

5

Rhode Island

RICAS

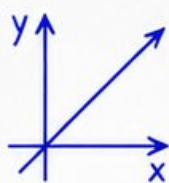
GRADE

7

MATH

PRACTICE TESTS

Standards Aligned
Problem Solving
For Comprehensive
Assessment Programs



$$y = mx + b$$

$$\frac{2}{3} + \frac{1}{6} = \frac{5}{6}$$



$$V = \pi r^2 h$$



5 PRINTED TESTS



2 ONLINE TESTS

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



Build
Confidence



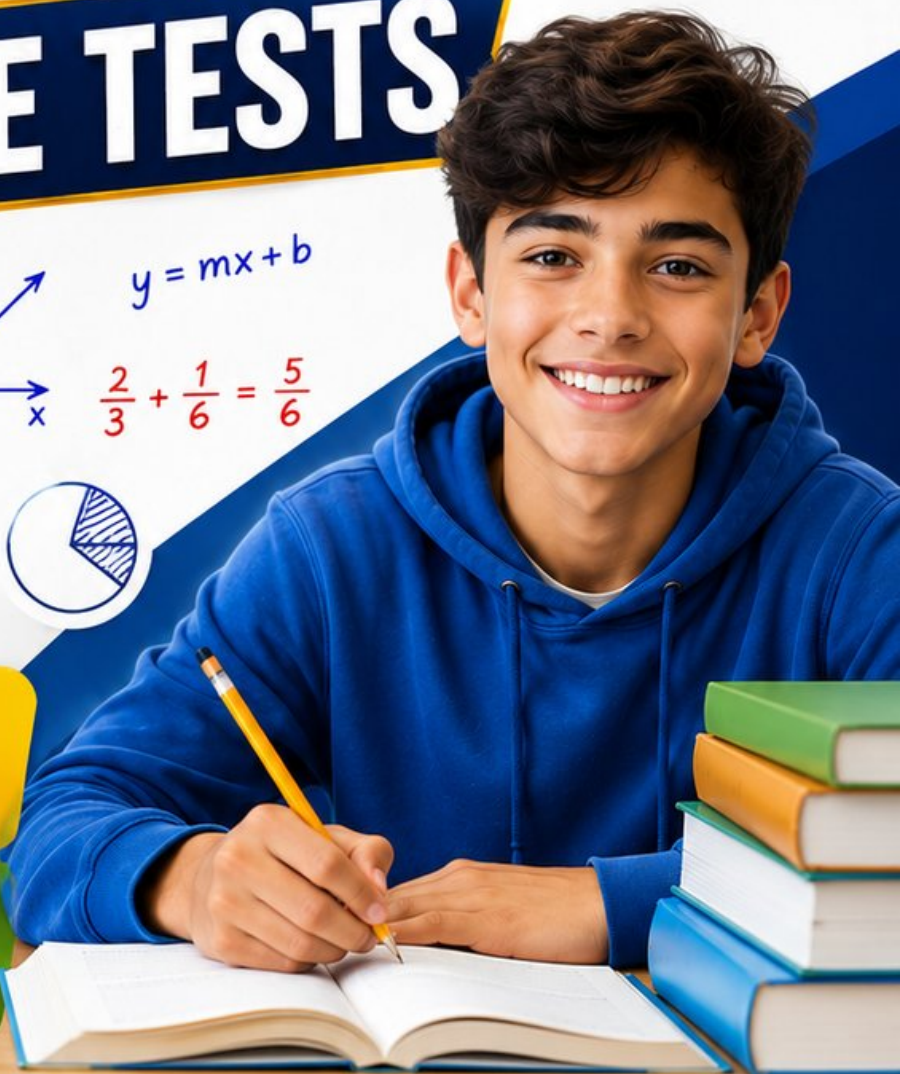
Strengthen
Math Skills



Detailed Answers
& Explanations

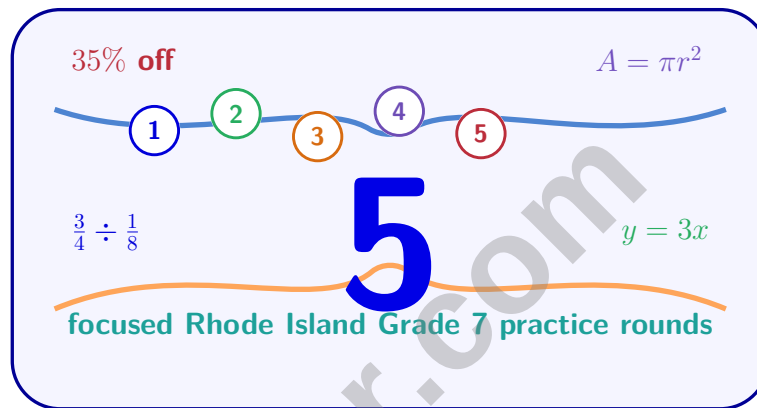


Improve Test
Performance



5 Rhode Island RICAS Grade 7 Math Practice Tests

Five-Test Standards Review with Keys and Guided Explanation Support



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

Jay Daie and Reza Nazari



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Welcome, Rhode Island Grade 7 Problem Solver!

Five focused rounds for sharper RICAS math thinking

This book gives you five full Grade 7 RICAS 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 Rhode Island 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 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.

Rhode Island 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 RICAS tests, 200 questions, and a focused review path

Part	What You Will Practice
Tests 1–2	Proportional relationships, unit rates, percents, rational-number operations, and careful reading.
Tests 3–5	Expressions, equations, inequalities, scale drawings, geometry, data, probability, 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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& answers

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1) A store marks up a product by \$5 on a cost of \$25. What is the selling price?

☐ A. \$35

☐ C. \$20

☐ B. \$45

☐ D. \$30

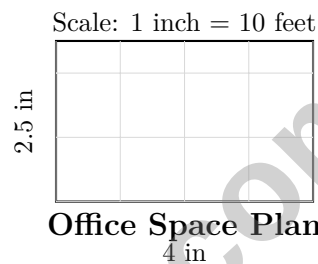
2) Simplify: $-2 - (-8)$

☐ A. -10

☐ C. -6

☐ B. 10

☐ D. 6



3)

Based on the scale, what is the perimeter of the office space in feet?

☐ A. 325 feet

☐ C. 6.5 feet

☐ B. 65 feet

☐ D. 130 feet

4) A soccer team won 75% of their 20 games. How many games did they win?

☐ A. 5

☐ C. 15

☐ B. 12

☐ D. 18

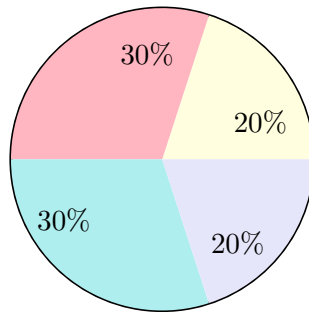
5) A worker is paid \$18 per hour. What are the earnings for 40 hours?



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- 6) A plane descends 2000 feet from its cruising altitude of 35000 feet. What is its new altitude? (Model as -2000 for descent.)

- ☐ A. 37000 feet ☐ C. -33000 feet
☐ B. 70000 feet ☐ D. 33000 feet



7)

The circle graph shows time allocation in a student's weekly schedule. Yellow is schoolwork (20%), pink is sports (30%), turquoise is study (30%), and lavender is free time (20%). If there are 168 hours in a week, how many are spent on sports?

- ☐ A. 30.4 ☐ C. 50.4
☐ B. 33.6 ☐ D. 67.2

- 8) A store sells apples at \$2.50 per pound. The relationship between pounds (p) and cost (c) is proportional. Write the equation.

- ☐ A. $c = p + 2.5$ ☐ C. $p = 2.5c$
☐ B. $c = 2.5 + p$ ☐ D. $c = 2.5p$

- 9) A loan of \$5000 at 8% simple interest is repaid after 2.5 years. What is the total amount repaid?



10) Maya runs at a constant speed. The relationship between distance (miles) and time (hours) is proportional and passes through (3, 18). How far does she run per hour?

☐ A. 3 miles per hour

☐ C. 15 miles per hour

☐ B. 54 miles per hour

☐ D. 6 miles per hour

11) A soccer team won 16 out of 20 games. What percent of games did they win?

☐ A. 64%

☐ C. 80%

☐ B. 75%

☐ D. 85%

12) Divide $2\frac{1}{4} \div \frac{3}{4}$.

☐ A. 2

☐ C. 3

☐ B. $2\frac{2}{3}$

☐ D. 4

13) A baker estimated she would need 2.8 cups of flour for a recipe that actually requires 3.2 cups. What is the percent error? Round to the nearest whole percent.

14) A car's fuel tank is at $\frac{3}{4}$ capacity. After a drive, $\frac{1}{4}$ of the tank is used. What fraction of the tank remains?

☐ A. $\frac{1}{12}$

☐ C. $\frac{5}{12}$

☐ B. $\frac{1}{2}$

☐ D. $\frac{1}{3}$



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- 1) A scale model of a bridge has a ratio of 1 : 500 (model to real). If the real bridge is 150 meters long, how long is the model in centimeters?

☐ A. 3 cm ☐ C. 300 cm
☐ B. 3000 cm ☐ D. 30 cm

- 2) Simplify $-5x + 3x + 2y - y$, then evaluate when $x = 1$ and $y = 1$.

- 3) Two proportional relationships are $y = 3x$ and $y = 5x$. Which relationship has the greater constant of proportionality?

☐ A. $y = 3x$ ☐ C. Both have the same constant
☐ B. $y = 5x$ ☐ D. Neither relationship is proportional

- 4) If a proportional relationship has $k = \frac{1}{2}$, which equation represents it?

☐ A. $y = 2x$ ☐ C. $y = x + \frac{1}{2}$
☐ B. $y = \frac{1}{2}x + 1$ ☐ D. $y = \frac{1}{2}x$

- 5) A simulation uses a spinner with two equal sections to model guessing on a multiple-choice question with four choices. Is this a good model?

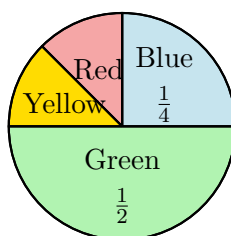
☐ A. Yes, because both have equally likely outcomes ☐ C. No, because the probabilities do not match
☐ B. Yes, because the spinner is easy to use ☐ D. No, because you cannot use a spinner twice



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- 6) A cube has edge length 3 cm. What is its surface area?
- ☐ A. 9 cm^2 ☐ C. 27 cm^2
☐ B. 18 cm^2 ☐ D. 54 cm^2
- 7) A marketing company conducts a phone survey during evening hours. Which population is most likely to be excluded by this method?
- ☐ A. People who work during evening hours and are unavailable ☐ C. People who prefer to communicate by email
☐ B. People who live in rural areas with poor service ☐ D. People who own landlines only
- 8) Which inequality represents “twice a number is at most 30”?
- ☐ A. $2x > 30$ ☐ C. $x \leq 30$
☐ B. $2x \leq 30$ ☐ D. $2x < 30$
- 9) A blueprint of a house has a scale where $\frac{1}{2}$ inch represents 4 feet. If a hallway in the blueprint is 1 inch long, how many feet long is the actual hallway?
- ☐ A. 2 feet ☐ C. 8 feet
☐ B. 4 feet ☐ D. 16 feet
- 10) A rectangular park boundary on a city map is 11 cm by 13 cm. The scale is 1 cm : 200 m. What is the perimeter of the actual park in meters?
- ☐ A. 4,800 m ☐ C. 2,400 m
☐ B. 9,600 m ☐ D. 4,400 m





1)

A spinner labeled with probability regions shows: $P(\text{blue}) = \frac{1}{4}$, $P(\text{green}) = \frac{1}{2}$. If red and yellow split the remaining space equally, what is $P(\text{red})$?

- ☐ A. $\frac{1}{8}$
☐ B. $\frac{1}{4}$

- ☐ C. $\frac{1}{2}$
☐ D. $\frac{3}{8}$

2) Expand and simplify $-2(5 - 3m) + 4m$, then evaluate when $m = 3$.

3) Evaluate $-3(x - 2)$ when $x = 5$.

- ☐ A. 9
☐ B. -9

- ☐ C. 21
☐ D. -21

4) A car rental company charges a base fee of \$45 and then \$0.25 per mile. Which equation represents the total cost C for m miles?

- ☐ A. $C = 45m + 0.25$
☐ B. $C = 0.25m + 45$

- ☐ C. $C = 45(m + 0.25)$
☐ D. $C = (45 + m)(0.25)$



5) Solve: $\frac{x}{3} \geq 2$

☐ A. $x \geq \frac{2}{3}$

☐ B. $x \leq 6$

☐ C. $x \geq 6$

☐ D. $x \geq 2$

6) A scale drawing shows a rectangular garden with dimensions 6 cm $\times$ 4 cm. The scale is 1 cm : 2 m. What is the area of the actual garden?

☐ A. 48 m²

☐ B. 96 m²

☐ C. 192 m²

☐ D. 384 m²

7) A rectangular parking space at a lot is 2.5 m by 5 m. A scale drawing is made with 1 cm : 1 m. What is the area of the drawing in square centimeters?

☐ A. 12.5 cm²

☐ B. 2.5 cm²

☐ C. 25 cm²

☐ D. 50 cm²

8) A train travels 180 miles in 3 hours. What is its speed in miles per hour? Show your work and estimate to check reasonableness.

9) If an investment of \$2,000 grows by 8% per year, what is the interest earned after one year?

☐ A. \$80

☐ B. \$400

☐ C. \$320

☐ D. \$160



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Rhode Island RICAS 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 Rhode Island RICAS practice test.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice D is correct.** (7.RP.3) Selling price = cost + markup = $25 + 5 = \$30$. (The markup represents $\$5/\$25 = 20\%$ of the cost.)
- 2) **Choice D is correct.** (7.NS.1-7.NS.3) $-2 - (-8) = -2 + 8 = 6$. The opposite of -8 is 8 , and $-2 + 8 = 6$.
- 3) **Choice D is correct.** (7.RP.1-7.RP.3) Actual dimensions: $4 \times 10 = 40$ feet; $2.5 \times 10 = 25$ feet. Perimeter = $2(40 + 25) = 130$ feet.
- 4) **Choice C is correct.** (7.RP.3) 75% of 20 is $0.75 \times 20 = 15$ games.
- 5) **The correct answer is \$720.** (7.RP.1-7.RP.3) Use $18 \times 40 = 720$ dollars.
- 6) **Choice D is correct.** (7.NS.1b) New altitude = $35000 + (-2000) = 33000$ feet. The plane's altitude decreased by 2000 feet.
- 7) **Choice C is correct.** (7.SP.1-7.SP.4) 30% of $168 = 0.30 \times 168 = 50.4$ hours.
- 8) **Choice D is correct.** (7.RP.1-7.RP.3) Proportional relationship: cost equals constant times pounds. Form is $y = kx$, so $c = 2.5p$.
- 9) **The correct answer is \$6000.** (7.RP.3) $I = 5000 \times 0.08 \times 2.5 = \1000 . $A = 5000 + 1000 = \$6000$.
- 10) **Choice D is correct.** (7.RP.1-7.RP.3) From the point $(3, 18)$, the unit rate is $18 \div 3 = 6$ miles per hour.
- 11) **Choice C is correct.** (7.RP.3) Set up $\frac{16}{20} = \frac{p}{100}$. Simplifying: $\frac{16}{20} = \frac{4}{5} = \frac{80}{100} = 80\%$.
- 12) **Choice C is correct.** (7.NS.1-7.NS.3) Convert: $2\frac{1}{4} = \frac{9}{4}$. Then $\frac{9}{4} \div \frac{3}{4} = \frac{9}{4} \times \frac{4}{3} = \frac{9}{3} = 3$.
- 13) **The correct answer is 13%.** (7.RP.3) Percent error = $\frac{|2.8 - 3.2|}{3.2} \times 100\% = \frac{0.4}{3.2} \times 100\% = 12.5\%$, rounds to 13% .
- 14) **Choice B is correct.** (7.NS.1-7.NS.3) Remaining = $\frac{3}{4} - \frac{1}{4} = \frac{2}{4} = \frac{1}{2}$ tank.
- 15) **Choice B is correct.** (7.EE.1-7.EE.2) The ratio is 2 cups flour per 1 cup sugar, so $f = 2s$.
- 16) **Choice D is correct.** (7.RP.1-7.RP.3) Maya: $\frac{7/8}{1/4} = \frac{7}{8} \times 4 = \frac{7}{2} = 3.5$ mph. Alex: $\frac{5/6}{1/3} = \frac{5}{6} \times 3 = \frac{5}{2} = 2.5$ mph. Maya is faster.
- 17) **Choice C is correct.** (7.RP.3) Rent = $50\% \times \$1,200 = 0.50 \times 1200 = \600 .
- 18) **Choice A is correct.** (7.NS.1-7.NS.3) When adding two negative numbers, add their absolute values and keep the negative sign: $-5 + (-2) = -(5 + 2) = -7$.
- 19) **Choice A is correct.** (7.NS.1-7.NS.3) A withdrawal decreases the balance. From $\$0$, withdrawing $\$15$ gives $0 - 15 = -15$ dollars.
- 20) **Choice B is correct.** (7.NS.1-7.NS.3) Moving the decimal 4 places right: $0.000789 \rightarrow 7.89$. Correct answer is 7.89×10^{-4} , not -3 .
- 21) **The correct answer is A, C.** (7.RP.1-7.RP.3) From the table, $k = 14/2 = 7$, so A is true and the equation is $y = 7x$ (C is true). B is false: $k = 7$, not 2.8 . D is false: when $x = 10$, $y = 7 \cdot 10 = 70$, not 68 .
- 22) **Choice C is correct.** (7.SP.5-7.SP.8) W has 3 sections and X has 4 sections, so $P(W \text{ or } X) = \frac{3+4}{10} = \frac{7}{10}$.
- 23) **Choice D is correct.** (7.NS.2) $(-1) \times 2 = -2$; $(-2) \times (-3) = 6$; $6 \times 4 = 24$. Two negatives total, so result is positive.
- 24) **Choice B is correct.** (7.NS.1-7.NS.3) $\sqrt{121} = 11$ feet since $11 \times 11 = 121$.
- 25) **Choice C is correct.** (7.EE.1-7.EE.2) The distributive property says $3(2 + 0.5) = 3(2) + 3(0.5)$. Choice C shows this explicitly: we multiply 3 by each part separately ($3 \times 2 = 6$ cups, $3 \times 0.5 = 1.5$ cups), then add: $6 + 1.5 = 7.5$ cups. This form reveals how multiplication distributes across each ingredient measure.
- 26) **Choice A is correct.** (7.SP.3) The New Method has a higher median (78 vs. 75), suggesting better average performance. However, its larger range (35 vs. 25) indicates less consistency. Trade-off: higher average but more variability.
- 27) **Choice C is correct.** (7.RP.3) Tip = $0.18 \times 50 = \$9.00$. The question asks for the tip amount, not the total bill.
- 28) **Choice D is correct.** (7.RP.3) Compound interest means each period's interest calculation includes the accumulated balance, earning "interest on interest."
- 29) **Choice B is correct.** (7.G.4-7.G.6) Square: $8 \times 8 = 64 \text{ m}^2$. Triangle: $\frac{1}{2} \times 8 \times 3 = 12 \text{ m}^2$. Total: $64 + 12 = 76 \text{ m}^2$.



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 5 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

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **5** 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:

5 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!

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- ✓ The Number System
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- ✓ Percents & Decimals
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- ✓ 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!

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