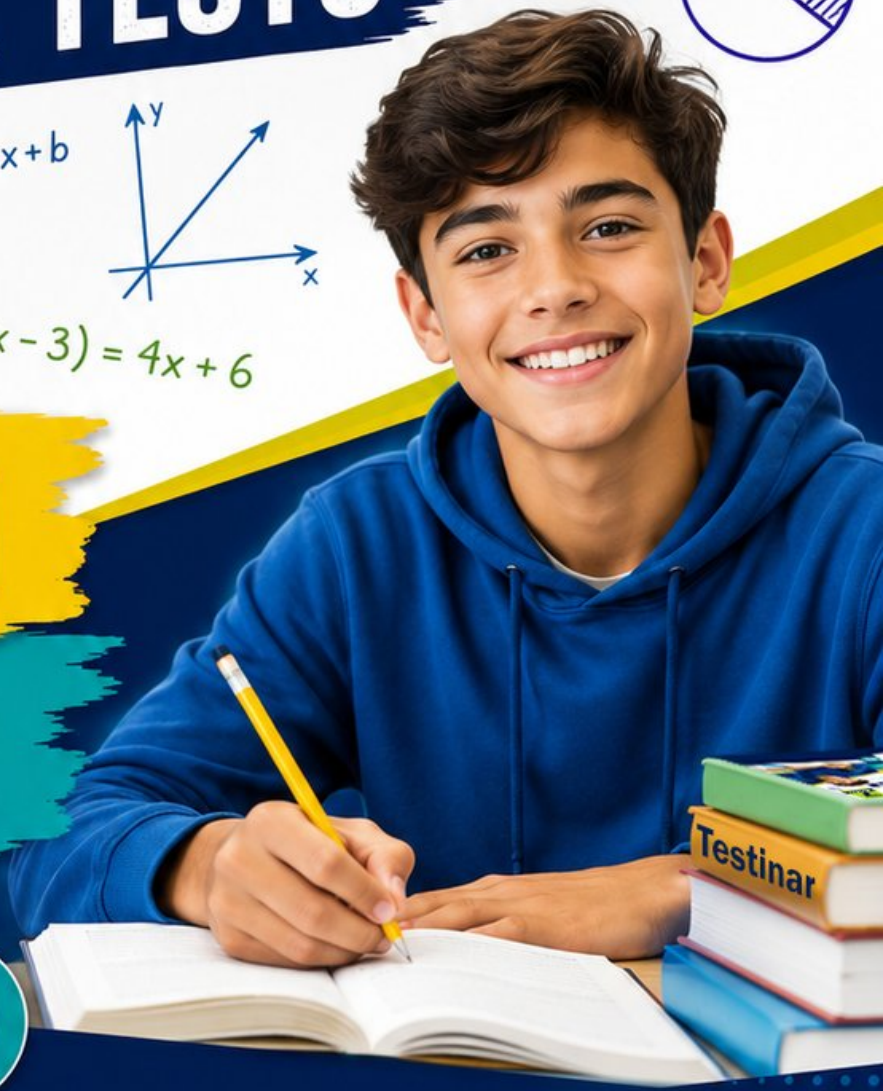
6 SOUTH CAROLINA SC READY PRACTICE TESTS

GRADE 7 MATH

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

$y = mx + b$

$2(x - 3) = 4x + 6$



6 PRINTED TESTS

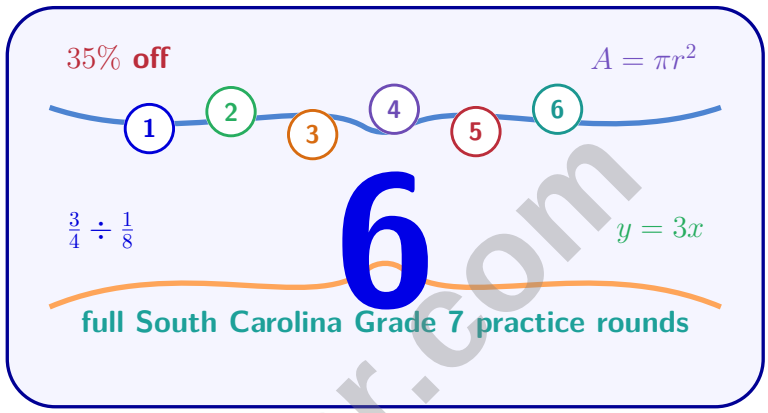
2 ONLINE TESTS

USE THESE TWO ADDITIONAL ONLINE PRACTICE TESTS FOR EXTRA REVIEW AFTER THE PRINTED TESTS IN THIS BOOK.

- Build Confidence
- Strengthen Math Skills
- Detailed Answers & Explanations
- Improve Test Performance

6 South Carolina SC READY Grade 7 Math Practice Tests

Standards-Aligned Practice with Review, Answer Keys, and Explanations



Six complete 40-question Grade 7 SC READY practice rounds with proportional relationships, percents, rational numbers, expressions, equations, geometry, statistics, probability, answer keys, and clear explanations for every item.

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Jay Daie and Reza Nazari

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Welcome, South Carolina Grade 7 Problem Solver!

Six focused rounds for sharper SC READY math thinking

This book gives you six full Grade 7 SC READY math practice tests. Each round is built to help you notice structure, compare quantities, use proportional reasoning, handle rational numbers, 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.

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How to Use This Book

A six-session plan for confident Grade 7 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.

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

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For more practice
& answers

What Is Inside?

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

Part	What You Will Practice
Tests 1–3	Proportional relationships, unit rates, percents, rational-number operations, and careful reading.
Tests 4–6	Expressions, equations, inequalities, scale drawings, geometry, and multi-step problem solving.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Grade 7 success means recognizing which idea is being tested even when the next question changes format.

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1) A nutritionist estimated 2200 calories per day but the actual need was 2000 calories. What is the percent error?

☐ A. 10%
☐ B. 11%
☐ C. 200%
☐ D. 90.9%

2) A square has vertices at $(0, 0)$, $(2, 0)$, $(2, 2)$, and $(0, 2)$. If the square is reflected over the line $y = -x$, what is the x-coordinate of the image of the vertex originally at $(2, 0)$?

3) Which characteristic is TRUE for all proportional relationships?

☐ A. The ratio $y : x$ decreases over time
☐ B. The slope is always positive
☐ C. The relationship involves fractions
☐ D. The y-intercept is always 0

4) A teacher buys 5 notebooks at $\$x$ each and spends a total of \$45 (including a \$5 coupon discount). What is the price per notebook?

☐ A. \$8
☐ B. \$9
☐ C. \$10
☐ D. \$12

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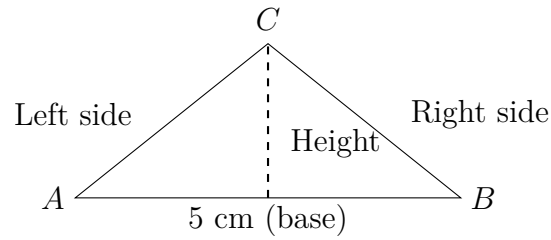
5)



The triangle has a base of 5 cm and the two other sides are equal. What type of triangle is this?

☐ A. Equilateral
☐ B. Isosceles
☐ C. Scalene
☐ D. Right

6) A principal surveys students about preferred lunch times. To ensure the sample includes students from all lunch periods, she randomly selects 15 students from first lunch, 15 from second lunch, and 15 from third lunch. This sampling method is called:

☐ A. Systematic sampling
☐ B. Stratified random sampling
☐ C. Convenience sampling
☐ D. Cluster sampling

7) Two datasets both have a range of 30. Which measure would help distinguish their variability further?

☐ A. Mode
☐ B. Interquartile range or MAD
☐ C. Minimum value
☐ D. Outlier count

8) Two similar rectangles have a scale factor of 2.5. The smaller rectangle has a perimeter of 16 inches. What is the perimeter of the larger rectangle?

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9) A cylindrical pasta jar has a radius of 5 cm and a height of 15 cm. What is the surface area of the jar (including both circular ends)? Use $\pi \approx 3.14$.

☐ A. 471 cm^2
☐ B. 628 cm^2
☐ C. 785 cm^2
☐ D. 1256 cm^2

10) A line plot shows the number of goals scored by 15 soccer players this season:

Goals	2	2	3	3	3	4	4	4	4	5	5	6	6	7	9

Which statement best describes the data?

☐ A. The data shows a uniform distribution with all scores equally common
☐ B. Most players scored between 3 and 5 goals, with one outlier at 9
☐ C. All players scored at least 2 goals, with the median at 4
☐ D. The mode is 4 goals, appearing 4 times

11) A spinner has 10 equally-sized sections. 4 are labeled "Red", 3 are labeled "Blue", and 3 are labeled "Yellow". What is the probability of spinning Blue?

☐ A. $\frac{3}{10}$
☐ B. $\frac{1}{3}$
☐ C. $\frac{4}{10}$
☐ D. $\frac{3}{7}$

12) A spinner with 4 equal sections (1, 2, 3, 4) is spun, and a coin is flipped. How many favorable outcomes result in spinning a number greater than 2 and flipping Heads?

☐ A. 1
☐ B. 2
☐ C. 4
☐ D. 8

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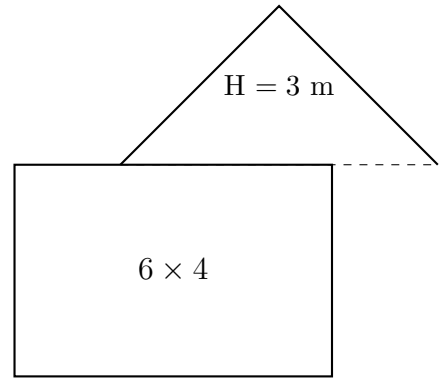
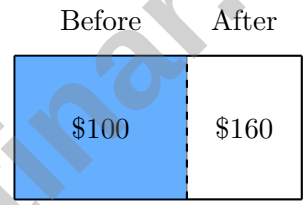
1)



A student tried to find the area of a house shape (rectangle 6 m × 4 m with triangle on top, base 6 m, height 3 m). The student calculated $6 \times 4 + 6 \times 3 = 24 + 18 = 42$ m^2. What is the correct area?

☐ A. 24 m^2
☐ B. 33 m^2
☐ C. 42 m^2
☐ D. 51 m^2

2)



A before-and-after bar diagram shows a quantity increasing from \$100 to \$160. What is the percent increase?

☐ A. 40%
☐ B. 62.5%
☐ C. 37.5%
☐ D. 60%

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3)

Number of Heads	0	1	2	3	Total
Frequency	12	36	37	15	100

A coin is flipped 3 times in each trial, and this is repeated 100 times. The table shows the number of heads per trial. What is the estimated probability of getting exactly 2 heads in three flips?

☐ A. 0.27
☐ B. 0.35
☐ C. 0.37
☐ D. 0.40

4) A restaurant has 3 appetizers, 5 main courses, and 2 desserts. If a diner chooses one of each, how many complete meals are possible?

☐ A. 10
☐ B. 15
☐ C. 20
☐ D. 30

5) A box plot shows test scores with minimum 45, Q1 = 65, median = 75, Q3 = 85, maximum = 95. What is the interquartile range (IQR)?

6) A standard die is rolled twice. What is the probability of rolling a 4 on the first roll and a number less than 4 on the second roll?

☐ A. $\frac{3}{36}$
☐ B. $\frac{1}{18}$
☐ C. $\frac{4}{36}$
☐ D. $\frac{7}{36}$

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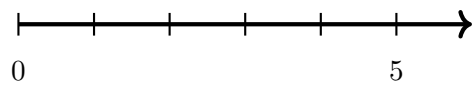
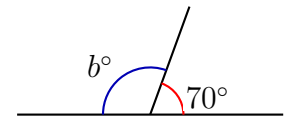
1) Number-line model: Where does $\frac{5}{6} \div \frac{1}{6}$ map on the number line?

Answer



☐ A. 0
☐ B. Between 0 and 1
☐ C. At 5
☐ D. Beyond 5

2) 

A ray splits a straight angle into two adjacent angles. One angle is 70°. Find the measure of angle b.

☐ A. 20°
☐ B. 70°
☐ C. 110°
☐ D. 180°

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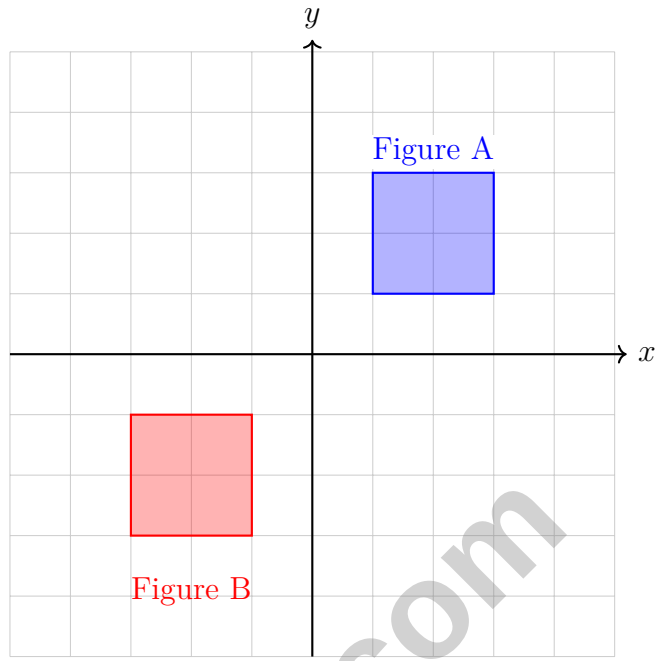
3)



What transformation maps Figure A to Figure B?

- ☐ A. Translation by $(-4, -4)$
- ☐ B. Rotation of 180° about the origin
- ☐ C. Reflection over the line $y = -x$
- ☐ D. Rotation of 90° counterclockwise

4) If a cylinder is scaled such that both the radius and height are doubled, by what factor does the volume increase?

- ☐ A. 2
- ☐ B. 4
- ☐ C. 8
- ☐ D. 16

5) A histogram shows the ages of people visiting a museum. The x-axis shows age intervals (10–20, 20–30, 30–40, etc.), and the heights of the bars show the number of people. What does the height of each bar represent?

- ☐ A. The width of each age interval
- ☐ B. The frequency (count) in each age interval
- ☐ C. The average age in each interval
- ☐ D. The age of the oldest person

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South Carolina SC READY Grade 7 Practice Test Answer Keys

How to use this section with a Grade 7 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 A is correct.** 7.RP.3 Percent error $= \frac{|2200-2000|}{2000} \times 100\% = \frac{200}{2000} \times 100\% = 10\%$.
2) **The correct answer is 0 .** 7.G.1-7.G.5 Reflection over $y = -x$ uses the rule $(x, y) \to (-y, -x)$. Applying this to $(2, 0)$: $(2, 0) \to (-0, -2) = (0, -2)$. The x-coordinate of the image is 0.
3) **Choice D is correct.** 7.RP.1-7.RP.3 Proportional relationships pass through origin, so y-intercept is always 0. Slope can be any nonzero number.
4) **Choice C is correct.** 7.EE.4a Equation: $5x - 5 = 45$. Add 5: $5x = 50$. Divide by 5: $x = 10$.
5) **Choice B is correct.** 7.G.1-7.G.5 Two sides are equal (the left and right sides), making it isosceles.
6) **Choice B is correct.** 7.SP.1-7.SP.4 Dividing the population into lunch periods (strata) and randomly selecting from each group is stratified random sampling.
7) **Choice B is correct.** 7.SP.1-7.SP.4 Range only tells the difference between max and min. IQR and MAD show how data is distributed within that range, distinguishing clustered from spread-out data with the same range.
8) **The correct answer is 40 .** 7.G.1-7.G.5 Perimeter scales linearly by the scale factor. Larger perimeter $= 16 \times 2.5 = 40$ inches.
9) **Choice B is correct.** 7.G.4-7.G.6 $SA = 2\pi r^2 + 2\pi rh = 2(3.14)(5^2) + 2(3.14)(5)(15) = 157 + 471 = 628$ cm^2.
10) **Choice D is correct.** 7.SP.1-7.SP.4 Counting occurrences: 2 (twice), 3 (three times), 4 (four times), 5 (twice), 6 (twice), 7 (once), 9 (once). The value 4 appears most frequently, making it the mode.
11) **Choice A is correct.** 7.SP.5-7.SP.8 Blue sections: 3 out of 10. $P(\text{Blue}) = \frac{3}{10}$.
12) **Choice B is correct.** 7.SP.5-7.SP.8 Numbers greater than 2: $\{3, 4\} = 2$ outcomes. Heads: 1 outcome. Favorable: 3H, 4H = 2 outcomes.
13) **Choice C is correct.** 7.SP.5-7.SP.8 Odd: 1, 3, 5, 7; Prime: 2, 3, 5, 7. Union: 1, 2, 3, 5, 7 = 7 out of 8.
14) **Choice B is correct.** 7.SP.6 Relative frequency of rainy days: $\frac{78}{365} \approx 0.214 \approx 0.21$. This experimental probability predicts future rain likelihood.
15) **Choice B is correct.** 7.SP.1-7.SP.4 Total: 2+3+4+2+4 = 15 people. In 40s: 4 people. Percent: $4/15 \approx 0.267 \approx 25\%$ (closest).
16) **Choice B is correct.** 7.SP.5-7.SP.8 $60\% = \frac{60}{100} = 0.6$.
17) **The correct answer is 44 .** 7.G.4-7.G.6 $C = 2\pi r = 2 \times \frac{22}{7} \times 7 = 2 \times 22 = 44$ cm.
18) **Choice B is correct.** 7.EE.1-7.EE.2 Distribute 3: $(2y) \cdot 3 + (-4) \cdot 3 = 6y - 12$. The sign of the term remains with it when distributed.
19) **Choice D is correct.** 7.NS.1-7.NS.3 $3 - (-3) = 3 + 3 = 6$.
20) **The correct answer is A,C.** 7.G.1-7.G.5 A: Two triangles with the same three side lengths are congruent by SSS. C: Two triangles with two equal sides and an equal included angle are congruent by SAS. B is incorrect because AAA determines similarity, not congruence (triangles can be different sizes). D is incorrect because two angles and two separate sides (not necessarily properly positioned) do not guarantee congruence.
21) **Choice D is correct.** 7.RP.3 Markup $= 0.60 \times 500 = \$300$. Selling price $= 500 + 300 = \$800$.
22) **Choice A is correct.** 7.EE.1 All terms have the same variables and exponents. Combine: $(6 + 3 - 2)x^2y = 7x^2y$.
23) **Choice C is correct.** 7.SP.1-7.SP.4 Angle $\div 360° \times 100 = 72° \div 360° \times 100 = 20\%$.
24) **Choice C is correct.** 7.RP.1-7.RP.3 Correct answer: $2 \times 5 = 10$ miles. Student divided $(2 \div 5 = 0.4)$ instead of multiplied.
25) **Choice D is correct.** 7.RP.3 45% of 80 is $0.45 \times 80 = 36$ students.
26) **Choice D is correct.** 7.NS.1b Check each: A: $8 + (-3) = 5$. B: $2 + (-7) = -5$ ✓. C: $-1 + 6 = 5$. D: $-9 + 3 = -6$. Only B equals -5.
27) **The correct answer is 113.04 .** 7.G.4-7.G.6 Full circle: $A = 3.14 \times 12^2 = 3.14 \times 144 = 452.16$ ft^2. Quarter: $\frac{452.16}{4} = 113.04$ ft^2.
28) **Choice B is correct.** 7.EE.1-7.EE.2 Factor out the GCF 6 and the negative: $-6m + 18 = -6(m - 3)$. Check: $-6(m - 3) = -6m + 18$.

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Hi, Persistent Problem Solver!

◇ Some Grade 7 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 6 full Grade 7 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 7 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

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PRACTICE TODAY. SUCCEED TOMORROW!

This book includes 6 full-length Math practice tests and 2 online tests to help Grade 7 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:

- 6 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.

Strengthen Math Skills
Develop key math concepts and problem solving abilities.

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

Test Confidence
Familiarize with test formats and improve accuracy and speed.

Boost Performance
Apply your knowledge and achieve your best score!

TOPICS COVERED

- Ratios & Proportions
- The Number System
- Expressions & Equations
- Geometry
- Percents & Decimals
- Statistics & Probability
- Data Analysis
- Measurement & Conversions
- Algebraic Thinking
- 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!

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PRACTICE REGULARLY | STAY FOCUSED | SOLVE CONFIDENTLY | SUCCEED BRIGHTLY