

# 7 Rhode Island RICAS

## Grade 6 MATH PRACTICE TESTS

7  
PRINTED  
TESTS  
+  
2  
ONLINE  
TESTS

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

Standards-Aligned *Steady Southern*  
Problem Solving for Comprehensive  
Assessment Program



7 Full-Length  
Printed Tests



Standards-Aligned  
Math Practice



Detailed Answer Keys  
and Explanations



Build Confidence.  
Achieve Success.



You've  
Got  
This!



PREPARE  
PRACTICE  
SUCCEED



PRACTICE  
WITH PURPOSE



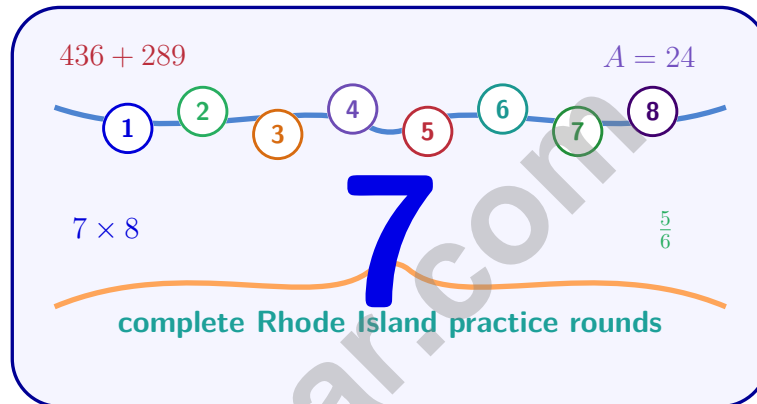
STRENGTHEN  
MATH SKILLS



REVIEW, IMPROVE,  
AND SUCCEED

# 7 Rhode Island RICAS Grade 6 Math Practice Tests

*Standards-Aligned Compact, Careful Review for Rhode Island Comprehensive Assessment System*



Seven complete 40-question Grade 6 practice rounds for RICAS, built for compact, careful review with ratios, rational numbers, expressions, equations, geometry, statistics, answer keys, and clear explanations for every item.

**Jay Daie and Reza Nazari**



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# Welcome, Rhode Island Math Explorer!

Eight focused rounds using compact, careful review

This book gives you seven full Grade 6 practice tests for RICAS. Each round uses harbor paths, short routes, and precise math notes as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

## Your Rhode Island Practice Promise

Make every step count: read exactly, solve neatly, and check before moving on.

Read

Plan

Check

## How to Use This Book

A seven-session routine for compact, careful review

1. **Preview the skills.** Scan the quick review pages before beginning the first round.
2. **Mark confidence.** Put a small star beside problems where your plan felt strong.
3. **Work in order.** Take one 40-question test at a time in a quiet place.
4. **Plan the next round.** Use the growth log to choose one habit and one skill to practice.
5. **Correct actively.** Retry missed items before reading the full explanation.

**Rhode Island review rhythm:** Use each round as a focused check, then review the few skills that need attention.



## What Is Inside?

Eight RICAS tests, 320 questions, and a full review path

Part	What You Will Practice
Tests 1–3	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Tests 4–6	Skill-building rounds with expressions, equations, geometry, data, and problem models.
Test 7	Final stamina round for mixed review, neat work, and flexible strategy choices.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Compact, careful review means recognizing the skill even when the next question changes topic, changes format, or asks for an explanation.



Scan me!  
For more practice  
& answers

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1) Simplify  $11x - 6x + 2x$ .

A.  $7x$

C.  $5x$

B.  $15x$

D.  $19x$

2) Compare the two datasets using their box plots. Dataset X: median = 50, IQR = 10. Dataset Y: median = 50, IQR = 20. What can you conclude?

A. Dataset X is more spread out than Dataset Y.

C. Dataset Y has more variability than Dataset X.

B. Dataset Y has a higher center than Dataset X.

D. Both datasets are identical.

3) A histogram shows age distribution skewed left (tail on the left). Where is the mean relative to the median?

A. The mean is less than the median.

C. The mean is greater than the median.

B. The mean equals the median.

D. Cannot be determined.

4) A student records the number of minutes spent on homework: 24, 31, 28, 35, 29, 32, 26. Arranging in a stem-and-leaf plot, the data spans:

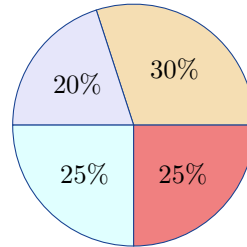
A. One stem (20s)

C. Three stems

B. Two stems (20s and 30s)

D. Cannot determine





5)

What is the central angle for the 20% section in this circle graph?

- A.  $54^\circ$                        C.  $72^\circ$   
 B.  $90^\circ$                        D.  $108^\circ$

6)

Item	Quantity
Apples	15
Bananas	25

What ratio correctly compares bananas to the total fruit in simplest form?

- A. 5 : 3                       C. 15 : 25  
 B. 25 : 40                       D. 5 : 8

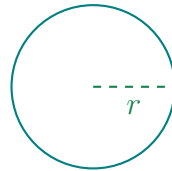
7) A rectangle has vertices at (2, 1), (8, 1), (8, 5), and (2, 5). What is its area?

- A. 10 square units                       C. 24 square units  
 B. 20 square units                       D. 30 square units



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Circle:  $r = 9$  ft

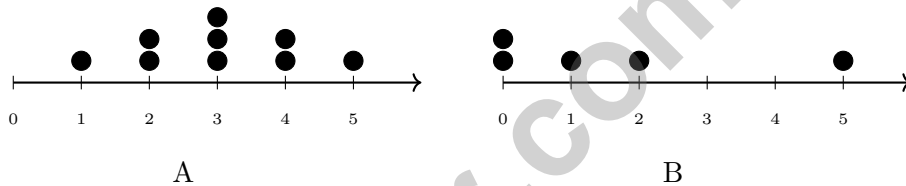


8)

A circle has a radius of 9 feet. Using  $\pi \approx 3.14$ , which is closest to the area?

- A.  $56.52 \text{ ft}^2$
- B.  $113.04 \text{ ft}^2$
- C.  $254.34 \text{ ft}^2$
- D.  $508.68 \text{ ft}^2$

9) Which dot plot shows data with a symmetric distribution?



- A. Plot A (symmetric)
- B. Plot B (skewed)
- C. Both are symmetric
- D. Neither is symmetric

10) The probability that a randomly selected student in a class plays soccer is  $\frac{2}{3}$ . If there are 24 students in the class, how many play soccer?

- A. 8
- B. 12
- C. 16
- D. 18

11) A savings account earns \$15 per month. After 8 months, how much more money is in the account?

- A. \$7
- B. \$23
- C. \$120
- D.  $-\$120$

1) Expand  $10(3 + 9)$ .

A.  $30 + 90$

C.  $10 + 12$

B.  $30 + 9$

D. 120

2) In a student club, the ratio of 6th graders to 7th graders is 4 : 6. If there are 12 sixth graders, how many seventh graders are in the club?

3) A container holds 2 gallons of water. How many pints are in the container? (Use 1 gallon = 8 pints.)

A. 10 pints

C. 24 pints

B. 16 pints

D. 8 pints

4) Brand X cereal: 12 oz box for \$3.00. Brand Y cereal: 15 oz box for \$4.50. Which brand has the lower unit price?

A. Brand X at \$0.30 per oz

C. Brand X at \$0.25 per oz

B. Brand Y at \$0.30 per oz

D. Brand Y at \$0.35 per oz

5) A pencil is 0.15 meters long. A pen is 0.08 meters long. How much longer is the pencil?

A. 0.07 meters

C. 0.07 cm

B. 0.23 meters

D. 1.87 meters



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& answers

- 6) Two students see the same ratio table. Student 1 says the ratio is 2 : 3. Student 2 says the ratio is 4 : 6. Who is correct?

Cats	Dogs
4	6
8	12

- A. Student 1 only  
 B. Student 2 only  
 C. Both are correct  
 D. Neither is correct
- 7) Evaluate:  $\frac{4}{7} \div \frac{2}{7}$
- A.  $\frac{8}{49}$   
 B. 2  
 C.  $\frac{6}{7}$   
 D.  $\frac{2}{14}$
- 8) A runner is doing interval training. Starting at position 0, the runner sprints forward 15 yards, then backward 8 yards, then forward 3 yards. What is the runner's final position relative to the start?



- A. 10 yards forward  
 B. 20 yards backward  
 C. 8 yards forward  
 D. 26 yards forward



1) A container has 8 ounces of sugar. How many pounds is this? (Use 1 pound = 16 ounces.)

A. 0.25 pounds

C. 1 pound

B. 0.5 pounds

D. 2 pounds

2) A gardener measures plant heights (in cm) from five gardens: 15, 18, 22, 20, 19. When ordered: 15, 18, 19, 20, 22. The mean is 18.8 cm. Calculate the MAD.

A. 2

C. 1.84

B. 2.4

D. 7

3) What is the least integer that is at least 25?

4) A video streaming service requires a constant internet speed. A file of 2.4 gigabytes downloads in 8 minutes. What is the download rate in gigabytes per minute?

A. 0.2 GB/min

C. 0.4 GB/min

B. 0.3 GB/min

D. 0.5 GB/min



5) A ratio table shows the number of apples and oranges in a fruit basket.

Apples	Oranges
2	5
4	10
6	15

If this ratio is graphed with apples on the x-axis, what is the y-coordinate when the x-coordinate is 8?

- A. 18
- B. 24
- C. 22
- D. 20



6)

What percent of the grid is shaded?

- A. 35%
- B. 45%
- C. 55%
- D. 65%



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& answers

## Rhode Island RICAS Practice Test Answer Keys

**How to use this Rhode Island RICAS answer section with a Grade 6 student:**

1. check the answer first, then write one quick reason the choice is correct
2. mark questions to try again, especially the skills that feel connected to compact, careful review
3. rework the problem before reading the full explanation, using this reminder:  
Make every step count: read exactly, solve neatly, and check before moving on.

**A calm Rhode Island correction routine turns every missed item into useful practice. Use each round as a focused check, then review the few skills that need attention.**



Scan me!  
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& answers

## Rhode Island Practice Test Answers and Explanations

Review the seven printed RICAS tests with precise, focused, and ready for the next page habits.

### Practice Test 1 Answers and Explanations

- Choice A is correct.** **(6.EE.A.3)** Combine like terms:  $(11 - 6 + 2)x = 7x$ .
- Choice C is correct.** **(6.SP.B.4)** Both have the same median (center), but Dataset Y has a larger IQR (20 vs 10), indicating greater spread and variability.
- Choice A is correct.** **(6.SP.B.5)** Left-skewed distributions have a tail of low values that pull the mean below the median.
- Choice B is correct.** **(6.SP.B.4)** Values range from 24 to 35, covering stem 2 (20s: 24, 26, 28, 29) and stem 3 (30s: 31, 32, 35).
- Choice C is correct.** **(6.NS.A.1)** 20% of  $360^\circ$  is  $0.20 \times 360^\circ = 72^\circ$ .
- Choice D is correct.** **(6.RP.A.3)** First find the total fruit:  $15 + 25 = 40$ . Bananas to total is  $25 : 40$ , and dividing both parts by 5 gives  $5 : 8$ .
- Choice C is correct.** **(6.G.A.1)** Length =  $8 - 2 = 6$ ; width =  $5 - 1 = 4$ . Area =  $6 \times 4 = 24$  square units.
- Choice C is correct.** **(6.RP.A.3)** Area =  $\pi r^2 \approx 3.14 \times 9^2 = 3.14 \times 81 = 254.34 \text{ ft}^2$ .
- Choice A is correct.** **(6.SP.A.2)** Plot A forms a triangle shape with a peak in the middle (at 3), with equal tails on both sides. Plot B has outliers on the right, making it skewed right.
- Choice C is correct.** **(6.NS.B.3)** Number of soccer players =  $\frac{2}{3} \times 24 = 16$ .
- Choice C is correct.** **(6.NS.B.3)** Earning \$15 per month for 8 months:  $15 \times 8 = 120$ . The account gains \$120.
- Choice A is correct.** **(6.EE.A.3)** Differential is points scored minus points allowed:  $48 - 52 = -4$ .
- Choice A is correct.** **(6.EE.A.3)** "Twice a number  $d$ " is  $2d$ . "8 less than  $2d$ " means subtract 8 from  $2d$ :  $2d - 8$ .
- Choice A is correct.** **(6.EE.A.3)** Substitute  $x = -2$ :  $-2 - 5 = -7$ .
- Choice C is correct.** **(6.EE.B.6)** Selling means subtract from the total:  $f - 25$  fish remain.
- Choice C is correct.** **(6.EE.B.5)** Multiply both sides by 4:  $x = 6 \times 4 = 24$ .
- Choice C is correct.** **(6.EE.B.8)**  $x < 10$  includes all numbers less than 10 but excludes 10 itself. The largest value NOT in the solution is 10.
- The correct answer is A: 6 feet = 72 inches; C: 5 meters = 500 centimeters.** **(6.RP.A.2)** A is correct:  $6 \times 12 = 72$  inches. B is incorrect:  $3 \times 16 = 48$  ounces, not 32. C is correct:  $5 \times 100 = 500$  cm. D is incorrect:  $2 \times 4 = 8$  quarts, not 10. E is incorrect because  $4 \text{ km} = 4,000,000 \text{ mm}$ , not 400,000 mm.
- Choice D is correct.** **(6.SP.A.2)** Distances from mean 7.04: 0.24, 0.14, 0.04, 0.04, 0.06, 0.16, 0.26. Sum  $\approx 0.94$ . MAD  $\approx 0.94/7 \approx 0.134 \approx 0.15$ .
- The correct answer is 25000.** **(6.SP.B.4)** 25% of \$100000 =  $0.25 \times 100000 = \$25000$ .
- Choice A is correct.** **(6.RP.A.3)** Dress shirts are the 4-part amount. Since  $20 \div 4 = 5$ , each part is worth 5 shirts, so polo shirts are  $5 \times 5 = 25$ .
- The correct answer is 17.** **(6.SP.B.4)**  $|-14| = 14$ ,  $|8| = 8$ ,  $|-5| = 5$ . So  $14 + 8 - 5 = 17$ .
- Choice A is correct.** **(6.RP.A.2)** A rate compares two quantities measured in different units. Here, cups of flour are compared to eggs, so the comparison is a rate: 2 cups of flour for every 3 eggs.
- Choice A is correct.** **(6.RP.A.3)** Method 1: 1 cup costs \$2, so unit price = \$2/cup. Method 2: 2 cups cost \$3, so unit price =  $\$3 \div 2 = \$1.50/\text{cup}$ . The methods have different unit rates and cannot be called equivalent recipes in terms of cost efficiency.
- Choice D is correct.** **(6.RP.A.3)** Columns 5–9 (5 wide)  $\times$  10 high = 50 squares; column 0, rows 0–4 (5 squares) = 5. Total =  $50 + 5 = 55$  squares = 55%.
- Choice D is correct.** **(6.NS.A.1)** If  $\frac{2}{5}$  lap takes  $\frac{1}{3}$  minute, one lap takes  $\frac{1}{3} \div \frac{2}{5} = \frac{1}{3} \times \frac{5}{2} = \frac{5}{6}$  minute.



## Hi, Brave Explorer!

◇ What a trip! You explored 7 full tests. You went to many math places: multiplication, fractions, area, time, and more. ◇

★ **Smart explorers know:** every trip teaches something. Through 7 tests, you learned a lot. You are a stronger math explorer now. ★

### Your Explorer Tools

- **Map Reading:** You read problems carefully.
- **Trail Skills:** You take steps in the right order.
- **Backpack:** You have many math tools.
- **Brave Heart:** You explore even hard problems.

**Explorer tip:** on test day, use the tools you packed. You have the skills. You are ready!

If you want to share something or ask a question, please email me at [jay@testinar.com](mailto:jay@testinar.com).

**Jay Daie**

Your Math Trail Guide

# MASTER TODAY. SUCCEED TOMORROW.

This Grade 6 Math Practice Tests book is designed to help students strengthen their math skills, master important concepts, and build the confidence they need to excel on comprehensive assessments.

With 7 full-length printed tests and 2 online tests, students get the review, practice, and realistic test experience they need to improve accuracy, develop problem-solving abilities, and reach their full potential.

Perfect for classroom use, homework, test preparation, and extra practice at home.



## PERFECT FOR:

- ✓ Classroom Practice
- ✓ Homework & Review
- ✓ Independent Learning
- ✓ Test Preparation
- ✓ Skill Reinforcement
- ✓ Building Confidence

★ PRACTICE TODAY.  
SUCCEED TOMORROW.

## WHAT STUDENTS WILL 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 aligned with standards through meaningful practice.



### Test Confidence

Become familiar with test formats and improve accuracy and speed.



### Achieve Success

Build confidence and perform your best on test day.

## TOPICS COVERED

- ✓ Ratios & Rates
- ✓ The Number System
- ✓ Expressions & Equations
- ✓ Geometry
- ✓ Fractions & Decimals
- ✓ Percents
- ✓ Statistics & Probability
- ✓ Data Analysis
- ✓ Measurement & Conversions
- ✓ And More!



### 2 ONLINE TESTS

Extra online practice to reinforce learning and build confidence.

## MORE PRACTICE. GREATER RESULTS.

Give your child the tools needed to develop strong math skills, confidence, and a positive attitude toward learning.



7 FULL-LENGTH  
PRINTED TESTS



STANDARDS-  
ALIGNED PRACTICE



DETAILED ANSWER  
KEYS & EXPLANATIONS