 8$. Then $8 \times 3 = 24$, so choice C has a value of 24.
- 12) **Choice A is correct.** (5.NS.2) $12 \times 10^3 = 12000$. The digit 1 (from 12) moves to the thousands place.
- 13) **Choice D is correct.** (5.CE.2) $\frac{4}{5} \times 40 = \frac{4 \times 40}{5} = \frac{160}{5} = 32$.
- 14) **Choice A is correct.** (5.CE.2) Use total amount divided by the size of one piece. The equation is $2 \div \frac{1}{8} = n$.
- 15) **Choice A is correct.** (5.MG.3) Each angle, 50° , 60° , and 70° , is less than 90° . A triangle with three acute angles is an acute triangle.
- 16) **Choice C is correct.** (5.NS.2) $5.6 \div 10 = 0.56$ and $56 \div 100 = 0.56$. Both equal 0.56.
- 17) **Choice B is correct.** (5.CE.4) The words “the sum of 7 and 5” mean 7 and 5 must be grouped together as $(7 + 5)$. Then multiply that whole sum by 3.
- 18) **Choices A, B are correct.** (5.CE.2) Multiplying by a factor less than 1 makes a number smaller, while multiplying by a factor greater than 1 makes it larger. Choices C and D reverse that scaling rule.
- 19) **Choice B is correct.** (5.NS.2) The tenths place is the first position after the decimal point. In 3.915, the tenths digit is 9.
- 20) **The correct answer is 6000.** (5.NS.2) Multiplying by 10,000 moves the decimal point four places right: $0.6 \rightarrow 6,000$.
- 21) **Choice D is correct.** (5.MG.2) Multiply: $213 \times 3 = (200 \times 3) + (10 \times 3) + (3 \times 3) = 600 + 30 + 9 = 639$.
- 22) **Choice B is correct.** (5.NS.1) Student B did not regroup before subtracting the fractions, so the whole-number part is too large. The correct difference is $2\frac{2}{4} = 2\frac{1}{2}$.
- 23) **Choice A is correct.** (5.CE.2) Both circles show the same shaded amount. Circle A has 1 part shaded out of 3; Circle B has 2 parts shaded out of 6. Since these represent equal portions, $\frac{1}{3} = \frac{2}{6}$.
- 24) **The correct answer is 343 cm^3 .** (5.MG.2) A cube has the same side length in every direction. So the volume is $7 \times 7 \times 7 = 343 \text{ cm}^3$.
- 25) **Choice A is correct.** (5.MG.3) Figures with 4 equal sides include the rhombuses that are not squares and the squares: $4 + 3 = 7$.
- 26) **Choice A is correct.** (5.NS.1) 0.3 covers 3 tenths of the grid; 0.03 covers 3 hundredths. Tenths are larger, so $0.3 > 0.03$.
- 27) **Choice D is correct.** (5.NS.2) $25 \times 1000 = 25000$. Append three zeros to 25.
- 28) **Choice B is correct.** (5.MG.1) $2 \times 3 \times 6 = 36$ unit cubes. The other products do not equal 36.
- 29) **Choice B is correct.** (5.CE.1) Add step by step: $1.23 + 2.14 = 3.37$; then $3.37 + 3.45 = 6.82$.
- 30) **Choice D is correct.** (5.MG.1) 2 yards = $2 \times 3 = 6$ feet. 6 feet = $6 \times 12 = 72$ inches.



Notes From Your Math Architect

Dear Builder of Big Ideas,

◇ Across 3 practice tests, you laid down brick after brick of math skill. The foundation is solid. The walls are strong. The roof is in place. You've built yourself a study sturdy enough to stand any storm test day might bring. ◇

★ **What architects know:** a great building starts with a great plan. You've practiced planning—reading carefully, picking your strategy, and working step by step. That blueprint thinking is what turns hard problems into clear answers. ★

Builder's Inspection Checklist

- **Foundation:** ROCK SOLID! Number sense, fractions, decimals—all in place.
- **Frame:** STRONG! You can break down a problem into clear parts.
- **Walls:** TIGHT! Your work is organized and easy to follow.
- **Roof:** FINISHED! You always answer the question that was asked.

Architect's tip: on test day, build each answer like a small building. Foundation: read the question. Frame: pick the strategy. Walls: do the math. Roof: check the answer. Each piece matters. Each piece is yours.

If you'd like to share your experience or have questions, please email me at reza@testinar.com. I'd love to hear from you!

Reza Nazari & Jay Daie

Your Math Architect (Built to Last)

Build Skills. Boost Confidence. Excel on the Grade 5 Math Test.

Help your child succeed with confidence! This book includes **3 full-length Grade 5 Math practice tests** aligned to state standards. With a focus on essential skills, problem solving, and test readiness, it's the perfect resource for classroom, home, or on-the-go practice.



WHAT'S INSIDE:



3 Full-Length Grade 5 Math Practice Tests

Realistic test format to build familiarity and confidence.



Covers All Essential Math Topics

Fractions, decimals, geometry, measurement, data, number operations, and more.



Build Strong Math Skills

Strengthen understanding and problem-solving through varied question types.



Detailed Answer Key

Step-by-step explanations to help your child learn from mistakes and improve.



Track Progress & Improve

Use score trackers to identify strengths and focus on areas that need more practice.



The Smarter Way to Prepare!

Consistent practice builds stronger skills, sharper thinking, and test-day success.

- ✓ Reinforce classroom learning
- ✓ Improve accuracy and speed
- ✓ Reduce test anxiety
- ✓ Achieve your best score!



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