

# 10

# Minnesota MCA III

GRADE  
**6**  
MATH

## PRACTICE TESTS

**Standards-Aligned Review**  
**Mixed Practice & Answer Key**



### 10 PRINTED TESTS

Realistic practice to build confidence and mastery



### 2 ONLINE TESTS

Extra practice for continued success



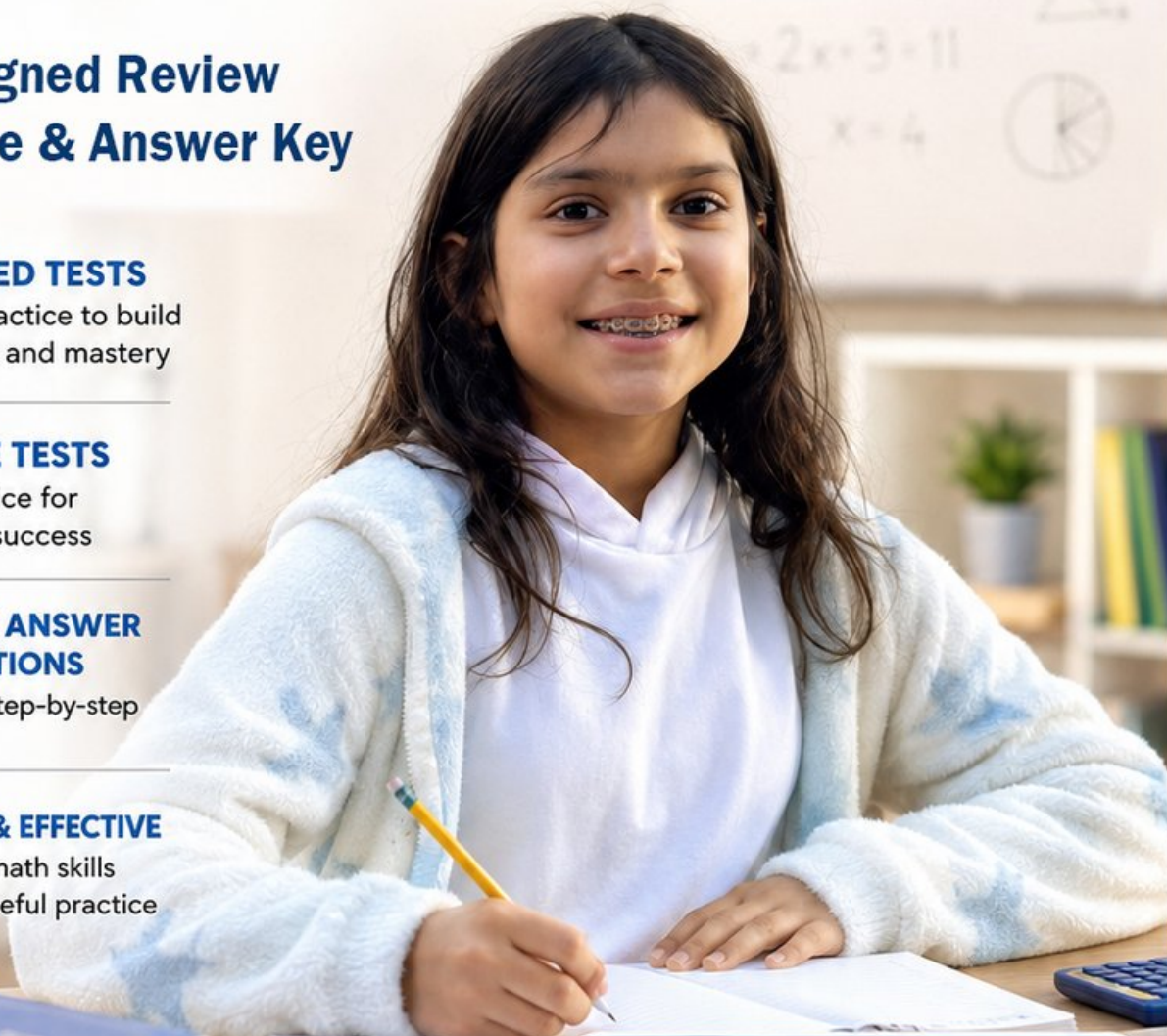
### DETAILED ANSWER EXPLANATIONS

Learn with step-by-step solutions



### FOCUSED & EFFECTIVE

Target key math skills with purposeful practice



**10** PRINTED TESTS  
**+ 2** ONLINE TESTS

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

**PRACTICE • REVIEW • SUCCEED**

# 10 Minnesota MCA-III Grade 6 Math Practice Tests

*Standards-Aligned North Star Direction for Minnesota Comprehensive Assessments*

A graphic with a light blue background and a dark blue border. At the top, the equation  $436 + 289$  is on the left and  $A = 24$  is on the right. Below these is a horizontal number line with circles containing numbers 1 through 10. The circles are colored: 1 (blue), 2 (green), 3 (orange), 4 (purple), 5 (red), 6 (light green), 7 (teal), 8 (pink), 9 (light blue), and 10 (green). In the center of the number line is a large blue number '10'. Below the '10' is an orange wavy line. Underneath the wavy line, the text 'complete Minnesota practice rounds' is written in green. To the left of the '10' is the equation  $7 \times 8$  and to the right is the fraction  $\frac{5}{6}$ .

Ten complete 40-question Grade 6 practice rounds for MCA-III, with ratios, rational numbers, expressions, equations, geometry, statistics, answer keys, and clear explanations for every item.

**Jay Daie and Reza Nazari**



# Copyright ©

## Testinar Inc



Published by Testinar Inc

[Testinar.com](http://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, Minnesota Math Explorer!

Ten steady rounds on a North Star math route

This book gives you ten full Grade 6 practice tests for MCA-III. Each round uses lake country, bright winter focus, and steady review habits as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

## Your Minnesota Practice Promise

Let the question point the way before you start computing. I will slow down for the question, circle what matters, solve one step at a time, and use mistakes as clues for getting stronger.

Read

Plan

Check

# How to Use This Book

A ten-session routine for North Star direction

1. **Preview the skills.** Read the quick review pages before the first test.
2. **Take one test at a time.** Work in a quiet place and answer all 40 questions.
3. **Mark your confidence.** Put a small star beside problems you solved with a strong plan.
4. **Check, then retry.** For missed questions, try the problem again before reading the explanation.
5. **Track your next move.** Use the growth log to name one habit and one skill for the next test.

**Minnesota review rhythm:** Test one day, correct carefully the next day, then return for the next round when your corrections feel clear.



## What Is Inside?

Ten MCA-III tests, 400 questions, and a full review path

Part	What You Will Practice
Tests 1–3	Warm-up rounds for ratios, rational numbers, operations, and careful reading.
Tests 4–6	Skill-building rounds with expressions, equations, geometry, data, and problem models.
Tests 7–9	Stamina rounds for mixed review, neat work, and flexible strategy choices.
Test 10	Final Minnesota round to show growth across the whole book.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. North star direction means recognizing the skill even when the next question changes topic.

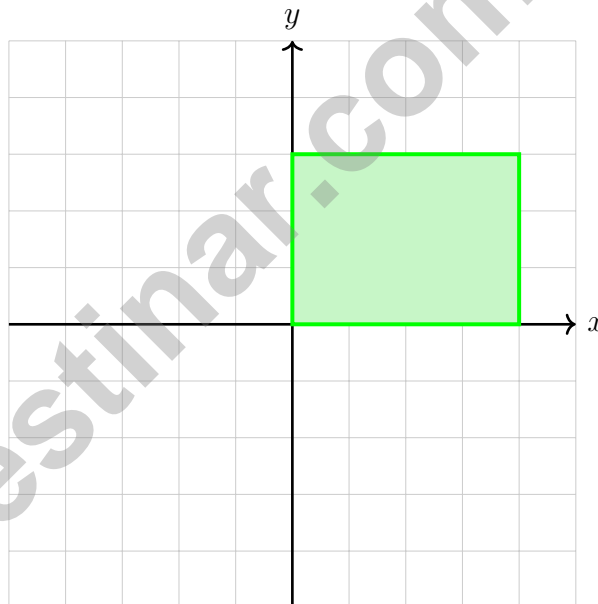


Scan me!  
For more practice  
& answers

# Table of Contents

★ Practice Test 1	_____	13
★ Practice Test 2	_____	29
★ Practice Test 3	_____	45
★ Practice Test 4	_____	62
★ Practice Test 5	_____	79
★ Practice Test 6	_____	97
★ Practice Test 7	_____	112
★ Practice Test 8	_____	125
★ Practice Test 9	_____	139
★ Practice Test 10	_____	154
<b>Practice Test Answer Keys</b>	_____	<b>170</b>
<b>Practice Test Answers and Explanations</b>	_____	<b>176</b>

- 1) A circular tabletop has a radius of 2 feet. What is its approximate area using  $\pi \approx 3.14$ ?
- A. 6.28 ft<sup>2</sup>                       C. 25.12 ft<sup>2</sup>  
 B. 50.24 ft<sup>2</sup>                       D. 12.56 ft<sup>2</sup>
- 2) A scale drawing is made with a scale of 1 inch = 3 feet. What is the scale factor?
- A. 3                                       C. 36  
 B.  $\frac{1}{3}$                                        D.  $\frac{1}{36}$



3)

A rectangle has vertices at  $(0,0)$ ,  $(4,0)$ ,  $(4,3)$ , and  $(0,3)$ . If the rectangle is translated 2 units to the left and 1 unit up, what are the new coordinates of the vertex that was originally at  $(4,0)$ ?



Scan me!  
For more practice  
& answers

- 4) A student's homework scores over 9 assignments are: 85, 90, 88, 92, 88, 95, 87, 91, 86. What is the median score?

- 5) A fruit basket contains 6 apples and 4 oranges. What is the ratio of apples to oranges in simplest form?

- A. 6 : 4                       C. 4 : 6  
 B. 2 : 3                       D. 3 : 2

- 6) A garden hose fills a tank at a rate of 8 gallons per minute. How many gallons are in the tank after 5.5 minutes?

- A. 40 gallons                       C. 48 gallons  
 B. 44 gallons                       D. 52 gallons

- 7) A population of 500 ants decreases by 12%. How many ants remain?

- A. 60                                       C. 440  
 B. 380                                       D. 560

- 8) A budget surplus of \$400 is split evenly among 5 categories. How much does each category receive?

- A. \$60                                       C. \$80  
 B. \$70                                       D. \$90



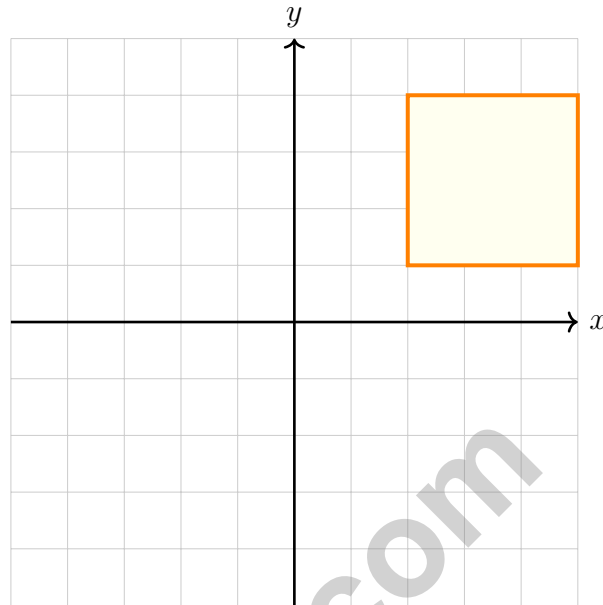
- 9) Using the same stem-and-leaf plot from Question 2, what is the maximum height?
- A. 165 cm                       C. 175 cm  
 B. 167 cm                       D. 177 cm
- 10) A survey of 360 people asked about favorite pizza toppings. One section of the circle graph represents  $\frac{1}{5}$  of the total. What central angle does this represent?
- A.  $36^\circ$                        C.  $90^\circ$   
 B.  $60^\circ$                        D.  $72^\circ$
- 11) A paint manufacturer creates batches in which the ratio of red to blue to yellow is always 2 : 3 : 4. If a batch contains 8 liters of red paint, what is the total volume of the entire batch?
- A. 18 L                       C. 36 L  
 B. 24 L                       D. 48 L
- 12) A store sells 8 notebooks for \$6.40. What is the unit price per notebook?
- A. \$0.50 per notebook                       C. \$0.80 per notebook  
 B. \$0.70 per notebook                       D. \$1.00 per notebook
- 13) 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                       C. Both are correct  
 B. Student 2 only                       D. Neither is correct



Scan me!  
For more practice  
& answers

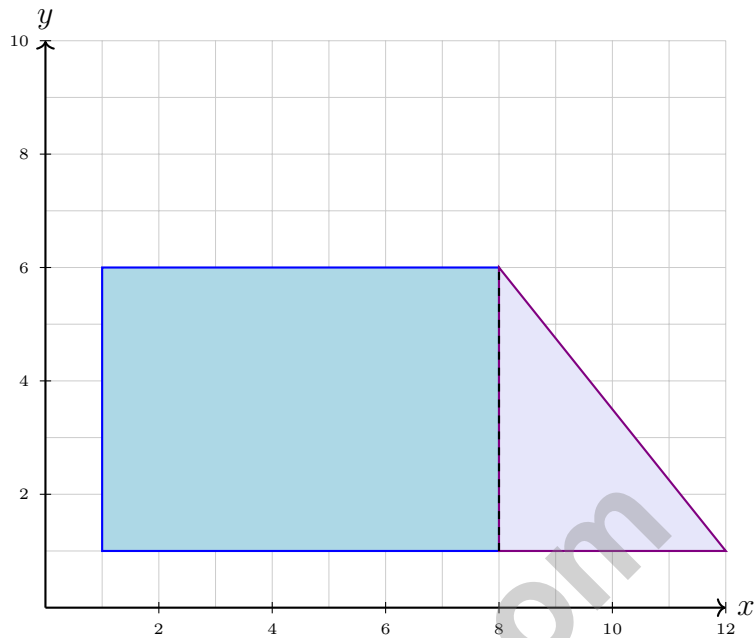


1)

A line segment has endpoints at  $(2, 1)$  and  $(5, 4)$ . If it is translated 2 units left and 1 unit up, what will be the new endpoint that corresponds to the original point  $(5, 4)$ ?

 A.  $(3, 5)$  C.  $(3, 3)$  B.  $(7, 3)$  D.  $(7, 5)$ 

Scan me!  
For more practice  
& answers



2)

A composite figure consists of a rectangle and a triangle. The rectangle has vertices at  $(1, 1)$ ,  $(8, 1)$ ,  $(8, 6)$ , and  $(1, 6)$ . The triangle has vertices at  $(8, 1)$ ,  $(12, 1)$ , and  $(8, 6)$ . What is the total area?

- A. 40 square units
- B. 45 square units
- C. 50 square units
- D. 55 square units

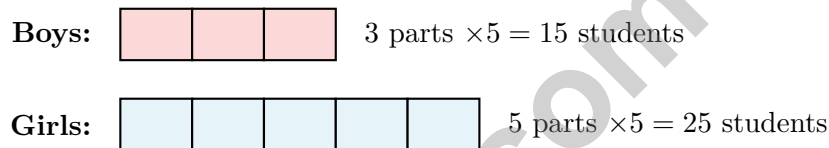
3) Error Analysis: A student claims, “The question ‘How old is my parent?’ is statistical because I need to ask my parent to find the answer.”

What is the error in this reasoning?

- A. Parents don’t like to share their age.
- B. Statistical questions are always asked in school.
- C. Your parent will not give an accurate answer.
- D. Asking someone a question does not make it statistical.

- 1) A box plot shows the distribution of daily temperatures. The box spans from  $Q1 = 68$  to  $Q3 = 78$ . What is the IQR?
- A. 5  C. 15  
 B. 10  D. 68
- 2) Sam says the ratio of boys to girls in a class is 3 : 5, and there are 40 students total. He calculates there are 25 boys and 15 girls. What is Sam's error?

**Ratio 3 : 5 (Boys:Girls)**



Sam flipped the groups: he used 25 for boys and 15 for girls.

- A. He flipped the ratio  C. He forgot to find the unit rate  
 B. He divided instead of multiplied  D. His calculation is correct
- 3) A can of soda is 12 fluid ounces. How many cups is this? (Use 1 cup = 8 fluid ounces.)
- A. 1 cup  C. 2 cups  
 B.  $\frac{3}{4}$  cup  D. 1.5 cups
- 4) Jamal receives a salary of \$2000. He pays 15% for taxes and saves 20% of what remains. How much does he save?
- A. \$200  C. \$340  
 B. \$300  D. \$400

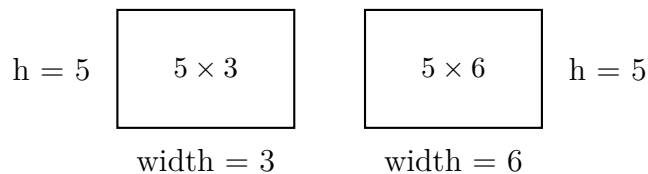


- 5) A science teacher is comparing two chemical solutions. Solution A has a mass of 50 grams and Solution B has a mass of 75 grams. The volumes are 10 mL and 15 mL respectively. Which solution shows a proportional mass-to-volume relationship?

Solution	Mass (g)	Volume (mL)
A	50	10
B	75	15

- A. Only Solution A has a ratio of 5 : 1     C. Both have the same proportional ratio of 5 : 1  
 B. Only Solution B has a ratio of 5 : 1     D. Neither; the ratios are different
- 6) Which list contains all factors of 20?
- A. 1, 2, 4, 5, 10, 20     C. 2, 4, 5, 10  
 B. 1, 2, 3, 4, 5, 20     D. 1, 2, 4, 5, 8, 20
- 7) In a group of 200 people, 50 are left-handed. What percent are left-handed?

- 8) Which expression represents the total area of the two rectangles shown?



- A.  $(5 + 3)(5 + 6)$      C.  $3 + 5 + 6 + 5$   
 B.  $5(3 + 6)$      D.  $5 + 3 + 5 + 6$



Scan me!  
For more practice  
& answers

## Minnesota MCA-III Practice Test Answer Keys

**How to use this section with a Grade 6 student:**

1. check the answer first
2. mark questions to try again
3. rework the problem before reading the full explanation

**A calm correction routine turns every missed item into useful practice.**

Testinar.com



## Practice Test Answers and Explanations

### Practice Test 1 Answers and Explanations

- Choice D is correct.** (6.1.2.2) Area =  $\pi r^2 \approx 3.14 \times 2^2 = 3.14 \times 4 = 12.56 \text{ ft}^2$ .
- Choice C is correct.** (6.1.1.1) Convert to the same units: 1 inch = 3 feet = 36 inches. Scale factor is 36 : 1.
- The correct answer is (2, 1).** (6.2.3.1) Translate:  $(4, 0) \rightarrow (4 - 2, 0 + 1) = (2, 1)$ .
- The correct answer is 88.** (6.1.2.2) Order: 85, 86, 87, 88, 88, 90, 91, 92, 95. With 9 values, median is the 5th value: 88.
- Choice D is correct.** (6.2.1.2) Great start: keep the order the same, apples first and oranges second. Both 6 and 4 can be divided by 2, so 6 : 4 becomes 3 : 2.
- Choice B is correct.** (6.4.1.2)  $8 \text{ gal/min} \times 5.5 \text{ min} = 44 \text{ gallons}$ .
- Choice C is correct.** (6.3.2.3) Decrease is 12% of  $500 = 0.12 \times 500 = 60$ . Remaining is  $500 - 60 = 440$  ants.
- Choice C is correct.** (6.2.1.2) Each category:  $\$400 \div 5 = \$80$ .
- Choice C is correct.** (6.1.1.6) The largest stem is 17, and the largest leaf for that stem is 5, so the maximum is 175 cm.
- Choice D is correct.** (6.1.3.5)  $\frac{1}{5}$  equals 20%. The central angle is  $0.20 \times 360^\circ = 72^\circ$ .
- Choice C is correct.** (6.2.2.1) Red is the 2-part amount, and  $8 \div 2 = 4$ , so each part is 4 L. The total ratio has  $2 + 3 + 4 = 9$  parts, and  $9 \times 4 = 36$  L.
- Choice C is correct.** (6.3.1.1) Divide total cost by number of notebooks:  $6.40 \div 8 = 0.80$  dollars per notebook.
- Choice C is correct.** (6.3.1.2) The table shows 4 : 6 and 8 : 12. Student 1 says the ratio is 2 : 3 (the simplified form). Student 2 says 4 : 6 (one row from the table). Both are correct because 4 : 6 simplifies to 2 : 3; they describe the same proportional relationship.
- Choice B is correct.** (6.1.1.1) Using the point (2, 1): unit rate =  $1 \div 2 = 0.5$  points per minute. Or from (10, 5): unit rate =  $5 \div 10 = 0.5$  points per minute.
- Choice C is correct.** (6.2.2.1) Shaded: 4 columns  $\times$  10 rows = 40 squares. Unshaded:  $100 - 40 = 60$  squares.
- Choice D is correct.** (6.2.2.1) Batting average is  $\frac{3}{10}$ . Expected hits for 40 at-bats:  $\frac{3}{10} \times 40 = 12$  hits.
- Choice C is correct.** (6.1.1.6) Reading the double number line: 3 miles corresponds to 15840 feet.
- The correct answer is Statements A, B, D, and E are correct; C is false.** (6.2.2.1) A:  $2.5 \times 2 \times 4 = 20 \text{ m}^3 \checkmark$ . B:  $16 \times 3 = 48 \text{ in}^3 \checkmark$ . C:  $3 \times 4 \times 5 = 60 \text{ ft}^3$  (not 70)  $\times$ . D:  $6 \times 2 \times 3 = 36 \text{ cm}^3 \checkmark$ . E:  $10 \times 5 = 50 \text{ m}^3 \checkmark$ .
- Choice A is correct.** (6.2.3.1) With only \$300 and needing \$800, Sophia should save more money first. Using a debit card would overdraw her account (negative balance), and using credit card debt for a purchase like this is not recommended at this grade level.
- Choice D is correct.** (6.1.1.1) Using  $p = 12y$  with  $y = 2.5$ :  $p = 12 \times 2.5 = 30$  dollars.
- Choice D is correct.** (6.3.1.1) 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.
- Choice C is correct.** (6.1.3.3) Double means multiply by 2:  $3.5 \times 2 = 7$  cups.
- Choice A is correct.** (6.3.1.2) Factors of 15: 1, 3, 5, 15. Factors of 25: 1, 5, 25. Common factors: 1, 5. GCF is 5. For option B, GCF is 10; for C, GCF is 4; for D, GCF is 7.
- Choice A is correct.** (6.1.3.5)  $6(7 + 4) = 6 \cdot 7 + 6 \cdot 4 = 42 + 24$ . The area model shows the two parts: height 6 with widths 7 and 4. Only Choice A shows the correct expansion.
- Choice D is correct.** (6.1.3.3) A negative number means the value is below zero. Since the temperature is  $-12^\circ\text{C}$ , it is 12 degrees below zero.
- Choice D is correct.** (6.3.2.2) Both  $|-7|$  and  $|7|$  equal 7, so they are equal.
- Choice A is correct.** (6.1.1.4) Point M is halfway between 2 and 3, which is 2.5 or  $2\frac{1}{2}$ .
- Choice D is correct.** (6.3.2.3) The point (5, -3) has a positive  $x$ -coordinate and a negative  $y$ -coordinate. Points with (+, -) are located in Quadrant IV.
- Choice C is correct.** (6.3.1.3)  $-\frac{1}{4} = -0.25 > -\frac{1}{2} = -0.5$ . All other choices are less than  $-\frac{1}{2}$ .
- Choice B is correct.** (6.3.2.2) Same  $y$ -coordinate (3):  $|7 - 2| = 5$  units.



## Hi, Math Champion!

◇ You trained hard! 10 full practice tests is real practice. Your math game is way better now than when you started. ◇

★ **Coach's truth:** kids who practice get better. You practiced. You got better. That's how it works!  
★

### Your Game Stats

- **Energy:** HIGH! You can finish a long test.
- **Smart Plays:** You know lots of strategies.
- **Calm Head:** You stay cool with hard problems.
- **Game-Day Ready:** You feel strong and prepared.

**Coach's tip:** the night before the test, get good sleep. Eat a good breakfast. Bring a sharp pencil. Trust your training!

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 Coach

# PRACTICE MORE. ACHIEVE MORE. SUCCEED!

This **Grade 6 Math Practice Tests** book is designed to help students build strong math skills, deepen their understanding of key concepts, and gain the confidence they need to succeed on any test.

With 10 full-length printed tests and 2 online tests, students get the review, practice, and realistic test experience they need to improve accuracy, strengthen 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

★ **CONFIDENCE TODAY.  
SUCCESS 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.



### Deepen Understanding

Reinforce key math concepts aligned with standards.



### Test Confidence

Get familiar with test formats and improve accuracy.



### 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.



10 PRINTED  
PRACTICE TESTS



2 ONLINE  
PRACTICE TESTS



DETAILED ANSWER  
EXPLANATIONS