

8

Rhode Island

RICAS

GRADE 7

MATH

PRACTICE TESTS



**Standards Aligned
Problem Solving**

For Comprehensive
Assessment Programs



**8 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 SKILLS



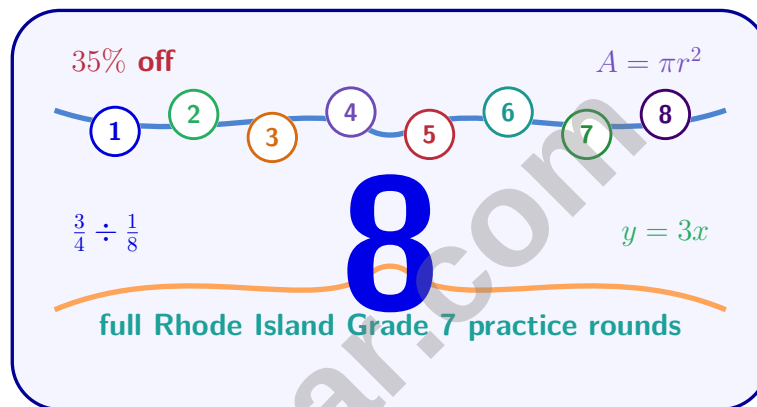
THINK SMARTER



BE TEST-READY

8 Rhode Island RICAS Grade 7 Math Practice Tests

A standards-minded review of Rhode Island Grade 7 unit rates, percents, algebraic models, circles, samples, and compound events



Eight 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



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, Rhode Island Grade 7 Problem Solver!

Eight focused rounds for sharper RICAS math thinking

This book gives you eight 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

An eight-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?

Eight RICAS tests, 320 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.
Tests 7–8	Statistics, probability, mixed review, stamina, and choosing efficient strategies.
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.



Scan me!
For more practice
& answers

Table of Contents

★ Practice Test 1	_____	14
★ Practice Test 2	_____	28
★ Practice Test 3	_____	42
★ Practice Test 4	_____	58
★ Practice Test 5	_____	71
★ Practice Test 6	_____	87
★ Practice Test 7	_____	101
★ Practice Test 8	_____	117
Practice Test Answer Keys	_____	132
Practice Test Answers and Explanations	_____	137

1) Two box plots show the test scores of Class A (median = 82, range = 30) and Class B (median = 78, range = 14). The box plot for Class A spans from 67 to 97; Class B spans from 71 to 85. Which statement is best supported by the visuals?

- ☐ A. Class A and Class B score ranges overlap from 71 to 85
- ☐ B. Class A's scores varied more and its typical score was higher
- ☐ C. Class B is always worse regardless of median
- ☐ D. Class A has higher minimum but Class B more consistent

2) Evaluate $x^2 + 3x - 5$ when $x = 3$.

- ☐ A. 7
- ☐ B. 13
- ☐ C. 19
- ☐ D. 23

3) An art supplier sells canvas rolls at \$7 each. A shop owner spends \$84 on canvas rolls and pays a \$12 handling fee. Which equation finds r , the number of rolls purchased?

- ☐ A. $7r + 12 = 84$
- ☐ B. $7r = 84$
- ☐ C. $12r + 7 = 84$
- ☐ D. $7 + 12r = 84$

4) Solve: $2(x + 3) = 14$

- ☐ A. $x = 2$
- ☐ B. $x = 3$
- ☐ C. $x = 4$
- ☐ D. $x = 7$

5) A car travels 240 miles in 4 hours. What is the car's average speed? Estimate to check reasonableness.

- ☐ A. 50 mph
- ☐ B. 60 mph
- ☐ C. 80 mph
- ☐ D. 120 mph



- 6) The temperature in Denver was -5°C in the morning. By afternoon, it increased by 12°C . What was the afternoon temperature?

☐ A. -17°C ☐ C. -7°C
☐ B. 7°C ☐ D. 17°C

- 7) A budget allocates 40% to housing and 20% to food from a monthly income of \$2 200. How much is allocated to housing and food combined?

- 8) An account earns \$8.50 per month in interest. After 6 months, how much interest is earned?

☐ A. \$1.42 ☐ C. \$51
☐ B. \$14.50 ☐ D. \$102

- 9) Which of the following is closest to $\sqrt{240}$?

☐ A. 14 ☐ C. 16
☐ B. 15 ☐ D. 17

- 10) Combine: $(10g + 6) + (2g - 8) - (3g + 1)$

☐ A. $9g - 3$ ☐ C. $15g - 3$
☐ B. $9g + 13$ ☐ D. $9g - 15$



Scan me!
For more practice
& answers

11) A student was asked to rewrite $0.3p + 0.3q$ in factored form. They wrote $0.3(p + q)$. Is their answer correct, and why?

- ☐ A. Yes; 0.3 is a common factor of both terms
- ☐ B. Yes; adding decimals always works this way
- ☐ C. No; you cannot factor out decimals
- ☐ D. No; 0.3 is not the GCF

12) Simplify: $v^{12} \div v^8$

- ☐ A. v^4
- ☐ B. v^{20}
- ☐ C. v^{96}
- ☐ D. v^0

13) Solve for x : $-2(x + 3) = 10$

- ☐ A. $x = -8$
- ☐ B. $x = -5$
- ☐ C. $x = 2$
- ☐ D. $x = 5$

14) Two similar triangles have corresponding sides of 6 cm and 9 cm. The smaller triangle has a perimeter of 18 cm. What is the perimeter of the larger triangle?

- ☐ A. 24 cm
- ☐ B. 27 cm
- ☐ C. 30 cm
- ☐ D. 36 cm

15) A survey uses a probability model with outcomes {Agree, Neutral, Disagree}. The model shows $P(\text{Agree}) = \frac{7}{20}$ and $P(\text{Disagree}) = \frac{1}{4}$. Find $P(\text{Neutral})$.

- ☐ A. $\frac{6}{20}$
- ☐ B. $\frac{8}{20}$
- ☐ C. $\frac{9}{20}$
- ☐ D. $\frac{12}{20}$



- 1) A family's monthly income is \$3,600. They spend 50% on housing, 20% on food, 15% on utilities, and the rest on other expenses. How much do they spend on other expenses?

☐ A. \$180☐ C. \$540☐ B. \$360☐ D. \$720

- 2) A circle has radius 7 cm. Find its circumference using $\pi \approx \frac{22}{7}$.

- 3) Solve: $x - (-4) < 8$

☐ A. $x < 4$ ☐ C. $x > 4$ ☐ B. $x < 12$ ☐ D. $x < 8$

- 4) Which equals $(2i + 4) + (6i - 1)$?

☐ A. $8i + 3$ ☐ C. $4i + 3$ ☐ B. $8i - 3$ ☐ D. $8i + 5$

- 5) What is -8×2 ?

☐ A. -16☐ C. 6☐ B. -6☐ D. 16

- 6) A box contains cards numbered 5 through 14. A card is drawn at random. What is the probability of drawing a card with a number divisible by 3?

☐ A. $\frac{1}{5}$
☐ B. $\frac{3}{10}$

☐ C. $\frac{2}{5}$
☐ D. $\frac{1}{3}$

- 7) A school cafeteria offers lunch combinations with a choice of 2 sides (Salad or Veggies), 3 proteins (Chicken, Fish, Beef), and 2 breads (Roll or Cornbread). How many different lunches can be made?

☐ A. 7
☐ B. 12

☐ C. 18
☐ D. 36

- 8) A cylindrical water tank has a radius of 2.5 meters and a height of 8 meters. Find the volume of the tank in cubic meters. Use $\pi \approx 3.14$.

- 9) A box plot shows the distribution of test scores for two classes: Class A: median 78, IQR 12 Class B: median 82, IQR 8 Which statement is true?

☐ A. Class A has a higher median
☐ B. Class B has less variability

☐ C. Class A performed better overall
☐ D. Class B has more outliers

- 10) A bag contains 6 blue marbles and 4 yellow marbles. Two marbles are drawn WITHOUT replacement. What is the probability the first is blue and the second is yellow?

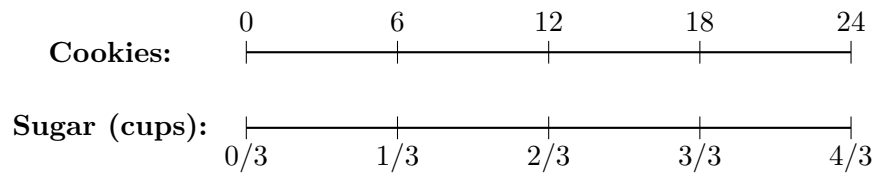
☐ A. $\frac{24}{80}$
☐ B. $\frac{6}{10} \cdot \frac{4}{8}$

☐ C. $\frac{24}{100}$
☐ D. $\frac{4}{15}$



Scan me!
For more practice
& answers

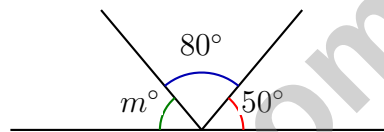
- 1) A recipe uses $\frac{2}{3}$ cup sugar for 12 cookies. Complete the double number line:



How much sugar is needed for 18 cookies?

- ☐ A. 1 cup ☐ C. $1\frac{1}{2}$ cups
☐ B. $1\frac{1}{4}$ cups ☐ D. 2 cups

2)



Three angles are formed around a point on a line. Two angles are 50° and 80° . What is the measure of angle m ?

- ☐ A. 30° ☐ C. 80°
☐ B. 50° ☐ D. 130°
- 3) A spinner is divided into 6 equal sections labeled A, A, B, C, C, C . What is $P(C)$?

- ☐ A. $\frac{1}{2}$ ☐ C. $\frac{1}{6}$
☐ B. $\frac{1}{3}$ ☐ D. $\frac{2}{3}$
- 4) When converting data into a stem-and-leaf plot, a student mistakenly interprets stem 11 with leaf 2 as 1.12 instead of 112. This is an example of which type of error?

- ☐ A. Reading error ☐ C. Conceptual error
☐ B. Computational error ☐ D. Rounding error



Scan me!
For more practice
& answers

5) Expand: $\frac{1}{3}(9y - 12)$

☐ A. $3y - 4$

☐ C. $3y - 12$

☐ B. $9y - 4$

☐ D. $y - 4$

6) A bond pays \$360 in simple interest on a principal of \$2000 over 3 years. What is the annual interest rate?

☐ A. 4%

☐ C. 6%

☐ B. 5%

☐ D. 7.2%

7) Which is the simplest form of $-6 - (-4)$?

☐ A. -10

☐ C. 2

☐ B. 10

☐ D. -2

8) A store offers a 32% discount on a pair of jeans originally priced at \$75. What is the sale price?

9) A square pyramid has a square base with side 5 cm and slant height 6.5 cm. Find the total surface area.

☐ A. 25 cm^2

☐ C. 90 cm^2

☐ B. 50 cm^2

☐ D. 115 cm^2



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.

Testinar.com



Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice B is correct.** (7.SP.3) Class A's range of 30 (67–97) is larger than Class B's range of 14 (71–85), showing greater variability. Class A's median (82) is higher than Class B's (78). Despite overlap at 71–85, Class A is higher and more variable overall.
- 2) **Choice B is correct.** (7.EE.1-7.EE.2) Substitute: $(3)^2 + 3(3) - 5 = 9 + 9 - 5 = 13$.
- 3) **Choice A is correct.** (7.EE.4a) Each roll costs \$7; handling fee is \$12. Equation: $7r + 12 = 84$, so $r = \frac{72}{7} \approx 10.3$ (or $r = 10$ full rolls).
- 4) **Choice C is correct.** (7.EE.3-7.EE.4) Divide by 2: $x + 3 = 7$. Subtract 3: $x = 4$.
- 5) **Choice B is correct.** (7.EE.3-7.EE.4) Speed = $\frac{\text{distance}}{\text{time}} = \frac{240}{4} = 60$ mph. Reasonableness check: $60 \text{ mph} \times 4 \text{ hours} = 240 \text{ miles}$ ✓. Estimate: 240 is close to 250; $250 \div 5 \approx 50$, so 60 is reasonable.
- 6) **Choice B is correct.** (7.NS.1-7.NS.3) $-5 + 12 = 7^\circ\text{C}$.
- 7) **The correct answer is \$1320.** (7.RP.3) Housing: $0.40 \times 2200 = \$880$. Food: $0.20 \times 2200 = \$440$. Combined: $\$880 + \$440 = \$1320$.
- 8) **Choice C is correct.** (7.NS.1-7.NS.3) Interest earned: $8.50 \times 6 = 51$ dollars.
- 9) **Choice B is correct.** (7.NS.1-7.NS.3) $15^2 = 225$ and $16^2 = 256$. Since 240 is closer to 225 than to 256, $\sqrt{240} \approx 15.5$, closest to 15.
- 10) **Choice A is correct.** (7.EE.1-7.EE.2) Combine: $(10g + 2g - 3g) + (6 - 8 - 1) = 9g - 3$.
- 11) **Choice A is correct.** (7.EE.1-7.EE.2) $0.3p + 0.3q = 0.3(p + q)$ is correct. The GCF is 0.3; you can factor out decimals just as you factor out whole numbers.
- 12) **Choice A is correct.** (7.EE.1-7.EE.2) Quotient rule: $v^{12} \div v^8 = v^{12-8} = v^4$.
- 13) **Choice A is correct.** (7.EE.4a) Distribute: $-2x - 6 = 10$. Add 6: $-2x = 16$. Divide by -2 : $x = -8$.
- 14) **Choice B is correct.** (7.G.1-7.G.5) Scale factor = $\frac{9}{6} = 1.5$. Perimeter of larger = $18 \times 1.5 = 27 \text{ cm}$.
- 15) **Choice B is correct.** (7.SP.5-7.SP.8) $P(\text{Disagree}) = \frac{1}{4} = \frac{5}{20}$. Then $P(\text{Neutral}) = 1 - \frac{7}{20} - \frac{5}{20} = \frac{20-12}{20} = \frac{8}{20}$.
- 16) **Choice A is correct.** (7.NS.2) Option A directly disproves the claim: negative times positive (-10) is smaller, not larger, than positive times positive (10). The products are equal in magnitude but opposite in sign, showing the claim is false. Options B, C, D also work but use less intuitive magnitudes.
- 17) **Choice D is correct.** (7.RP.3) Origination fee = $0.01 \times 300000 = \$3,000$.
- 18) **Choice B is correct.** (7.G.4-7.G.6) Start with the large rectangle: $12 \times 9 = 108 \text{ ft}^2$. Subtract the cutout rectangle: $4 \times 3 = 12 \text{ ft}^2$. Remaining area: $108 - 12 = 96 \text{ ft}^2$.
- 19) **Choice C is correct.** (7.RP.1-7.RP.3) Scale: $1 \text{ cm} = 50 \text{ km}$. For 6 cm: $6 \times 50 = 300 \text{ km}$.
- 20) **Choice A is correct.** (7.G.4-7.G.6) Volume of first = $25 \times 4 = 100 \text{ cm}^3$. Volume of second = $25 \times 8 = 200 \text{ cm}^3$. Difference = $200 - 100 = 100 \text{ cm}^3$.
- 21) **Choice C is correct.** (7.G.1-7.G.5) The third side c must satisfy $|12 - 5| < c$, so $c > 7$. The smallest whole number greater than 7 is 8.
- 22) **The correct answer is A,C.** (7.RP.3) Automation (A) ensures consistent saving without temptation, and increasing income (C) provides more funds to allocate to goals. Options B and D actively reduce savings, and E overlooks the powerful effect of compound growth over time.
- 23) **Choice B is correct.** (7.G.1-7.G.5) Given three specific side lengths that satisfy the Triangle Inequality, exactly one unique triangle (up to congruence) can be formed. In fact, this is a right triangle because $6^2 + 8^2 = 10^2$.
- 24) **Choice C is correct.** (7.G.4-7.G.6) In the same circle, sector area is proportional to central angle. Since $80^\circ = 2 \times 40^\circ$, Sector Y is twice as large as Sector X.
- 25) **The correct answer is \$7.35.** (7.RP.3) Simple: $1500 \times 0.07 \times 2 = 210$. Compound: $1500(1.07)^2 = 1717.35$; interest = 217.35 . Difference: $217.35 - 210 = 7.35$.
- 26) **Choice C is correct.** (7.SP.1-7.SP.4) $\frac{42}{150} = \frac{x}{500}$. Simplify: $\frac{7}{25} = \frac{x}{500} \Rightarrow x = 140$.
- 27) **Choice D is correct.** (7.RP.1-7.RP.3) Multiply each dimension by the scale factor: $3 \times 8 = 24$ feet and $2.5 \times 8 = 20$ feet.



Scan me!
For more practice
& answers

Hi, Future Algebra Thinker!

◇ Grade 7 practice prepares you for the next math steps. Expressions, equations, proportional relationships, and graphs are all part of that bridge. This wide-ranging book gave you eight serious Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. ◇

★ **Remember this:** Every time you solved for an unknown or explained a relationship, you were building skills that future math will use again. ★

Bridge Skills

- **Use Variables:** Let letters stand for unknown values.
- **Balance Equations:** Keep both sides fair.
- **Read Graphs:** Connect points to meaning.
- **Compare Rates:** Look for constant relationships.

Grade 7 test-day tip: When you see a variable, say what it represents. That keeps algebra connected to the problem.

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

Jay Daie

Your Algebra Bridge Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **8** 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:

8 Full-Length Printed Tests

2 Online Practice Tests

 Detailed Answer 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



Stronger Math Skills

Build a solid foundation through targeted practice and review.



Better Problem Solving

Develop logical thinking and effective solution strategies.



Deeper Understanding

Reinforce key concepts with clear explanations and meaningful practice.



Test Confidence

Familiarize with test formats and improve accuracy and speed.



Achieve Success

Build confidence and perform your best on test day.

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!



VISIT **TESTINAR.COM/MATH7** FOR MORE PRACTICE TESTS



PRACTICE
REGULARLY



STAY
FOCUSED



SOLVE
CONFIDENTLY



SUCCEED
BRIGHTLY