

10 COMPLETE

Virginia

SOL

GRADE 5

MATH

PRACTICE TESTS

Standards-Based Review with
Mixed Practice and Detailed Answer Key



10 Complete Practice Tests

Build confidence and test readiness



Standards-Based Review

Covers key Grade 5 math standards



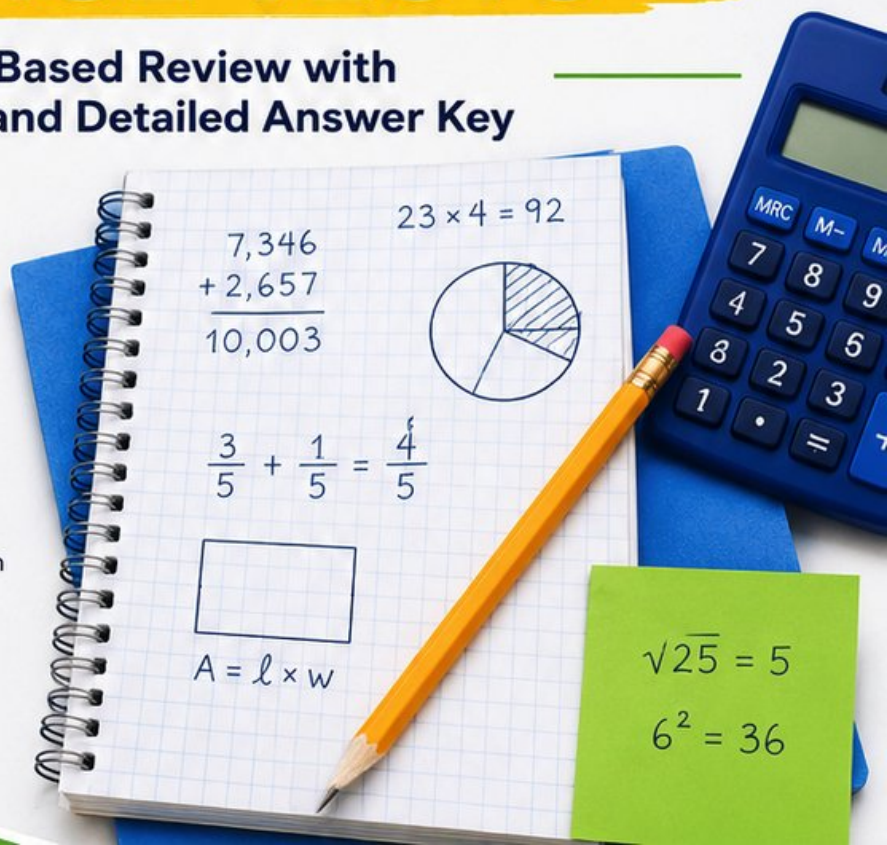
Mixed Practice

Variety of question types to strengthen skills



Detailed Answer Key

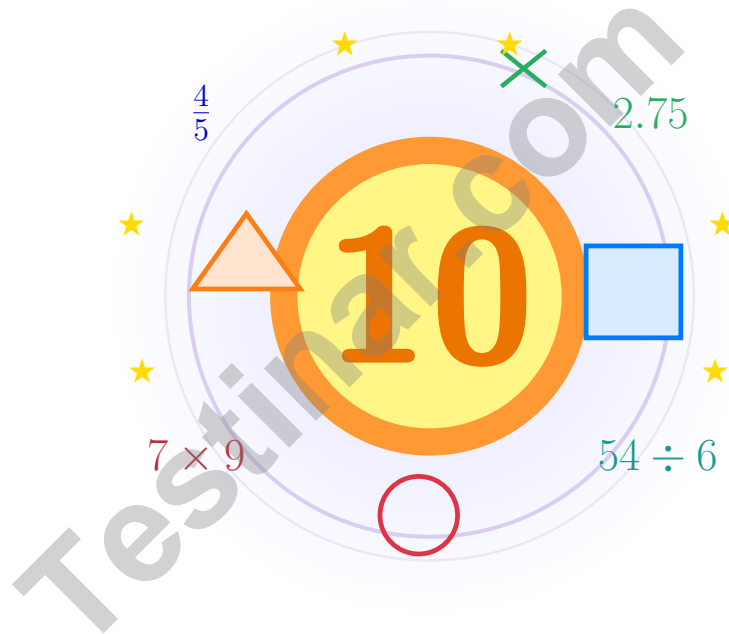
Step-by-step explanations for every question



**PREPARE.
PRACTICE.
SUCCEED!**

10 Virginia SOL Grade 5 Math Practice Tests

Bright review, thoughtful practice, and steady confidence for Grade 5



Ten full tests, a focused quick review, and student-friendly support that keeps practice clear and encouraging.

Jay Daie and Reza Nazari



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Welcome!

This book is a place to practice bravely and think clearly

Dear Grade 5 Mathematician

This book gives you ten chances to read carefully, solve thoughtfully, and build steady math confidence. Some problems will feel friendly right away. Some will take more patience. Both kinds help you grow.

The goal is not to feel perfect before you begin. The goal is to practice honest effort, learn from corrections, and notice how much stronger your thinking becomes over time.

Read

Slow down and understand the task.

Solve

Show clear steps and good choices.

Learn

Use mistakes as clues for what comes next.

A strong habit from the start: keep your work neat, estimate when it helps, write units carefully, and do not let one hard problem decide your mood for the whole page.



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How to Use This Book

A simple routine that turns practice into real progress

Step 1

Warm up with the quick review.

Spend a few minutes refreshing the ideas before the test begins.

Step 2

Take one full practice test.

Work in a calm spot and aim for careful thinking before speed.

Step 3

Check your work honestly.

Circle missed questions and notice which skills need another look.

Step 4

Fix and reflect.

Read the explanation, repair the work, and bring that lesson into the next test.



A Good 10-Week Rhythm

Week 1	Take Test 1 and notice your starting strengths.
Week 2	Take Test 2 and slow down on word problems.
Week 3	Take Test 3 and sharpen multiplication and division checks.
Week 4	Take Test 4 and focus on fractions and decimals.
Week 5	Take Test 5 and watch your labels and units closely.
Week 6	Take Test 6 and practice calmer pacing.
Week 7	Take Test 7 and compare your habits with the earlier weeks.
Week 8	Take Test 8 and focus on tidy, checkable work.
Week 9	Take Test 9 and compare your progress with the way you worked in the earlier weeks.
Week 10	Take Test 10 and finish with steady, confident effort while using every strong habit you built.



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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

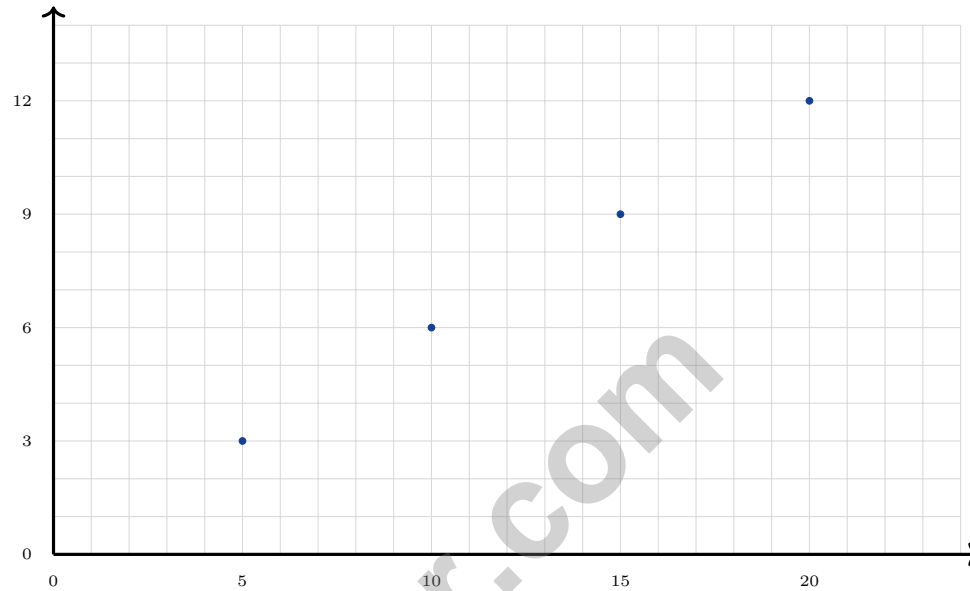
1 minute (min) = 60 seconds (sec) 1 week = 7 days

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

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



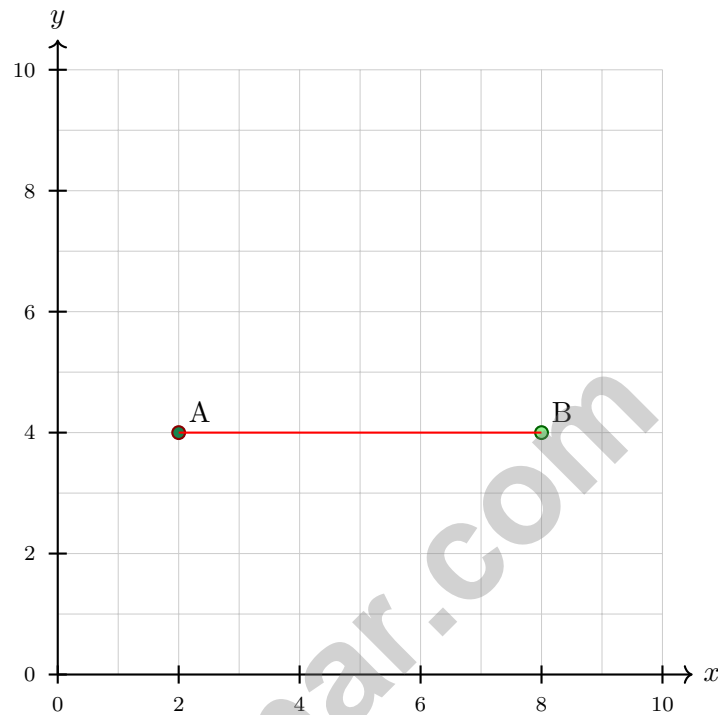
- 1) A graph shows the pattern from two input-output rules. Input values: 1, 2, 3, 4. First output: 5, 10, 15, 20. Second output: 3, 6, 9, 12. Which (first output, second output) pair matches input 2?



- A. (5, 3) C. (15, 9)
- B. (10, 6) D. (20, 12)



- 2) Two points are plotted on a coordinate plane. Point A is at (2, 4) and point B is at (8, 4). What is the distance between the two points?



- A. 2 units
- B. 4 units
- C. 6 units
- D. 8 units
- 3) Multiply: $\frac{3}{5} \times \frac{5}{6}$
- A. $\frac{1}{2}$
- B. $\frac{3}{11}$
- C. $\frac{8}{11}$
- D. $\frac{8}{30}$
- 4) How many right angles does a rectangle have?

Record your answer in the space provided.



Grade 5 Mathematics Reference Materials

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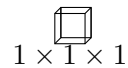
1 day = 24 hours (hr) 1 year = 52 weeks



- 1) Which statement correctly uses equivalent fractions to compare $\frac{4}{6}$ and $\frac{3}{4}$?
- A. $\frac{4}{6} = \frac{8}{12}$ and $\frac{3}{4} = \frac{9}{12}$, so $\frac{3}{4}$ is greater. C. $\frac{4}{6} = \frac{2}{3}$ and $\frac{3}{4} = \frac{2}{3}$, so they are equal.
 B. $\frac{4}{6} = \frac{4}{12}$ and $\frac{3}{4} = \frac{3}{12}$, so $\frac{4}{6}$ is greater. D. $\frac{4}{6} = \frac{10}{12}$ and $\frac{3}{4} = \frac{9}{12}$, so $\frac{4}{6}$ is greater.
- 2) Identify the error: A student said a triangle with sides 5 cm, 5 cm, and 8 cm is equilateral.
- A. Correct; all sides are present C. Incorrect; it is scalene because the sides are different
 B. Incorrect; it is isosceles because two sides are equal D. Incorrect; equilateral triangles must have sides over 5 cm
- 3) Evaluate the expression: $48 \div (6 + 2) + 5 \times 3$

Record your answer in the space provided.

- 4) Which expression equals 24×15 ?
- A. $(24 + 15) \times 2$ C. $24 - 15$
 B. $24 + 15$ D. 15×24
- 5) A cubic unit is defined as:



- A. A cube with all sides 1 unit long C. Any cube, regardless of size
 B. A flat square with area 1 square unit D. A line segment of length 1



39) Bookshelf: 5 ft by 3 ft by 6 ft. Volume =?

A. 14 ft^3

C. 90 ft^3

B. 15 ft^3

D. 18 ft^3

40) A science lab measures a sample with a mass of 15.375 grams. What is the digit in the hundredths place?

A. 1

C. 7

B. 3

D. 5

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End of Practice Test

Nice work. Pause, breathe, and check your answers with care.



Grade 5 Mathematics

10

Questions: 40 Duration: No time limit

Calculator Policy: Calculators are not allowed



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

- Choice B is correct.** **(5.MG.1)** For input 2: first output is 10 (position 2 in 5, 10, 15, 20), second output is 6 (position 2 in 3, 6, 9, 12).
- Choice C is correct.** **(5.MG.1)** Both points have the same y -coordinate (4), so they are on a horizontal line. The distance is the difference of the x -coordinates: $8 - 2 = 6$ units.
- Choice A is correct.** **(5.CE.2)** $\frac{3}{5} \times \frac{5}{6} = \frac{15}{30}$, which simplifies to $\frac{1}{2}$.
- The correct answer is 4.** **(5.MG.3)** All four angles of a rectangle are right angles.
- Choice B is correct.** **(5.CE.1)** If $1,620 \div 27 = 60$, then $3,240 \div 54 = 60$ as well (double both dividend and divisor). Option B: $54 \times 60 = 3,240$ (correct).
- Choice C is correct.** **(5.MG.1)** Original: $8 \times 2 \times 2 = 32$ cubes. Double the length to 16: $16 \times 2 \times 2 = 64$ unit cubes.
- Choice A is correct.** **(5.MG.2)** If one fraction has denominator m and the other has denominator n , the grid has $m \times n$ total squares. The overlap squares equal the product of the numerators.
- Choice D is correct.** **(5.CE.2)** LCD of 3 and 5 is 15. Divide each bar into 15 parts to align them.
- Choice B is correct.** **(5.MG.2)** Volume is length \times width \times height: $10 \times 6 \times 4 = 240$ cubic centimeters.
- The correct answer is $3\frac{1}{3}$.** **(5.CE.2)** Convert the mixed numbers: $2\frac{2}{3} = \frac{8}{3}$ and $1\frac{1}{4} = \frac{5}{4}$. Multiply to get $\frac{40}{12}$, which simplifies to $\frac{10}{3} = 3\frac{1}{3}$.
- Choice C is correct.** **(5.CE.2)** The one-tenth bar is divided among 3 students. So the matching equation is $\frac{1}{10} \div 3 = n$.
- The correct answer is 30000.** **(5.NS.2)** Multiply the nonzero parts first: $3 \times 5 \times 2 = 30$. The three factor zeros make the final product 30,000.
- Choice A is correct.** **(5.CE.2)** $\frac{2}{5} \times \frac{5}{6} = \frac{10}{30}$, which simplifies to $\frac{1}{3}$ pound.
- Choice B is correct.** **(5.MG.1)** The base area is $20 \times 8 = 160$ square meters. Since $800 \div 160 = 5$, the height is 5 m.
- Choice D is correct.** **(5.CE.2)** Sharing $\frac{1}{4}$ cup into 2 equal parts means $\frac{1}{4} \div 2 = \frac{1}{8}$ cup for each mini loaf.
- Choice B is correct.** **(5.NS.2)** $15 \times 10^7 = 15 \times 10000000 = 150000000$, which is 150 million.
- Choice C is correct.** **(5.MG.1)** 1 kilometer = 1,000 meters. Multiply: $4.5 \times 1000 = 4500$ m.
- Choice D is correct.** **(5.NS.2)** $10^2 = 100$. So $? \times 100 = 4500 \Rightarrow ? = 45$.
- Choice A is correct.** **(5.PS.1)** The plot shows 3 students at 15 seconds, 2 students at 20 seconds, 3 students at 25 seconds, and 3 students at 30 seconds. Total: $(15 \times 3) + (20 \times 2) + (25 \times 3) + (30 \times 3) = 250$ seconds.
- The correct answer is 9 ft³.** **(5.MG.1)** Box A has volume $8 \times 4 \times 3 = 96$ cubic feet. Box B has volume $7 \times 5 \times 3 = 105$ cubic feet, so Box B is greater by 9 cubic feet.
- Choice C is correct.** **(5.CE.2)** Only $\frac{5}{7} < 1$, so only $14 \times \frac{5}{7}$ produces a result smaller than 14. The others are equal to or larger than 14.
- Choices A, B are correct.** **(5.CE.2)** C gives $\frac{5}{12}$; D gives $\frac{1}{8}$.
- Choice D is correct.** **(5.NS.1)** Start at $8\frac{3}{4}$ and hop back $2\frac{1}{4}$ to land at $6\frac{2}{4} = 6\frac{1}{2}$. Verify: $(8 - 2) + (\frac{3}{4} - \frac{1}{4}) = 6 + \frac{2}{4} = 6\frac{1}{2}$.
- Choice D is correct.** **(5.CE.2)** $2 \div \frac{1}{4} = 2 \times 4 = 8$. She can make 8 loaves.
- Choice D is correct.** **(5.MG.3)** All three sides are equal (equilateral). An equilateral triangle always has three 60-degree angles (acute).
- Choice D is correct.** **(5.MG.2)** First: $V = 25 \times 4 = 100 \text{ m}^3$. Second: $V = 25 \times 3 = 75 \text{ m}^3$. Difference: $100 - 75 = 25 \text{ m}^3$.
- Choice C is correct.** **(5.NS.2)** Multiplying by 1,000 moves the decimal three places right: $0.65 \rightarrow 6.5 \rightarrow 65 \rightarrow 650$.
- Choice B is correct.** **(5.PFA.1)** In 2.518, the digit 5 is in the first place after the decimal point, which is the tenths place.
- Choice C is correct.** **(5.CE.1)** Add from right to left: hundredths $6 + 7 = 13$, so write 3 hundredths and regroup 1 tenth. Tenth: $2 + 1 + 1 = 4$. Ones: $4 + 3 = 7$. So the sum is 7.43.
- Choice D is correct.** **(5.MG.3)** A square has four right angles, so it is a rectangle. It also has four equal sides, so it is a rhombus. Therefore, it belongs in the overlap of Rectangle and Rhombus.



Mathematical Explorer's Journey

Welcome, Brave Explorer!

◇ Phenomenal expedition! You've successfully navigated through 10 mathematical territories, exploring every concept and discovering new strategies along the way! You've mapped out the landscape of Grade 5 math with the courage of a true adventurer. Each problem was uncharted territory, and you charted it with skill and determination! ◇

★ **Wisdom from veteran explorers:** the most rewarding journeys are the ones that challenge you most. Through 10 comprehensive practice tests, you've climbed mathematical mountains, crossed conceptual rivers, and discovered solutions in places you didn't know existed. Your exploration skills are strong, your map is detailed, and you're ready for any test-day adventure! ★

Explorer's Achievement Map

- **Territory Covered:** You've explored every major mathematical concept thoroughly!
- **Navigation Skills:** You can find your way through any problem with multiple solution paths!
- **Equipment Mastered:** You know exactly which strategies to use in different situations!
- **Expedition Ready:** You're fully prepared for the ultimate test day adventure!

Important explorer wisdom: experienced adventurers always review their maps before important journeys. Take a few moments before test day to mentally review your successful strategies. Visualize yourself confidently tackling each type of problem. You've already proven you can handle the expedition!

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 Teacher and Test-Day Coach

PRACTICE TODAY. MASTER TOMORROW.

Give your child the confidence to excel in **Grade 5 Math!**
This book includes **10 complete practice tests** designed to build strong skills, improve test readiness, and achieve success.



10

COMPLETE
PRACTICE
TESTS

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- ✓ Results-Driven.

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Strengthen Skills

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Improve Test Readiness

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Better preparation leads to higher scores and bright futures.

COVERS ALL ESSENTIAL TOPICS

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



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