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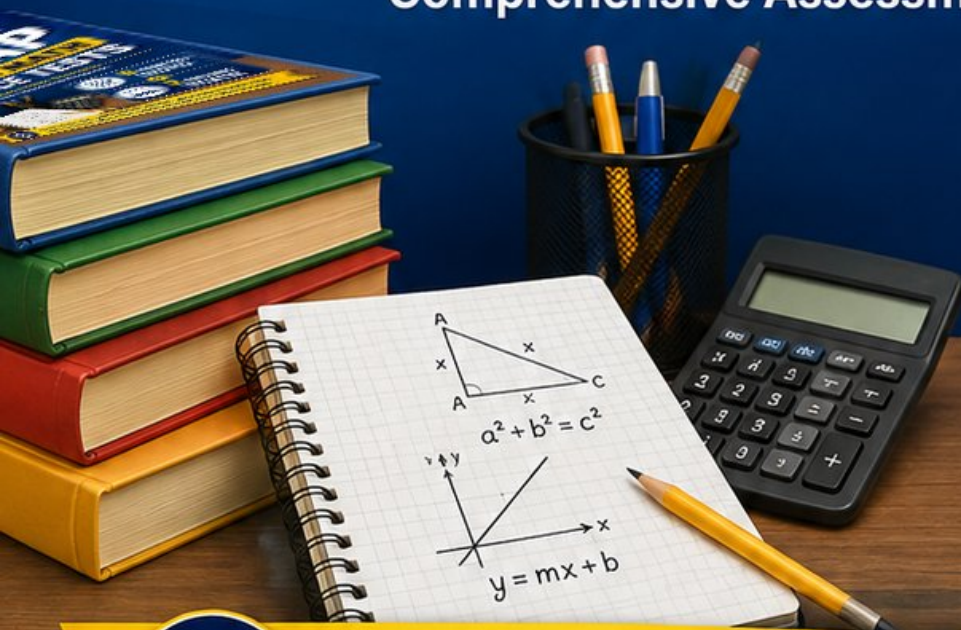
South Carolina

SC READY

GRADE 8 MATH

PRACTICE TESTS

Standards Aligned Problem Solving For
Comprehensive Assessment Programs



6 PRINTED
TESTS



2 ONLINE
TESTS



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

6 South Carolina SC READY Grade 8 Math Practice Tests

Grade 8 Math Prep for State Standards, Review, and Confident Testing



Six 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



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Welcome, South Carolina Grade 8 Problem Solver!

Six focused rounds for sharper SC READY math thinking

This book gives you six 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 six-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?

Six SC READY tests, 240 questions, and a complete review path

Part	What You Will Practice
Tests 1–3	Real numbers, exponents, scientific notation, equations, and careful reading.
Tests 4–6	Functions, systems, transformations, geometry, data analysis, and multi-step problem solving.
Answer Pages	Compact keys and explanations that show why each answer works.

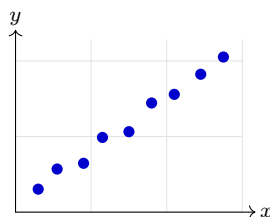
The tests are mixed on purpose. Grade 8 success means recognizing which idea is being tested even when the next question changes format.



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& answers

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1)

A scatter plot shows hours of study and test scores for 30 students. As study hours increase, test scores also increase. What type of correlation does this show?

- | | |
|--|---|
| ☐ A. Positive correlation | ☐ C. No correlation |
| ☐ B. Negative correlation | ☐ D. Causal relationship |

2) Two trend-line slopes are 1.2 and 1.1. What is their difference?

3) Which shows an error in classification?

- | | |
|---|---|
| ☐ A. $\sqrt{36} = 6$ is classified as rational | ☐ C. $0.\overline{27}$ is classified as irrational |
| ☐ B. π is classified as irrational | ☐ D. $\sqrt{50}$ is classified as irrational |

4) Which number is equivalent to 6.5×10^{-3} ?

- | | |
|------------------------------------|------------------------------------|
| ☐ A. 6,500 | ☐ C. 0.065 |
| ☐ B. 65,000 | ☐ D. 0.0065 |



5) $\frac{2.8 \times 10^7}{7 \times 10^4} = ?$

☐ A. 0.4×10^3

☐ C. 4×10^3

☐ B. 0.4×10^7

☐ D. 4×10^2

6) Which radicand gives a square root closest to 5.5?

☐ A. 25

☐ C. 33

☐ B. 28

☐ D. 30

7) Which is the best estimate of $\frac{\pi}{\sqrt{2}}$?

☐ A. 1.5

☐ C. 3.1

☐ B. 4.4

☐ D. 2.2

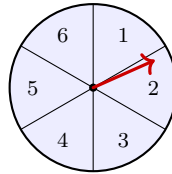
8) Sarah invests \$2,000 at 5% simple interest for 3 years. At the end of 3 years, she decides whether to withdraw all her money or let it grow another 3 years at the same rate. Which statement correctly predicts the impact of waiting another 3 years?

☐ A. No additional interest accrues after 3 years☐ C. Interest compounds, so she earns more than \$300☐ B. She will earn another \$600 in interest (total after 6 years: \$2,900)☐ D. She will earn another \$300 in interest (total after 6 years: \$2,600)

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- 9) A spinner has 6 equal sections numbered 1–6. If the spinner is spun twice, what is the probability of getting a sum of 7? Express your answer as a fraction in simplest form.



- 10) The area of a square is $A = s^2$. If you square the side length, what is the area of the new square in terms of s ?

- ☐ A. s^2
☐ C. $(s^2)^2 = s^4$
☐ B. s^3
☐ D. $2s^2$

- 11) The area model below represents $(x + 2)(x + 4)$:

	x	2
x	x^2	$2x$
4	$4x$	8

What is the total area?

- ☐ A. $x^2 + 6x + 8$
☐ C. $x^2 + 4x + 2$
☐ B. $x^2 + 8$
☐ D. $2x^2 + 6x + 8$



1) A student claims that $0.\overline{3}$ is less than $\frac{1}{3}$. Which is true?

- ☐ A. The student is correct; $0.\overline{3} < \frac{1}{3}$. ☐ C. The student is incorrect; $0.\overline{3} > \frac{1}{3}$.
☐ B. We cannot compare them without a calculator. ☐ D. The student is incorrect; $0.\overline{3} = \frac{1}{3}$.

2) A parallelogram has base 6 in and height 4 in. It is dilated by a scale factor of 2.5. What is the new height?

- ☐ A. 4 in ☐ C. 15 in
☐ B. 10 in ☐ D. 6.5 in

3) Each interior angle of a regular polygon is 108° . How many sides does the polygon have?

- ☐ A. 5 ☐ C. 7
☐ B. 6 ☐ D. 8

4) A health clinic surveys 280 patients about diet type:

	Vegetarian	Omnivore	Total
Age 18–40	84	112	196
Age 41+	28	56	84
Total	112	168	280

What is the joint relative frequency of age 41+ omnivores, as a percentage?

- ☐ A. 20% ☐ C. 33%
☐ B. 25% ☐ D. 40%



5) A data set has $MAD = 0$. What must be true about the data?

- ☐ A. All values are zero ☐ C. There is exactly one value
☐ B. The mean is zero ☐ D. All values are identical

6) A die is rolled once. What is the probability of rolling a 2 OR a number less than 4?

- ☐ A. $\frac{5}{6}$ ☐ C. $\frac{1}{3}$
☐ B. $\frac{4}{6}$ ☐ D. $\frac{1}{2}$

7) There are 5 ways to get from building A to building B, and 3 ways to get from B to C. A student writes: "Total routes = $5 + 3 = 8$." Which statement best describes the error?

- ☐ A. The student is correct; addition is the right operation. ☐ C. The student should use factorials: $5! + 3! = 126$.
☐ B. The student should multiply because each A-to-B route can be followed by any B-to-C route. ☐ D. The student should use combinations: $\binom{5}{3} = 10$.



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1) Is $\sqrt{17}$ closer to 4 or closer to 5?

- ☐ A. Both equally close ☐ C. Closer to 4
☐ B. Closer to 5 ☐ D. Cannot determine

2) A fitness gym charges only a flat \$50 monthly fee with no additional per-visit costs. If C is total monthly cost and m is the number of months, which equation represents this?

- ☐ A. $C = m + 50$ ☐ C. $C = 50$
☐ B. $C = 50m$ ☐ D. $C = m^2$

3) A proportional relationship passes through $(0,0)$ and $(3,12)$. What is the constant of proportionality k ? (Give your answer as a simplified fraction or decimal.)

4) Two parallel lines are cut by a transversal. If one angle is $(6y + 12)^\circ$ and its corresponding angle is $(3y + 51)^\circ$, find y .

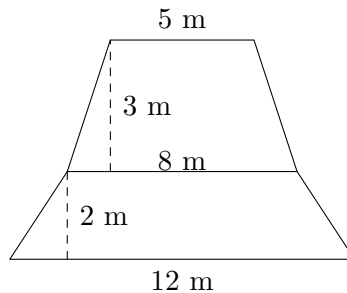
- ☐ A. 13 ☐ C. 17
☐ B. 15 ☐ D. 19

5) A company requires workers to complete at least 100 units per day. If a worker has completed 45 units, how many more units must the worker complete?

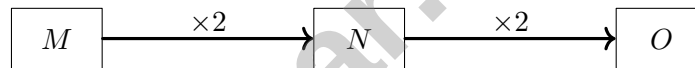


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& answers

- 6) A composite figure is an asymmetric shape made of two trapezoids stacked vertically. Top trapezoid: bases 5 m and 8 m, height 3 m. Bottom trapezoid: bases 8 m and 12 m, height 2 m. What is the combined area?



- ☐ A. 15 m^2
☐ C. 35 m^2
☐ B. 20 m^2
☐ D. 39.5 m^2
- 7) If Figure M is similar to Figure N with scale factor 2, and Figure N is similar to Figure O with scale factor 2, what is the scale factor from Figure M to Figure O ?



- ☐ A. 2
 ☐ C. $\frac{1}{2}$
☐ B. 4
 ☐ D. 1
- 8) Which scenario can be modeled by a function?
- ☐ A. A student and all books they checked out this year.
 ☐ C. Time of day and the temperature outside.
☐ B. A positive number and its two square roots.
 ☐ D. A person and their email address (one person may have multiple emails).



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

- Choice A is correct.** (8.DPSR.1.1) When both variables increase together, there is a positive correlation. Negative correlation occurs when one increases while the other decreases.
- The correct answer is 0.1.** (8.DPSR.1.1) Compute $1.2 - 1.1 = 0.1$.
- Choice C is correct.** (8.NR.2.2) The repeating decimal $0.\overline{27} = 0.272727\ldots = \frac{27}{99} = \frac{3}{11}$ is rational, not irrational. All repeating decimals are rational. The other classifications are correct.
- Choice D is correct.** (8.PAFR.3.3) A negative exponent shifts the decimal to the left. Move the decimal 3 places left: $6.5 \times 10^{-3} = 0.0065$.
- Choice D is correct.** (8.PAFR.3.3) Divide coefficients: $2.8 \div 7 = 0.4$. Subtract exponents: $10^{7-4} = 10^3$. Rewrite: $0.4 \times 10^3 = 4 \times 10^2$.
- Choice D is correct.** (8.NR.2.1) $(5.5)^2 = 30.25$. Since $\sqrt{30} \approx 5.48$ is closest to 5.5, the answer is 30.
- Choice D is correct.** (8.NR.2.1) $\frac{\pi}{2} \approx \frac{3.14}{1.41} \approx 2.23$.
- Choice D is correct.** (8.DPSR.2.2) After 3 years: $A = 2000 + 2000 \times 0.05 \times 3 = \$2,300$. Another 3 years of simple interest on \$2,000: $I = 2000 \times 0.05 \times 3 = \300 . Total: $\$2,300 + \$300 = \$2,600$. (Note: Simple interest, not compound, means the same principal earns the same amount each 3-year period.)
- The correct answer is $\frac{1}{6}$.** (8.DPSR.2.2) Favorable outcomes: (1,6), (2,5), (3,4), (4,3), (5,2), (6,1). That's 6 of 36. $P = \frac{6}{36} = \frac{1}{6}$.
- Choice C is correct.** (8.PAFR.3.3) New side is s^2 , so new area is $(s^2)^2 = s^{2 \cdot 2} = s^4$.
- Choice A is correct.** (8.PAFR.1.5) Sum of areas: $x^2 + 2x + 4x + 8 = x^2 + 6x + 8$.
- Choice A is correct.** (8.PAFR.1.5) Slope = $(0 - 12)/(3 - 0) = -12/3 = -4$.
- Choice A is correct.** (8.PAFR.1.3) The differences are $13 - 5 = 8$, $21 - 13 = 8$, $29 - 21 = 8$. A constant difference of 8 indicates a linear function.
- Choice A is correct.** (8.PAFR.2.4) Using slope = $\frac{\Delta y}{\Delta x}$: $-\frac{1}{2} = \frac{y - 6}{8 - 4}$. So $-\frac{1}{2} = \frac{y - 6}{4}$, giving $y - 6 = -2$, thus $y = 4$.
- Choice C is correct.** (8.PAFR.2.1) Let p = pennies, n = nickels, and d = dimes. Then $n = 2p$ and $d = 2n = 4p$. The total is $p + 2p + 4p = 7p = 70$, so $p = 10$.
- Choice A is correct.** (8.PAFR.1.4) The correct evaluation is $f(4) = 3(4) + 2 = 12 + 2 = 14$. The student treated 3 as an addend instead of multiplying it by 4.
- Choice A is correct.** (8.MGSR.1.1) The student calculated the sum of the three different face areas but forgot to double each (since there are two of each face). The correct calculation is $SA = 2(12 + 8 + 6) = 52 \text{ m}^2$.
- The correct answer is A,C.** (8.MGSR.3.6) Correct: (A) All linear measurements (sides, perimeter) are multiplied by 2.5. (C) Area is multiplied by $(2.5)^2 = 6.25$. Incorrect: (B) Angles are congruent in dilation, not scaled. (D) Perimeter is multiplied, not divided, by 2.5. (E) Dilation preserves shape; polygon type does not change.
- Choice A is correct.** (8.MGSR.3.1) 270° counterclockwise equals 90° clockwise, using the rule $(x, y) \rightarrow (y, -x)$. Distractor B is 90° counterclockwise.
- Choice D is correct.** (8.PAFR.3.1) Volume = $s^3 = 343$, so $s = \sqrt[3]{343} = 7 \text{ cm}$. One face is a square with side 7 cm, so area = $7^2 = 49 \text{ cm}^2$.
- Choice A is correct.** (8.PAFR.2.5) Using points (0, 1) and (4, 5): slope = $\frac{5 - 1}{4 - 0} = \frac{4}{4} = 1$.
- Choice D is correct.** (8.PAFR.2.1) Distribute: $-2n + 8 = 10$. Subtract 8: $-2n = 2$. Divide by -2 : $n = -1$.
- Choice D is correct.** (8.PAFR.2.1) Subtract 3: $-2x > -8$. Divide by -2 (FLIP): $x < 4$. Open circle and left ray.
- Choice A is correct.** (8.MGSR.1.2) The line is $x - 2y = 6$. Test origin: $0 - 0 = 0 \leq 6$ TRUE. So the origin is in the solution region with $\leq$.
- Choice C is correct.** (8.MGSR.1.1) $V = \frac{4}{3}\pi r^3 = \frac{4}{3} \times 3.14 \times 512 = 2143.57 \text{ in}^3$.
- The correct answer is 132.** (8.NR.1.1) Line leader: 12 choices. Helper: 11 remaining choices. Total: $12 \times 11 = 132$ ways.



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 deep and steady book gave you six full 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. ACHIEVE TOMORROW.

6

Give your child the confidence and skills they need with **6 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 |
| | ✓ And More! |



6 PRINTED TESTS



2 ONLINE TESTS



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