

SOUTH CAROLINA

SC READY

GRADE 8 MATH

PRACTICE TESTS

5

PRINTED
TESTS



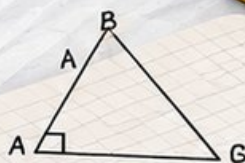
2

 ONLINE
TESTS

**Standards Aligned
Problem Solving For**
Comprehensive Assessment Programs



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



$$a^2 + b^2 = c^2$$



$$y = mx + b$$

5 South Carolina SC READY Grade 8 Math Practice Tests

Five SC READY Practices for Functions, Geometry, and Review



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

Jay Daie and Reza Nazari



Copyright ©

Testinar Inc



Published by Testinar Inc

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, South Carolina Grade 8 Problem Solver!

Five focused rounds for sharper SC READY math thinking

This book gives you five full Grade 8 SC READY math practice tests. Each round is built to help you recognize structure, reason with real numbers and exponents, analyze linear relationships, connect equations with graphs, and explain your thinking with care.

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 five-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 an exponent rule, equation, graph, transformation, diagram, 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.

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?

Five SC READY tests, 200 questions, and a focused review path

Part	What You Will Practice
Tests 1–2	Real numbers, exponents, scientific notation, equations, and careful reading.
Tests 3–5	Functions, systems, transformations, geometry, data analysis, and multi-step problem solving.
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.



Scan me!
For more practice
& answers

Table of Contents

★ Practice Test 1	_____	14
★ Practice Test 2	_____	31
★ Practice Test 3	_____	47
★ Practice Test 4	_____	63
★ Practice Test 5	_____	78
Practice Test Answer Keys	_____	94
Practice Test Answers and Explanations	_____	98

1) A line passes through $(2, 10)$ and has slope 3. What is the y -intercept?

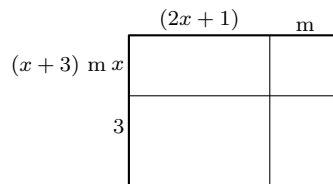
☐ A. 3

☐ C. 10

☐ B. 4

☐ D. 6

2) A garden is shaped like a rectangle with length $(2x + 1)$ m and width $(x + 3)$ m. What is its area in square meters?


☐ A. $2x^2 + 7x + 3$
☐ C. $3x^2 + 4x + 3$
☐ B. $2x^2 + 3x + 7$
☐ D. $2x^2 + 6x + 3$

3) Function $p(x) = \frac{3}{2}x - 4$ and the table for function q : $(0, 2)$, $(2, 5)$, $(4, 8)$. Which has a steeper slope?

x	0	2	4
$q(x)$	2	5	8

☐ A. $p(x)$
☐ C. Both have equal slopes.

☐ B. $q(x)$
☐ D. Cannot be determined.

4) A stock price drops from \$45 to \$30 over 10 days. What is the slope (rate of change per day)?

☐ A. $-\$1.50$ per day

☐ C. $\$1.50$ per day

☐ B. $-\$3$ per day

☐ D. $\$0.50$ per day


5) Which system best models: "The sum of two numbers is 20. Their difference is 4"?

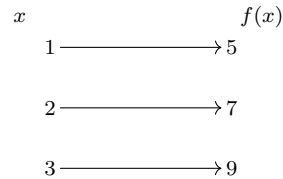
☐ A. $x + y = 20$; $x - y = 4$

☐ C. $x \cdot y = 20$; $x/y = 4$

☐ B. $x + y = 20$; $x + y = 4$

☐ D. $x = 20$; $y = 4$

6) The mapping diagram shows function f . What is $f(2)$?



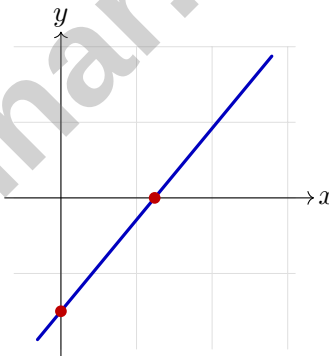
☐ A. 5

☐ C. 9

☐ B. 7

☐ D. 2

7) A function has a y -intercept of -3 and an x -intercept of 2. On the graph, these appear at which points?



☐ A. $(0, -3)$ and $(2, 0)$

☐ C. $(0, 2)$ and $(-3, 0)$

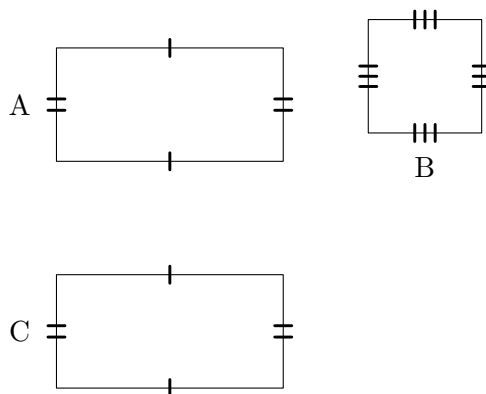
☐ B. $(-3, 0)$ and $(0, 2)$

☐ D. $(2, 0)$ and $(0, 0)$



Scan me!
For more practice
& answers

8) Which pair of figures is congruent?



☐ A. Figures A and B

☐ C. Figures B and C

☐ B. Figures A and C

☐ D. None are congruent

9) Which transformation rule represents a reflection across the y -axis?

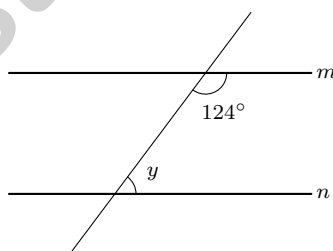
☐ A. $(x, y) \rightarrow (x, -y)$

☐ C. $(x, y) \rightarrow (y, x)$

☐ B. $(x, y) \rightarrow (-x, y)$

☐ D. $(x, y) \rightarrow (-x, -y)$

10) Lines m and n are parallel, cut by a transversal. If one co-interior angle is 124° , what is the other co-interior angle?



☐ A. 56°

☐ C. 124°

☐ B. 62°

☐ D. 180°



1) A square pyramid has a base with side 8 cm. If the volume is 192 cm^3 , what is the height?

☐ A. 6 cm

☐ C. 12 cm

☐ B. 9 cm

☐ D. 18 cm

2) Factor completely: $3x^2 + 6x + 3$.

☐ A. $3(x^2 + 2x + 1)$

☐ C. $3(x + 1)^2$

☐ B. $(3x + 3)(x + 1)$

☐ D. $3(x + 2)^2$

3) Function $f(x) = \frac{3}{4}x + 2$ and g shown in table: (0, 3), (4, 5), (8, 7). Which has steeper slope?

x	0	4	8
$g(x)$	3	5	7

☐ A. $f(x)$ is steeper

☐ C. Equal slopes

☐ B. $g(x)$ is steeper

☐ D. Cannot compare

4) Which equation represents a LINEAR function?

☐ A. $y = 2^x$

☐ C. $y = |x| + 1$

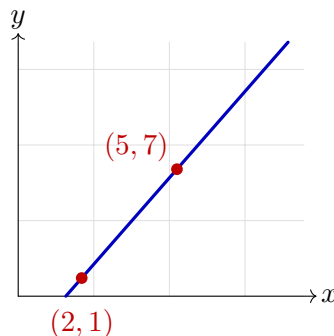
☐ B. $y = \frac{5}{x-2}$

☐ D. $y = -3x + 4$



Scan me!
For more practice
& answers

- 5) A graph shows a line passing through $(2, 1)$ and $(5, 7)$. If the line continues, which point would it pass through?



- ☐ A. $(8, 13)$ ☐ C. $(8, 11)$
☐ B. $(8, 12)$ ☐ D. $(7, 10)$
- 6) If $3^a \cdot 3^5 = 3^{12}$, what is the value of a ?

- 7) A farmer's market charges \$2 for apples and \$3 for oranges. On Saturday, the vendor sold 120 pieces of fruit for \$310. How many apples were sold?

- ☐ A. 40 ☐ C. 50
☐ B. 60 ☐ D. 80

- 8) A cube-shaped storage container has a volume of 512 cubic feet. What is the side length of the cube?



1) $(4.8 \times 10^{-2}) \times (1.25 \times 10^2) = ?$

☐ A. 0.6×10^0

☐ C. 6×10^0

☐ B. 6×10^{-1}

☐ D. 6×10^{-4}

2) A vehicle loan of \$25,000 at 6% simple interest for 5 years. What is the total amount to repay?

☐ A. \$25,750

☐ C. \$30,000

☐ B. \$27,500

☐ D. \$32,500

3) Solve: $x^7 \cdot x^4 = x^9$.

☐ A. 13

☐ C. 5

☐ B. 36

☐ D. $\frac{9}{4}$

4) Expand $(x - 7)^2$.

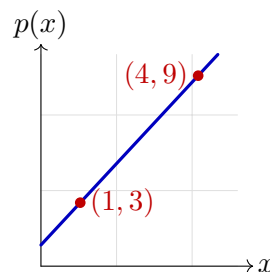
☐ A. $x^2 - 49$

☐ C. $x^2 - 14x + 49$

☐ B. $x^2 + 14x + 49$

☐ D. $x^2 - 7x + 49$

5) Function p with graph through $(1, 3)$ and $(4, 9)$ (slope shown visually). Function q : “starts at 5, decreases by 2 each unit.” Which has a positive slope?



☐ A. Only p

☐ C. Both p and q

☐ B. Only q

☐ D. Neither p nor q

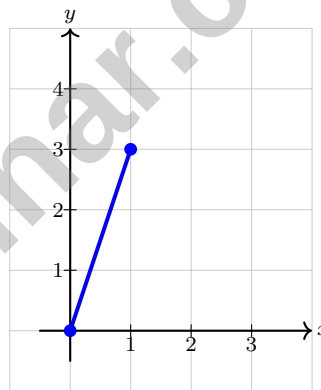


- 6) The mass of the Sun is approximately 2×10^{30} kg. How many times more massive is the Sun than Earth, which has mass 6×10^{24} kg?

- 7) The function $y = \sqrt{x-1}$ is LINEAR or NONLINEAR?

- ☐ A. Linear, because it has a constant slope ☐ C. Linear, because x appears once
☐ B. Nonlinear, because $x \geq 1$ ☐ D. Nonlinear, because it contains a square root

- 8) What is the slope of the line shown?



- ☐ A. 2 ☐ C. 3
☐ B. $\frac{1}{3}$ ☐ D. $\frac{3}{2}$



Scan me!
For more practice
& answers

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.

Testinar.com



Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice B is correct.** **(8.PAFR.1.6)** Using $y = mx + b$: $10 = 3(2) + b \Rightarrow 10 = 6 + b \Rightarrow b = 4$.
- 2) **Choice A is correct.** **(8.PAFR.1.5)** Area = $(2x + 1)(x + 3) = 2x^2 + 6x + x + 3 = 2x^2 + 7x + 3$ m².
- 3) **Choice C is correct.** **(8.PAFR.1.5)** Slope of p : $\frac{3}{2} = 1.5$. From table q : $(5 - 2)/(2 - 0) = 3/2 = 1.5$. Both have slope 1.5.
- 4) **Choice A is correct.** **(8.PAFR.2.4)** Slope = $\frac{30 - 45}{10 - 0} = \frac{-15}{10} = -\1.50 per day.
- 5) **Choice A is correct.** **(8.PAFR.2.1)** "Sum" translates to $x + y = 20$. "Difference" translates to $x - y = 4$ (or $y - x = 4$, depending on order). Options B, C, and D do not match these descriptions.
- 6) **Choice B is correct.** **(8.PAFR.1.4)** Follow the arrow from input 2 to output 7. Therefore, $f(2) = 7$.
- 7) **Choice A is correct.** **(8.PAFR.1.4)** A y -intercept occurs where $x = 0$, giving point $(0, -3)$. An x -intercept occurs where $y = 0$, giving point $(2, 0)$.
- 8) **Choice B is correct.** **(8.MGSR.2.2)** Figures A and C are both 4×2 rectangles. Figure B is a 2×2 square, so it is not congruent to either rectangle.
- 9) **Choice B is correct.** **(8.MGSR.3.7)** Reflection across the y -axis negates the x -coordinate while keeping y the same: $(x, y) \rightarrow (-x, y)$.
- 10) **Choice A is correct.** **(8.MGSR.2.1)** Co-interior angles (same-side interior angles) are supplementary: $124 + y = 180$, so $y = 56^\circ$.
- 11) **Choice A is correct.** **(8.MGSR.1.3)** From $(\sqrt{2})^2 + (\sqrt{6})^2 = c^2$, we get $2 + 6 = 8$, so $c = \sqrt{8} = \sqrt{4 \cdot 2} = 2\sqrt{2}$.
- 12) **Choice C is correct.** **(8.MGSR.1.2)** $d = \sqrt{40^2 + 9^2} = \sqrt{1600 + 81} = \sqrt{1681} = 41$ m.
- 13) **Choice C is correct.** **(8.MGSR.2.4)** Co-interior angles sum to 180° : $(m - 15) + (m + 35) = 180 \Rightarrow 2m + 20 = 180 \Rightarrow 2m = 160 \Rightarrow m = 80^\circ$.
- 14) **Choice B is correct.** **(8.MGSR.3.5)** Two congruent right triangles form a rectangle. Area = $5 \times 12 = 60$ ft².
- 15) **Choice A is correct.** **(8.MGSR.2.3)** For a triangle ($n = 3$): $(3 - 2) \times 180 = 1 \times 180 = 180^\circ$.
- 16) **Choice B is correct.** **(8.DPSR.1.1)** When points cluster tightly around a line, the correlation is stronger. When points are widely scattered, the correlation is weaker. Students should judge strength by how closely points cluster around an imaginary trend line.
- 17) **Choice B is correct.** **(8.DPSR.1.4)** This is a row-conditional relative frequency. Among cream-adders (50 total), 35 are office workers: $\frac{35}{50} = 0.70 = 70\%$.
- 18) **Choice C is correct.** **(8.DPSR.1.2)** Absolute deviations: $|10 - 13| = 3$, $|12 - 13| = 1$, $|14 - 13| = 1$, $|16 - 13| = 3$. Sum = 8. MAD = $8/4 = 2$.
- 19) **Choice B is correct.** **(8.DPSR.2.2)** $P(\text{rolling 1 or 2}) = \frac{2}{6} = \frac{1}{3}$. The complement is $P(\text{rolling 3, 4, 5, or 6}) = 1 - \frac{1}{3} = \frac{2}{3}$, not $\frac{1}{3}$.
- 20) **Choice C is correct.** **(8.NR.1.1)** Apply the Counting Principle: $10 \text{ appetizers} \times 5 \text{ sides} \times 6 \text{ desserts} = 300$ different meals.
- 21) **The correct answer is 6.** **(8.PAFR.2.3)** The unit rate is 6 miles per hour, so $k = 6$ and $d = 6t$.
- 22) **The correct answer is B,E.** **(8.PAFR.3.3)** The product is $(4 \times 5) \times 10^{3+4} = 20 \times 10^7 = 2 \times 10^8$, so choices B and E are equivalent to the original expression. Choice A uses an exponent that is too large, and choices C and D have the wrong value.
- 23) **The correct answer is (5, 3).** **(8.PAFR.2.1)** Add the two equations to eliminate y : $(x + y) + (x - y) = 8 + 2$, so $2x = 10$, giving $x = 5$. Substitute into the first equation: $5 + y = 8$, so $y = 3$.
- 24) **Choice A is correct.** **(8.MGSR.1.1)** Base area: $B = \frac{1}{2} \times 10 \times 6 = 30$ cm². Volume: $V = \frac{1}{3} \times 30 \times 15 = 150$ cm³.
- 25) **Choice C is correct.** **(8.DPSR.1.1)** Tracing back to $x = 0$, the trend line intersects the y -axis at approximately 1 on the scale, or \$10,000.
- 26) **Choice B is correct.** **(8.MGSR.3.6)** In similar figures, corresponding angles are congruent. The angle measure does not change with dilation.



Hi, Persistent Problem Solver!

◇ Some Grade 8 questions ask you to hold several ideas in your mind at once. That can feel hard, and that is exactly why practice matters. ◇

★ **Remember this:** You showed persistence by continuing through the set. That habit is powerful because difficult problems often open after one more good attempt. You practiced across 5 full Grade 8 practice tests, and that repeated effort matters. ★

Persistence Tools

- **Try a Smaller Case:** Use an easier number to see the pattern.
- **Draw It:** Make the situation visible.
- **Restate It:** Say the question in your own words.
- **Check One Step:** Fix the first unclear place.

Grade 8 test-day tip: When stuck, do not restart everything. Find the first step you trust, then rebuild from there.

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

Jay Daie

Your Persistence Coach

Practice Today. Succeed Tomorrow!

Give your child the confidence and skills they need with **5 full-length Grade 8 Math** practice tests that reflect real test formats and cover all key math standards. Perfect for building skills, strengthening problem-solving abilities, and achieving success on test day!



WHAT'S INSIDE?



Standards-Aligned Practice

Questions designed to cover essential Grade 8 math standards.



Variety of Question Types

Multiple-choice, short answer, and more to build well-rounded skills.



Real-World Applications

Engaging problems that connect math to everyday life.



Step-by-Step Progress

Track improvement and build confidence with every test.

COVERS ALL ESSENTIAL TOPICS

- | | |
|---------------------------------------|----------------------------|
| ✓ The Number System | ✓ Statistics & Probability |
| ✓ Expressions & Equations | ✓ Pythagorean Theorem |
| ✓ Ratios & Proportional Relationships | ✓ Volume & Surface Area |
| ✓ Linear Equations | ✓ Transformations |
| ✓ Functions | ✓ Inequalities |
| ✓ Geometry | ✓ Data Analysis & Graphing |
| ✓ Measurement & Data | ✓ And More! |

5
PRINTED
TESTS



2 ONLINE
TESTS



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