

9

Virginia SOL

GRADE

6

MATH

PRACTICE TESTS

Standards-Aligned Review
Mixed Practice & Answer Key



9 PRINTED TESTS

Realistic practice to build confidence and mastery



DETAILED ANSWER EXPLANATIONS

Learn with step-by-step solutions



FOCUSED & EFFECTIVE

Target key math skills with purposeful practice



BUILD CONFIDENCE

Strengthen problem solving and test-taking skills



9 PRINTED TESTS
+2 ONLINE TESTS

Use these two additional online practice tests for extra review after the printed tests in this book.

PRACTICE TODAY.
SUCCEED TOMORROW.



PRACTICE



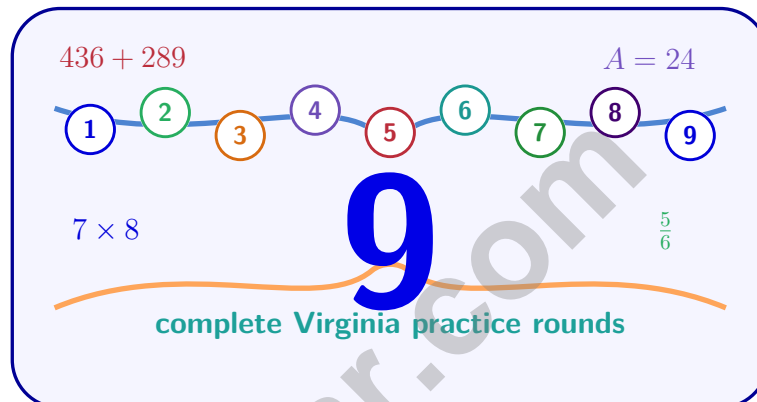
REVIEW



SUCCEED

9 Virginia SOL Grade 6 Math Practice Tests

Standards-Aligned Commonwealth-Ready Math Practice for Standards of Learning



Nine complete 40-question Grade 6 practice rounds for SOL, built for commonwealth-ready math practice with ratios, rational numbers, expressions, equations, geometry, statistics, answer keys, and clear explanations for every item.

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Welcome, Virginia Math Explorer!

Nine focused rounds using commonwealth-ready math practice

This book gives you nine full Grade 6 practice tests for SOL. Each round uses historic routes, mountain views, and careful solution checks as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

Your Virginia Practice Promise

Build the answer with evidence: identify the skill, show the work, and verify the result.

Read

Plan

Check

How to Use This Book

A nine-session routine for commonwealth-ready math practice

1. **Preview the skills.** Scan the quick review pages before beginning the first round.
2. **Work in order.** Take one 40-question test at a time in a quiet place.
3. **Mark confidence.** Put a small star beside problems where your plan felt strong.
4. **Correct actively.** Retry missed items before reading the full explanation.
5. **Plan the next round.** Use the growth log to choose one habit and one skill to practice.

Virginia review rhythm: Take one round, review the reasoning, and use the next test to improve precision.



What Is Inside?

Nine SOL tests, 360 questions, and a full review path

Part	What You Will Practice
Tests 1–3	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Tests 4–6	Skill-building rounds with expressions, equations, geometry, data, and problem models.
Tests 7–9	Final stamina rounds for mixed review, neat work, and flexible strategy choices.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Commonwealth-ready math practice means recognizing the skill even when the next question changes topic, changes format, or asks for an explanation.



Scan me!
For more practice
& answers

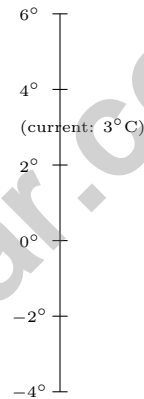
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1) Two swimmers have lap times in seconds. Swimmer A: 28, 30, 29, 31, 32. Swimmer B: 25, 35, 28, 32, 30. Calculate the range for each swimmer. Which swimmer has less variation?

- A. Swimmer A has a range of 3 seconds; less variation.
- B. Swimmer A has a range of 4 seconds; less variation.
- C. Swimmer B has a range of 10 seconds; less variation.
- D. Both swimmers have the same range.

2) A thermometer shows the temperature is 3°C . Which temperature is 7°C colder?



- A. 10°C
- B. -2°C
- C. 0°C
- D. -4°C

3) What is $8,064 \div 42$?

- A. 192
- B. 200
- C. 204
- D. 212



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For more practice
& answers

4) What is the LCM of 10 and 15?

- A. 30 C. 40
 B. 25 D. 150

5) The factor tree below shows the GCF of two numbers. Use it to write the factored form of the sum.

$$\text{GCF} = 2 \times 3$$

$$\begin{array}{cc} 2 & 3 \end{array}$$

$$\text{First number} = 2 \times 3 \times 4 = 24 \quad \text{Second number} = 3 \times 3 \times 4 = 36$$

- A. $6(5 + 4)$ C. $5(6 + 24)$
 B. $6(5 \times 4)$ D. $(5 + 4)(2 + 3)$
- 6) In a recipe, the ratio of sugar to flour is 2 : 5. If the recipe uses 10 cups of flour, how many cups of sugar are needed?

7) Which expression is NOT equal to the others?

- A. $|-6|$ C. $|6|$
 B. The opposite of -6 D. The opposite of 6



- 8) On a number line, which number is between $-\frac{1}{2}$ and $\frac{1}{2}$?
- A. -1 C. 0
 B. -0.6 D. 1
- 9) What is the reflection of $(-4, -5)$ across the x -axis?
- A. $(4, 5)$ C. $(4, -5)$
 B. $(-4, 5)$ D. $(-4, -5)$
- 10) Compare -1.2 and -1.5 . Which is true?
- A. $-1.2 < -1.5$ C. $-1.2 = -1.5$
 B. $-1.2 > -1.5$ D. They are opposites
- 11) The distance between $(x, 7)$ and $(8, 7)$ is 5 units. Both points have the same y -coordinate. What is x ?
- A. $x = 3$ or $x = 13$ C. $x = 4$ or $x = 12$
 B. $x = 2$ or $x = 14$ D. $x = 1$ or $x = 15$
- 12) Using zero pairs (a red chip and a blue chip neutralize each other), simplify: 5 blue chips + 7 red chips.

5 blue + 7 red chips



After pairing & removing



- A. -5 C. 2
 B. -2 D. 5



Scan me!
For more practice
& answers

1) A paint can holds 3.8 liters. How much paint is in two cans?

A. 5.8 L

C. 6.8 L

B. 1.9 L

D. 7.6 L

2) What is $\frac{-64}{8}$?

A. 8

C. 56

B. -8

D. -56

3) What is the least common multiple of 14 and 21?

4) A company had a profit of \$50,000 in month 1. In month 2, they had a loss of \$12,000. What is their combined profit or loss?

A. \$62,000 loss

C. \$38,000 loss

B. \$62,000 profit

D. \$38,000 profit

5) A cutting board has 3 feet of length. A pattern repeats every $\frac{1}{3}$ foot. How many times does the pattern repeat?

A. 6

C. 9

B. 8

D. 12



6) Evaluate: $(2 + 3)^2 - 5$

A. 10

C. 25

B. 20

D. 30

7) A point is on the y -axis between Quadrants I and II. Which of the following could be its coordinates?

A. $(0, -3)$

C. $(4, 0)$

B. $(0, 4)$

D. $(-4, 0)$

8) Order from greatest to least:

$-2, 0.5, -0.75, 1$

A. $1, 0.5, -0.75, -2$

C. $-2, -0.75, 0.5, 1$

B. $0.5, 1, -2, -0.75$

D. $1, -0.75, 0.5, -2$

9) On a grid, a store is at $(2, 4)$ and a home is at $(10, 4)$. The scale is 1 unit = 50 meters. What is the actual distance?

A. 400 m

C. 200 m

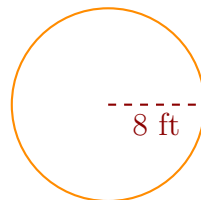
B. 300 m

D. 500 m



Scan me!
For more practice
& answers

- 1) A farmer has chickens and ducks in a part-to-part ratio of 6 : 4. If the farmer has 18 chickens, how many ducks does he have?
- A. 27 ducks C. 6 ducks
 B. 24 ducks D. 12 ducks
- 2) A library worker wants to know: “Which book genre do students like best?” To answer this question properly, the worker should:
- A. Ask one student. C. Look at what the librarian prefers.
 B. Survey many students and collect their responses. D. Count the total number of books.
- 3) The histogram of student test scores shows a peak on the left side with a long tail to the right. What is the shape?
- A. Skewed left C. Symmetric
 B. Bimodal D. Skewed right

Circular Garden

4)

A circular garden has a radius of 8 feet. Using $\pi \approx 3.14$, find the approximate area of the garden.



5) A data set has minimum = 10, $Q_1 = 18$, median = 24, $Q_3 = 30$, and maximum = 45. One value is an outlier far above the rest. Which measure of spread is LEAST affected by this outlier?

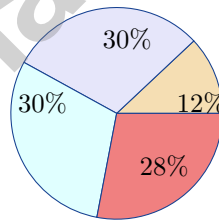
- A. Range C. Mean absolute deviation
 B. Interquartile range D. Mean

6) A coach records vertical jump heights (in inches) for basketball players:

Stem	Leaf
1	8, 9
2	1, 3, 4, 6, 8, 9
3	0, 2, 5

How many players jumped at least 24 inches?

- A. 3 C. 6
 B. 5 D. 7



7)

In a circle graph, if a section has a central angle of 43.2° , what percent does it represent?

- A. 12% C. 18%
 B. 15% D. 20%



Scan me!
For more practice
& answers

Virginia SOL Practice Test Answer Keys

How to use this Virginia SOL answer section with a Grade 6 student:

1. check the answer first, then write one quick reason the choice is correct
2. mark questions to try again, especially the skills that feel connected to commonwealth-ready math practice
3. rework the problem before reading the full explanation, using this reminder:
Build the answer with evidence: identify the skill, show the work, and verify the result.

A calm Virginia correction routine turns every missed item into useful practice. Take one round, review the reasoning, and use the next test to improve precision.



Virginia Practice Test Answers and Explanations

Review the nine printed SOL tests with prepared, precise, and ready for the next challenge habits.

Practice Test 1 Answers and Explanations

- Choice B is correct.** **(6.PS.2)** Swimmer A's range is 4 seconds, Swimmer B's range is 10 seconds. The smaller range indicates less variation in Swimmer A's times.
- Choice D is correct.** **(6.PFA.2)** 7°C colder means we subtract 7 from the starting temperature: $3 - 7 = -4^{\circ}\text{C}$.
- Choice A is correct.** **(6.CE.2)** $8,064 \div 42 = 192$. Check: $42 \times 192 = 8,064$.
- Choice A is correct.** **(6.NS.2)** Multiples of 10: 10, 20, 30, 40, ... Multiples of 15: 15, 30, 45, ... The least common multiple is 30.
- Choice A is correct.** **(6.CE.1)** GCF of 30 and 24 is $2 \times 3 = 6$. So $30 \div 6 = 5$ and $24 \div 6 = 4$.
- The correct answer is 4.** **(6.NS.3)** Ratio 2 : 5 with flour = 10 cups: each part is $10 \div 5 = 2$ cups. Sugar: $2 \times 2 = 4$ cups.
- Choice D is correct.** **(6.PFA.4)** A: $|-6| = 6$. B: opposite of -6 is 6. C: $|6| = 6$. D: opposite of 6 is -6 . Options A, B, C all equal 6; D equals -6 .
- Choice C is correct.** **(6.NS.1)** Zero lies between -0.5 and 0.5 on the number line, and is the only value in this range among the choices.
- Choice B is correct.** **(6.MG.3)** Reflection across the x -axis changes the sign of the y -coordinate only. The point $(-4, -5)$ becomes $(-4, 5)$.
- Choice B is correct.** **(6.PFA.2)** -1.2 is closer to zero than -1.5 , so -1.2 is greater.
- Choice A is correct.** **(6.MG.3)** Since $|x - 8| = 5$, then $x = 8 - 5 = 3$ or $x = 8 + 5 = 13$.
- Choice B is correct.** **(6.CE.2)** 5 blue chips pair with 5 red chips and neutralize. 2 red chips remain unpaired, representing $5 + (-7) = -2$.
- Choice B is correct.** **(6.PS.2)** The constant 6 stands alone. The coefficient of the variable j is the number multiplied by j , which is 4.
- Choice A is correct.** **(6.CE.1)** Substitute $y = 1$: $9 - 2(1) = 9 - 2 = 7$.
- Choice B is correct.** **(6.PFA.4)** Distance = speed \times time = $a \times 5 = 5a$ miles.
- The correct answer is 60.** **(6.MG.1)** $I = \$500 \times 0.03 \times 4 = \60 . To earn interest, we apply the principal, rate, and time to the formula.
- Choice C is correct.** **(6.PFA.3)** Multiply both sides by 9: $x = 3 \times 9 = 27$.
- Choice B is correct.** **(6.PFA.4)** $x \geq 4$ includes 4 (closed circle) and all numbers greater than 4 (arrow points right).
- Choice D is correct.** **(6.PFA.4)** In the equation $w = 18h$, the coefficient 18 is the constant rate (hourly pay rate in dollars per hour).
- Choice D is correct.** **(6.MG.2)** $A = \frac{1}{2} \times 24 \times 5 = 60 \text{ in}^2$.
- Choice C is correct.** **(6.PS.1)** Puppies in a litter have different weights, requiring data collection. This is correctly labeled as statistical. Option A is incorrectly labeled because February has a fixed number of days. Option B is incorrect because apple prices can vary. Option D is incorrect because backpack colors in a class can vary, so it is statistical.
- The correct answer is Plan X shows a proportional relationship, and it is represented by $e = 20h$.** **(6.PFA.2)** Statement A is correct: Plan X has equation $e = 20h$, so it is proportional. Statement C matches the equation for Plan X. Plan Y has equation $e = 100 + 10h$, so it is not proportional and its graph does not pass through the origin. After 10 hours, both plans pay \$200, so D is false.
- Choice B is correct.** **(6.PS.1)** A left-skewed distribution has a tail extending toward lower values. The peak is on the right (at 5 pets), with fewer data points on the left, meaning most families have more pets and fewer have very few pets.
- Choice A is correct.** **(6.PFA.2)** The lower whisker extends from the minimum to Q_1 , representing the bottom 25% of the data.
- Choice B is correct.** **(6.CE.1)** $\frac{7}{12} \times \frac{8}{7} = \frac{56}{84} = \frac{2}{3}$.



Ahoy, Math Sailor!

◇ You sailed through 9 full tests. Some waters were calm. Some waters were rough. You kept your boat steady the whole way. ◇

★ **Captain's truth:** good sailors stay calm. They use the wind. They check the map. You did all those things on every test. ★

Sailor's Skills

- **Steady Hand:** You stay calm even when problems are tricky.
- **Map Skills:** You read each problem carefully.
- **Brave Spirit:** You believe in yourself.
- **Safe Harbor:** You finish what you start.

Captain's tip: on test day, sail steady. Trust the map you built through 9 practice tests. You will reach safe harbor!

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

Jay Daie

Your Math Captain

PRACTICE MORE. ACHIEVE MORE.

This **Grade 6 Math Practice Tests** book is designed to help students strengthen their math skills, master important concepts, and build the confidence they need to excel on any test.

With 9 full-length printed tests and 2 online tests, students get the review, practice, and realistic test experience they need to improve accuracy, develop problem-solving abilities, and reach their full potential.

Perfect for classroom use, homework, test preparation, and extra practice at home.

PERFECT FOR:

- ✓ Classroom Practice
- ✓ Homework & Review
- ✓ Independent Learning
- ✓ Test Preparation
- ✓ Skill Reinforcement
- ✓ Building Confidence

★ PRACTICE TODAY.
SUCCEED TOMORROW.

WHAT STUDENTS WILL GAIN



Stronger Math Skills

Build a solid foundation through targeted practice and review.



Better Problem Solving

Develop logical thinking and effective solution strategies.



Deeper Understanding

Reinforce key math concepts aligned with standards.



Test Confidence

Get familiar with test formats and improve accuracy.



Achieve Success

Build confidence and perform your best on test day.

TOPICS COVERED

- ✓ Ratios & Rates
- ✓ The Number System
- ✓ Expressions & Equations
- ✓ Geometry
- ✓ Fractions & Decimals
- ✓ Percents
- ✓ Statistics & Probability
- ✓ Data Analysis
- ✓ Measurement & Conversions
- ✓ And More!



2 ONLINE TESTS

Extra online practice to reinforce learning and build confidence.

MORE PRACTICE. GREATER RESULTS.

Give your child the tools needed to develop strong math skills, confidence, and a positive attitude toward learning.



9 PRINTED
PRACTICE TESTS



2 ONLINE
PRACTICE TESTS



DETAILED ANSWER
EXPLANATIONS