

10

South Carolina

SC READY

GRADE

8

MATH

PRACTICE TESTS

Standards Aligned Problem Solving
For Comprehensive Assessment Programs

10

PRINTED TESTS



2

ONLINE TESTS



Build Confidence



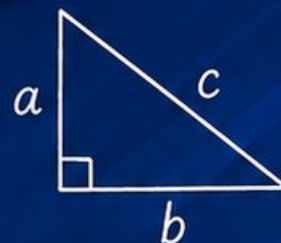
Master Key Math Skills



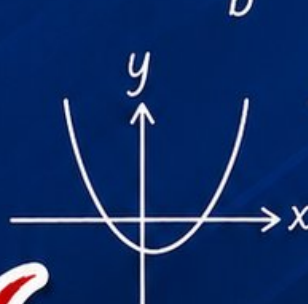
Answer Explanations for
Every Question



Test-Taking Strategies
That Work



$$y = mx + b$$



$$3x - 7 = 2(x + 5)$$
$$x = 17$$

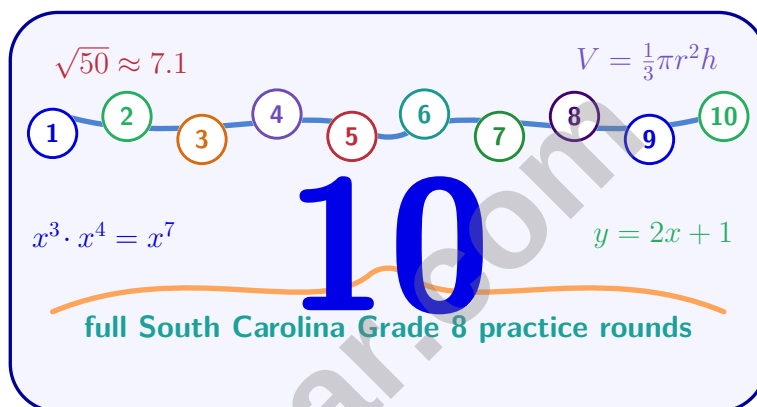


USE THESE TWO
**ADDITIONAL ONLINE
PRACTICE TESTS**

FOR EXTRA REVIEW AFTER
THE PRINTED TESTS
IN THIS BOOK.

10 South Carolina SC READY Grade 8 Math Practice Tests

South Carolina Grade 8 SC READY Practice for confident preparation through proportional models, real numbers, equations, geometry, and data



Ten complete 40-question Grade 8 SC READY practice rounds with linear relationships, scientific notation, real numbers, equations, functions, geometry, data analysis, probability, answer keys, and clear explanations for every item.

Jay Daie and Reza Nazari



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Welcome, South Carolina Grade 8 Problem Solver!

Ten focused rounds for sharper South Carolina SC READY math thinking

This book gives you ten full Grade 8 SC READY math practice tests. Each round is built to help you notice structure, compare quantities, use linear reasoning, handle real numbers, and explain your thinking with care.

Grade 8 standards focus: This page supports **Slope as Rate of Change** (8.PAFR.2.4): Explain why the slope is the same between any two distinct points on a linear graph. You will also meet **Estimating Irrational Numbers** (8.NR.2.1): Compare real numbers using inequality symbols.

Your South Carolina Practice Promise

I will read every question carefully, choose a strategy that fits, write enough work to prove my answer, and use corrections as training for the next test.

Read

Model

Verify

How to Use This Book

A ten-session plan for confident Grade 8 review

1. **Warm up with the review pages.** Notice the big ideas before starting the tests.
2. **Complete one test at a time.** Treat each 40-question round like a real practice session.
3. **Show your reasoning.** Jot a proportion, equation, diagram, number line, or quick estimate when it helps.
4. **Correct actively.** Rework missed items before reading the explanation.
5. **Choose the next target.** After each test, name one skill and one habit to improve.

Grade 8 standards focus: Keep the routine connected to **Solving Systems of Two Equations** (8.PAFR.2.1): Systems of equations are not a dedicated SCCCR 2023 Grade 8 standard. A second useful connection is **Operations with Scientific Notation** (8.PAFR.3.3): Apply laws of exponents; scientific notation is not a dedicated SCCCR 2023 Grade 8 standard.

South Carolina review rhythm: Work a test, score it, study your misses, then come back ready for the next round with one clear goal.



What Is Inside?

Ten South Carolina SC READY tests, 400 questions, and a complete review path

Part	What You Will Practice
Tests 1–3	Linear relationships, integer exponents, scientific notation, real-number reasoning, and careful reading.
Tests 4–6	Expressions, equations, inequalities, transformations, geometry, and multi-step problem solving.
Tests 7–9	Data analysis, probability, mixed review, stamina, and choosing efficient strategies.
Test 10	A final South Carolina round to show growth across the whole book.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Grade 8 success means recognizing which idea is being tested even when the next question changes format.

Grade 8 standards focus: Use these habits while practicing **What Is a Function?** (8.PAFR.1.3): Determine if a graph, table, mapping, or verbal description is a function (linear or nonlinear). It also prepares you for **Solving Systems of Two Equations** (8.PAFR.2.1): Systems of equations are not a dedicated SCCCR 2023 Grade 8 standard.



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For more practice
& answers

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1) A line has slope -2 . Which pair of points could lie on this line?

☐ A. $(1, 3)$ and $(2, 5)$

☐ C. $(1, 1)$ and $(3, 1)$

☐ B. $(0, 4)$ and $(2, 0)$

☐ D. $(2, 5)$ and $(3, 4)$

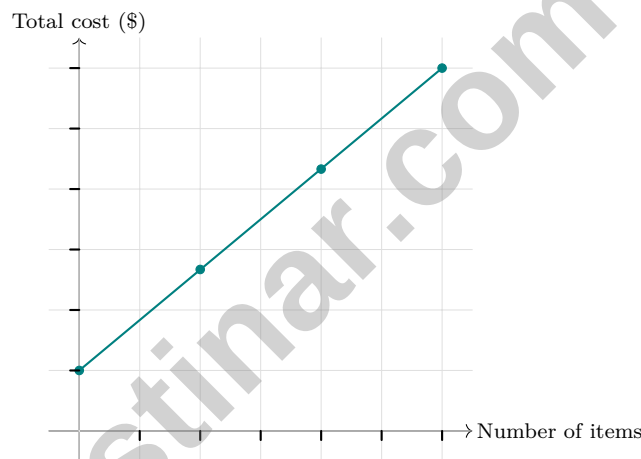
2) Two rectangular prisms have the same volume of 120 cm^3 . Prism A has dimensions $10 \times 6 \times 2 \text{ cm}$. Prism B has dimensions $8 \times 5 \times 3 \text{ cm}$. Which prism has the greater surface area?

☐ A. Prism A with $\text{SA} = 184 \text{ cm}^2$

☐ C. Prism B with $\text{SA} = 158 \text{ cm}^2$

☐ B. Prism A with $\text{SA} = 244 \text{ cm}^2$

☐ D. Prism B with $\text{SA} = 206 \text{ cm}^2$



3)

Based on the scatter plot, write the equation of the best-fit line in the form $y = mx + b$. What is the slope?

☐ A. $\frac{1}{6}$

☐ C. 1

☐ B. $\frac{5}{6}$

☐ D. 6



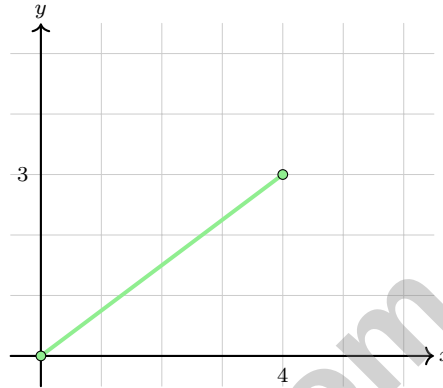
4) Simplify $n^6 \cdot n^{-4} \cdot n^3$.

☐ A. n^1

☐ B. n^{13}

☐ C. n^{-5}

☐ D. n^5



5)

The equation of the line is:

☐ A. $y = 3x$

☐ B. $y = \frac{4}{3}x$

☐ C. $y = \frac{3}{4}x$

☐ D. $y = 4x$

6) Solve for y : $-4y + 7 = 15$

☐ A. $y = -8$

☐ B. $y = 8$

☐ C. $y = 2$

☐ D. $y = -2$

7) Which set of ordered pairs does NOT represent a function?

☐ A. $\{(0, 5), (1, 6), (2, 7), (3, 8)\}$

☐ B. $\{(1, 1), (2, 4), (3, 9), (4, 16)\}$

☐ C. $\{(1, 3), (2, 3), (3, 3), (4, 3)\}$

☐ D. $\{(2, 4), (2, 5), (3, 6), (4, 7)\}$



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- 8) A bank account earns 3% simple interest on a principal of \$2,000. How much interest will be earned in 4 years?

- 9) What is $\sqrt{484}$?

- 10) The equation $y = |x - 2|$ is:

- | | |
|---|---|
| ☐ A. Linear, because it is an equation | ☐ C. Nonlinear, because absolute value creates a V-shape |
| ☐ B. Linear, because the absolute value of a linear expression is linear | ☐ D. Linear, because it can be written as $y = mx + b$ |



1) Solve for x : $3(x + 1) = 2(x + 4)$

☐ A. $x = 2$

☐ C. $x = -1$

☐ B. $x = 8$

☐ D. $x = 5$

2) A data set has residuals: $-3, 2, -1, 4, -2$. Which statement is true?

☐ A. The sum of residuals is 5

☐ C. All points lie exactly on the trend line

☐ B. The mean absolute residual (MAD) is 2.4

☐ D. The trend line is a poor fit because some residuals are negative

3) A square has area 9 cm^2 . If the square is dilated by a scale factor of 3, what is the area of the dilated square?

☐ A. 27 cm^2

☐ C. 9 cm^2

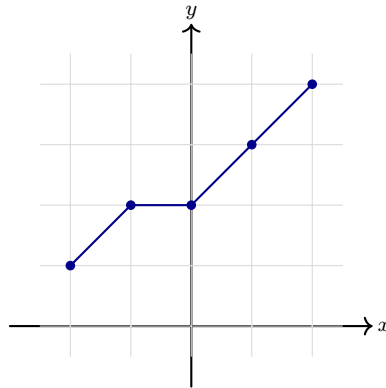
☐ B. 81 cm^2

☐ D. 36 cm^2

4) A piggy bank has nickels and dimes totaling \$2.75. There are twice as many dimes as nickels. How many nickels are in the bank?



5) From the graph of $f(x)$, what is $f(-1)$?



- ☐ A. -1
☐ C. 1
☐ B. 2
☐ D. 3
- 6) If r is a nonzero rational number and i is an irrational number, which expression is definitely rational?
- ☐ A. $r + i$
☐ C. $\frac{r}{r}$ (where $r \neq 0$)
☐ B. $r \times i$
☐ D. $i - r$
- 7) Two students claim different answers for $0.\overline{9}$. Student A says $\frac{9}{9} = 1$. Student B says $\frac{9}{10}$. Who is correct and why?
- ☐ A. Student A is correct; $0.\overline{9} = 1$.
 ☐ C. Both are incorrect; the answer is $\frac{8}{9}$.
☐ B. Student B is correct; $0.\overline{9} = 0.9$.
 ☐ D. They are equal, so both are correct.
- 8) Is $\sqrt{22}$ closer to 4.6 or 4.7?
- ☐ A. 4.6
 ☐ C. Equally close
☐ B. Cannot determine
 ☐ D. 4.7



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& answers

1) An electrician charges \$50 for a service call and \$35 per hour. A customer's bill comes to \$225. How many hours did the electrician work?

☐ A. 4 hours

☐ C. 6 hours

☐ B. 5 hours

☐ D. 7 hours

2) Which trinomial is equivalent to $(x - 8)(x + 3)$?

☐ A. $x^2 - 24$

☐ C. $x^2 + 11x - 24$

☐ B. $x^2 - 5x - 24$

☐ D. $x^2 - 24x + 3$

3) Culture A : $N(t) = 100 + 50t$ bact/hr. Culture B at $t = 0$: 50, $t = 2$: 150. Faster growth?

☐ A. Culture A

☐ C. Both same.

☐ B. Culture B

☐ D. Cannot be determined.

4) In a function, how many outputs can each input have?

5) A company's profit increases by \$500 for every unit sold. What is the slope of the profit-versus-units-sold line?

☐ A. $\frac{1}{500}$ per unit

☐ C. 500 units

☐ B. \$1000 per unit

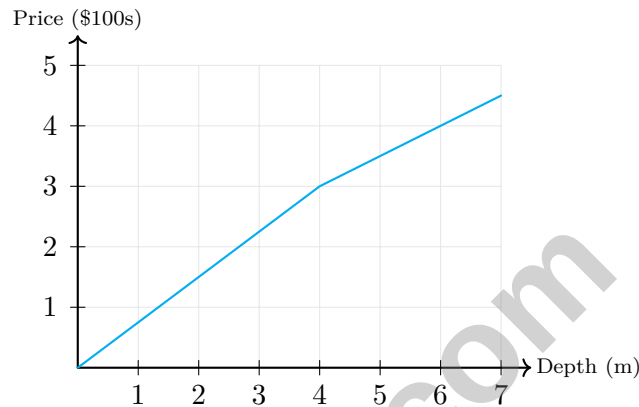
☐ D. \$500 per unit



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& answers

- 6) A restaurant has 50 tables. Small tables seat 2 people; large tables seat 4 people. To seat at least 160 people, how many large tables are needed at minimum?

☐ A. 20 ☐ C. 30
☐ B. 25 ☐ D. 35



7)

The graph shows well-drilling cost vs. depth. Why does the slope change at 4 meters depth?

- ☐ A. The drilling cost stays the same at all depths
☐ B. Different rock layers require different rates
☐ C. The drilling stops at 4 meters
☐ D. Cost actually decreases, shown by a negative slope
- 8) A rhombus has all four sides equal to 8 cm. After being reflected across the y -axis, what is the length of each side of the reflected rhombus?

☐ A. The sides change length ☐ C. 16 cm
☐ B. 4 cm ☐ D. 8 cm



South Carolina SC READY Grade 8 Practice Test Answer Keys

How to use this section with a Grade 8 student:

1. check the answer first and circle any item that needs another look
2. retry the problem with fresh work before reading the explanation
3. write one short lesson learned from each missed or guessed item

A strong review routine turns every correction into a sharper plan for the next South Carolina SC READY practice test.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice B is correct.** (8.PAFR.2.4) For option B, slope = $\frac{0-4}{2-0} = \frac{-4}{2} = -2$. The other choices have slopes 2, 0, and -1 .
- 2) **Choice A is correct.** (8.MGSR.1.1) Prism A: $SA = 2(60 + 20 + 12) = 184 \text{ cm}^2$. Prism B: $SA = 2(40 + 24 + 15) = 158 \text{ cm}^2$. Prism A has the greater surface area.
- 3) **Choice B is correct.** (8.DPSR.1.1) The line passes through $(0, 1)$ and $(6, 6)$. Slope = $\frac{6-1}{6-0} = \frac{5}{6}$.
- 4) **Choice D is correct.** (8.PAFR.3.3) Add exponents: $n^6 \cdot n^{-4} \cdot n^3 = n^{6-4+3} = n^5$.
- 5) **Choice C is correct.** (8.PAFR.2.3) Slope $k = \frac{3}{4}$. Line passes through origin and $(4, 3)$, so $y = \frac{3}{4}x$.
- 6) **Choice D is correct.** (8.PAFR.2.1) Subtract 7: $-4y = 8$. Divide by -4 : $y = -2$.
- 7) **Choice D is correct.** (8.PAFR.1.3) Input 2 appears with outputs 4 and 5, which violates the function definition. Options A, B, and C are all functions.
- 8) **The correct answer is \$240.** (8.DPSR.2.2) $I = Prt = 2000 \times 0.03 \times 4 = \240 .
- 9) **The correct answer is 22.** (8.PAFR.3.1) $22 \times 22 = 484$, so $\sqrt{484} = 22$.
- 10) **Choice C is correct.** (8.PAFR.1.3) Absolute value functions are nonlinear. They produce a V-shaped graph, not a straight line.
- 11) **Choice C is correct.** (8.PAFR.1.4) From week 3 to 5, the price jumps from \$1 to \$4 in 2 weeks, a rate of \$1.50/week. All other segments are flat.
- 12) **Choice C is correct.** (8.MGSR.2.2) Perimeter of PQRS = $10 + 14 + 5 + 7 = 36 \text{ cm}$. Since TUVW is congruent to PQRS, its perimeter is also 36 cm.
- 13) **Choice C is correct.** (8.MGSR.2.1) Co-interior angles (also called same-side interior or consecutive interior angles) are on the same side of the transversal and between the parallel lines.
- 14) **Choice C is correct.** (8.MGSR.1.3) Check option C: $9^2 + 12^2 = 81 + 144 = 225 = 15^2$. This is the 3-4-5 triple scaled by 3.
- 15) **Choice B is correct.** (8.MGSR.1.2) The distance formula comes from the Pythagorean Theorem applied to the horizontal and vertical legs of a right triangle.
- 16) **Choice B is correct.** (8.MGSR.1.1) Since $V_{\text{cone}} = \frac{1}{3}V_{\text{cyl}}$, the cone's volume is $\frac{1}{3} \times 720 = 240 \text{ in}^3$.
- 17) **Choice A is correct.** (8.MGSR.2.4) Co-interior angles are supplementary. So $u = 180 - 106 = 74^\circ$.
- 18) **The correct answer is B, E.** (8.DPSR.2.2) There are 10 marbles total. B is true because $P(\text{blue}) = \frac{3}{10}$. E is true because $P(\text{red or blue}) = \frac{5+3}{10} = \frac{8}{10} = \frac{4}{5}$. A is false because $P(\text{red}) = \frac{1}{2}$. C is false because $P(\text{green}) = \frac{1}{5}$. D is false because $P(\text{yellow}) = 0$.
- 19) **Choice A is correct.** (8.MGSR.2.3) The sum of angles in a pentagon is 540° . So $\angle E = 540 - 100 - 120 - 110 - 130 = 80^\circ$.
- 20) **Choice D is correct.** (8.DPSR.1.1) The tight downward trend shows a strong negative association: as phone usage increases, battery life decreases. This is a clear negative correlation pattern.
- 21) **Choice B is correct.** (8.DPSR.1.4) Marginal relative frequency for IT employees: row total divided by grand total = $\frac{180}{500} = 0.36$.
- 22) **Choice C is correct.** (8.DPSR.1.2) Group 1's smaller MAD (2) shows less spread and more consistent performance. Group 2's larger MAD (10) indicates greater variability in scores.
- 23) **Choice C is correct.** (8.PAFR.2.1) Verify $(2, 3)$: $y = 2 + 1 = 3$ ✓ and $y = -2 + 5 = 3$ ✓. The marked intersection point is $(2, 3)$.
- 24) **Choice A is correct.** (8.PAFR.1.5) GCF of $4x$ and 12 is 4. Factor: $4x + 12 = 4(x + 3)$.
- 25) **Choice B is correct.** (8.PAFR.1.5) X at day 0: 10 cm. Y at day 0: 15 cm. Since $15 > 10$, Y started taller.
- 26) **Choice A is correct.** (8.PAFR.1.6) Slope is $m = \frac{11-5}{4-1} = \frac{6}{3} = 2$.
- 27) **Choice A is correct.** (8.MGSR.3.7) Under 90° counterclockwise rotation, $(x, y) \rightarrow (-y, x)$. So $(2, 1) \rightarrow (-1, 2)$.



One Last Encouragement

Hi, Determined Student!

◇ You did meaningful Grade 8 practice. That matters because confidence is built through action, not waiting until everything feels easy. This full-length book gave you ten complete Grade 8 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. ◇

★ **Remember this:** Carry this with you: you can learn hard things by breaking them into steps, asking good questions, and reviewing with honesty. ★

Take This With You

- **You Can Start:** Even when the problem looks big.
- **You Can Adjust:** When the first method is not enough.
- **You Can Learn:** From every corrected mistake.
- **You Can Improve:** One practice session at a time.

Grade 8 test-day tip: Walk into test day ready to think, not ready to be perfect. Thinking clearly is the goal.

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

Jay Daie

Your Grade 8 Math Friend

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **10** full-length Math practice tests and **2** online tests to help Grade 8 students build confidence, strengthen skills, and excel on standardized assessments.

Each practice test is carefully crafted to reflect the latest standards and includes a variety of question types, realistic test conditions, and detailed answer explanations.

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



THIS BOOK INCLUDES:

10

Full-Length
Printed Tests

2

Online
Practice Tests



Detailed Answers
& Explanations



**MORE PRACTICE.
GREATER RESULTS.**

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

WHAT YOU'LL GAIN



**Build
Confidence**

Practice regularly to feel prepared and test-ready.



**Master
Key Skills**

Develop strong math skills and problem solving abilities.



**Improve
Understanding**

Learn with clear explanations and step-by-step solutions.



**Test
Strategies**

Learn proven strategies to approach every question with confidence.



**Boost
Performance**

Apply your knowledge and achieve your best score!

TOPICS COVERED

- ✓ The Number System
- ✓ Expressions & Equations
- ✓ Inequalities
- ✓ Functions
- ✓ Geometry
- ✓ Ratios & Proportions
- ✓ Statistics & Probability
- ✓ Data Analysis
- ✓ Measurement
- ✓ Pythagorean Theorem
- ✓ Surface Area & Volume
- ✓ And More!



2 ONLINE TESTS

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



2 EXTRA ONLINE TEST ACCESS CODE IS INSIDE THE BOOK!

Don't lose it—your extra practice and success start here!



PRACTICE
REGULARLY



STAY
FOCUSED



SOLVE
CONFIDENTLY



SUCCEED
BRIGHTLY