

4 Minnesota MCA III

GRADE
6
MATH

PRACTICE TESTS

Standards Aligned Problem Solving
For Comprehensive Assessment Programs

4

**PRINTED
TESTS**



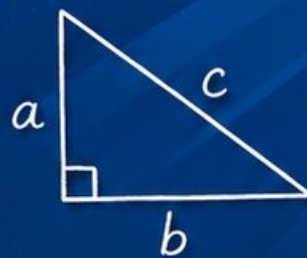
2

**ONLINE
TESTS**



- ✓ Build Confidence
- ✓ Master Key Math Skills
- ✓ Answer Explanations for Every Question
- ✓ Test-Taking Strategies That Work

$$2x + 5 = 21$$
$$x = 8$$



$$\frac{3}{4} + \frac{1}{2} = \frac{5}{4}$$



**USE THESE TWO
ADDITIONAL ONLINE
PRACTICE TESTS**

**FOR EXTRA REVIEW AFTER
THE PRINTED TESTS
IN THIS BOOK.**

4 Minnesota MCA-III Grade 6 Math Practice Tests

Standards-Aligned North Star Review Habits for Minnesota Comprehensive Assessments



Four complete 40-question Grade 6 practice rounds for MCA-III, built for North Star review habits 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

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!

Four focused rounds using North Star review habits

This book gives you four full Grade 6 practice tests for MCA-III. Each round uses lakeside paths, winter focus, and clear data reading 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

Use the problem as your compass: note what is asked, solve in order, and verify the units.

Read

Plan

Check

How to Use This Book

A four-session routine for North Star review habits

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

Minnesota review rhythm: Take one test, review the cold spots, and warm up the next round with targeted practice.



What Is Inside?

Four MCA-III tests, 160 questions, and a full review path

Part	What You Will Practice
Tests 1–2	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Tests 3–4	Skill-building and final stamina rounds with expressions, equations, geometry, data, and problem models.
Answer Pages	Compact keys and explanations that show why each answer works.

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



Scan me!
For more practice
& answers

Table of Contents

★ Practice Test 1	_____	13
★ Practice Test 2	_____	28
★ Practice Test 3	_____	46
★ Practice Test 4	_____	61
Practice Test Answer Keys	_____	79
Practice Test Answers and Explanations	_____	82

1) A dataset's five-number summary is: $\min = 8$, $Q_1 = 16$, $\text{median} = 22$, $Q_3 = 28$, $\max = 40$. If a single new data value of 45 is added, which statistic would change the MOST?

A. The median

B. Q_1

C. The IQR

D. The maximum

2) Which two expressions are equivalent?

A. $8(5 + 3)$ and $40 + 24$

B. $8(5 + 3)$ and $8 + 8$

C. $8(5 + 3)$ and $45 + 24$

D. $8(5 + 3)$ and $40 + 3$

3) A 10×10 grid has 52 shaded squares. What percent of the grid is shaded?

4) A company sells 480 products in one month. If 25% of the sales were online, how many products were sold online?



Scan me!
For more practice
& answers

5) Which integer is closest to zero on a number line?

A. -5

C. 4

B. -8

D. -1

6) An error was made in the statement below. What is the error?

“The absolute value of -10 is -10 because the sign tells us the distance from zero.”

A. Absolute value can be negative

C. The sign tells the distance from

B. Distance from zero is always non-
negative; $|-10| = 10$

zero

D. Absolute value is always negative

7) A zoom of a number line shows integers from 2 to 3 divided into tenths. Which decimal is closest to 2.6?

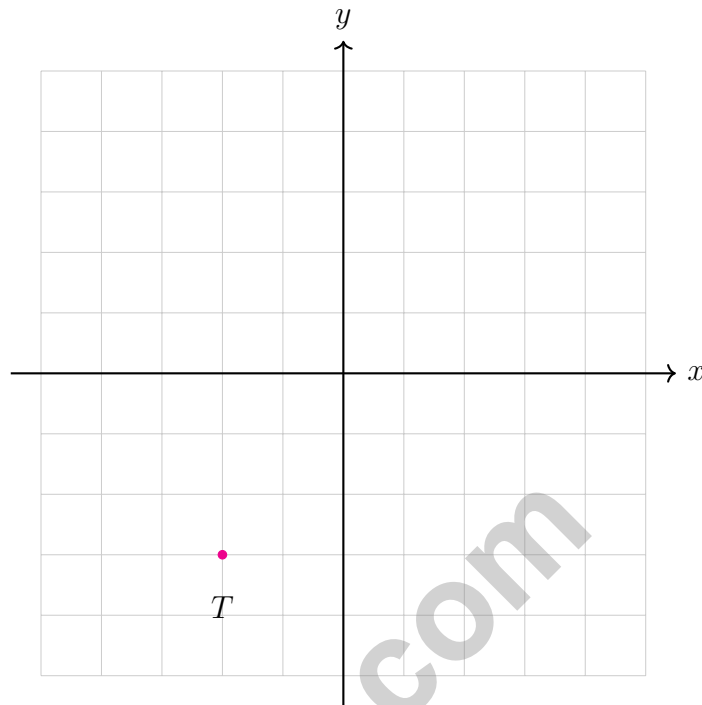
A. 2.5

C. 2.7

B. 2.6

D. 2.8





8)

What is the reflection of point T across the x -axis?

- A. $(-2, 3)$ C. $(2, 3)$
 B. $(2, -3)$ D. $(-2, -3)$

9) If you need a triangle with area 75 cm^2 and base 15 cm , what height is needed?

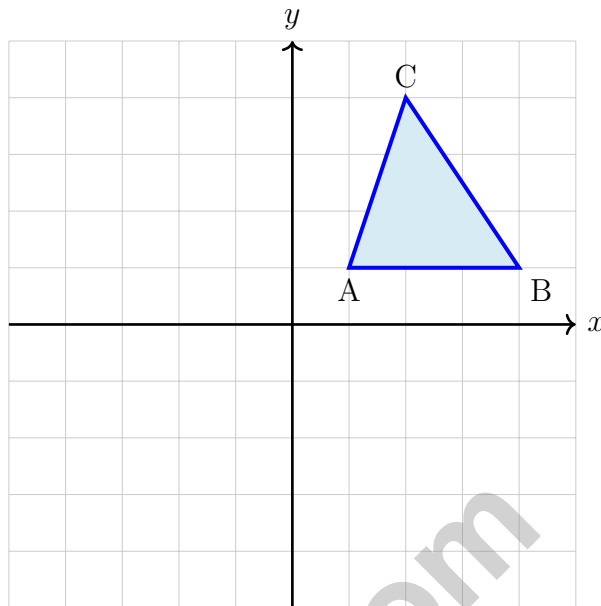
- A. 5 cm C. 15 cm
 B. 20 cm D. 10 cm

10) A parallelogram has a base of 9 in and a height of 7 in . What is its area?

- A. 16 in^2 C. 63 in^2
 B. 32 in^2 D. 126 in^2



Scan me!
For more practice
& answers



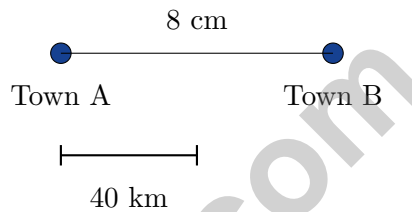
4)

A triangle has vertices at $A(1, 1)$, $B(4, 1)$, and $C(2, 4)$. The triangle is reflected over the x -axis. What are the coordinates of the image of vertex C ? Express your answer as an ordered pair.



Scan me!
For more practice
& answers

- 1) Two vertices of a rectangle are at (3, 2) and (3, 9). These are adjacent vertices. If the width is 5 units, where is a third vertex?
- A. (8, 2) C. (5, 2)
- B. (8, 9) D. (3, 7)
- 2) A map shows two towns with a distance between them. The scale bar below indicates the distance.



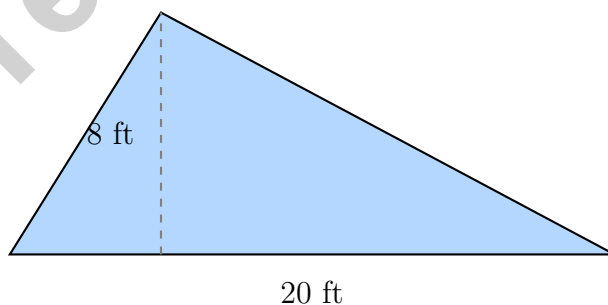
What is the actual distance between the towns?

- A. 80 km C. 160 km
- B. 120 km D. 200 km
- 3) What is $\frac{4}{5} \div \frac{2}{3}$?
- A. $\frac{8}{15}$ C. $\frac{10}{12}$
- B. $\frac{2}{15}$ D. $\frac{6}{5}$
- 4) A student uses the fact that $5,200 \div 13 = 400$ to help solve $5,213 \div 13$. What is the relationship between these two quotients?
- A. $5,213 \div 13 = 401$ (quotient increases by 1) C. $5,213 \div 13 = 401$ exactly
- B. $5,213 \div 13 = 400$ remainder 13 D. $5,213 \div 13 = 400$ remainder 1



Scan me!
For more practice
& answers

- 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
- 6) A city is at an elevation of 2050 feet above sea level. Its opposite elevation would be:
- A. -2050 feet C. 2050 feet
 B. $|2050|$ feet D. 4100 feet
- 7) Which number is located at the position labeled as -1.2 on a number line?
- A. $-\frac{6}{5}$ C. -1
 B. $-\frac{5}{4}$ D. $-\frac{1}{2}$
- 8) If the point $(6, -4)$ is reflected across the x -axis and then across the y -axis, what are the final coordinates?
- A. $(6, -4)$ C. $(6, 4)$
 B. $(-6, 4)$ D. $(-6, -4)$
- 9) A garden plot is triangular with a base of 20 feet and height 8 feet. How much area is available for planting?



- A. 28 ft^2 C. 80 ft^2
 B. 40 ft^2 D. 160 ft^2



Minnesota MCA-III Practice Test Answer Keys

How to use this Minnesota MCA-III 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 North Star review habits
3. rework the problem before reading the full explanation, using this reminder:
Use the problem as your compass: note what is asked, solve in order, and verify the units.

A calm Minnesota correction routine turns every missed item into useful practice. Take one test, review the cold spots, and warm up the next round with targeted practice.



Scan me!
For more practice
& answers

Minnesota Practice Test Answers and Explanations

Review the four printed MCA-III tests with clear, calm, and ready for the next signal habits.

Practice Test 1 Answers and Explanations

- 1) **Choice D is correct.** (6.2.1.2) Adding a value of 45 (larger than the current max of 40) directly changes the maximum from 40 to 45. The other quartiles and median are determined by position and would not change with one additional data point.
- 2) **Choice A is correct.** (6.1.1.6) $8(5 + 3) = 8 \cdot 5 + 8 \cdot 3 = 40 + 24$. Choice B gives $8 + 8 = 16$, so it is not equivalent.
- 3) **The correct answer is 52%.** (6.1.1.3) A 10×10 grid has 100 squares total. If 52 are shaded, the percent is $\frac{52}{100} = 52\%$.
- 4) **The correct answer is 120.** (6.1.3.5) 25% of $480 = 0.25 \times 480 = 120$ products were sold online.
- 5) **Choice D is correct.** (6.1.1.2) Distance from zero determines how close a number is. $|-1| = 1$, which is the smallest distance among the choices. Numbers closer to zero have smaller absolute values.
- 6) **Choice B is correct.** (6.1.1.1) Absolute value is distance from zero, so it is never negative. The sign indicates direction, not distance magnitude.
- 7) **Choice B is correct.** (6.1.1.1) The point 2.6 is six tenths of the way from 2 to 3, making it exactly the position given.
- 8) **Choice A is correct.** (6.1.1.1) Point T is at $(-2, -3)$. Reflecting across the x -axis changes the sign of the y -coordinate, giving $(-2, 3)$.
- 9) **Choice D is correct.** (6.3.2.3) $75 = \frac{1}{2} \times 15 \times h \Rightarrow h = 10$ cm.
- 10) **Choice C is correct.** (6.3.1.2) Area $= 9 \times 7 = 63$ in².
- 11) **Choice D is correct.** (6.3.1.1) The correct volume is $V = 2.5 \times 3 \times 4 = 7.5 \times 4 = 30$ m³. The student forgot to multiply by the height.
- 12) **Choice C is correct.** (6.1.1.1) Length $= 7 - 1 = 6$ units; width $= 4 - 1 = 3$ units. Perimeter $= 2(6 + 3) = 18$ units.
- 13) **Choice B is correct.** (6.3.2.3) Original rectangle: width $10 - 2 = 8$, height $8 - 2 = 6$, area $= 48$ sq. units. Option B: width $15 - 3 = 12$, height $5 - 1 = 4$, area $= 48$ sq. units. Match!
- 14) **The correct answer is 32.** (6.1.2.4) Unit cost: $8 \div \frac{1}{4} = 8 \times 4 = 32$ dollars per gallon.
- 15) **Choice A is correct.** (6.2.2.1) The GCF of 12 and 8 is 4. Factor: $12x + 8 = 4(3x + 2)$.
- 16) **Choice D is correct.** (6.2.3.1) "Older than 18" means strictly greater than: $a > 18$.
- 17) **Choice B is correct.** (6.2.1.1) The line passes through $(2, 4)$ and $(4, 8)$. The slope is $\frac{8-4}{4-2} = \frac{4}{2} = 2$ MB per song.
- 18) **Choice B is correct.** (6.2.2.1) With 4 values, the median is the average of the 2nd and 3rd values: $(20 + 25)/2 = 22.5$.
- 19) **Choice D is correct.** (6.1.3.3) For D: mean $= \frac{35}{5} = 7$, median $= 7$ (middle of 5 values). Symmetric data ensures mean $=$ median.
- 20) **Choice B is correct.** (6.3.1.1) Account 1: $I = \$500 \times 0.03 \times 3 = \45 . Account 2: $I = \$500 \times 0.04 \times 2 = \40 . Difference: $\$45 - \$40 = \$5$, with Account 1 earning more.
- 21) **Choice B is correct.** (6.2.1.2) Proportional equations have the form $y = kx$ with no constant term. Only $y = 3x$ fits this form. Option A has a constant $(+2)$, C is quadratic, and D has a constant term.
- 22) **The correct answer is The unit rate is 25 items per hour, and the y-value when x = 1 is 25.** (6.1.1.1) A is correct because $50 \div 2 = 25$ items per hour. D is correct because when $x = 1$, $y = 25$. Choice B is false for a proportional relationship, Choice C should be $y = 25x$, and Choice E is false.
- 23) **Choice B is correct.** (6.1.1.6) Remainder: $100\% - 40\% - 35\% - 15\% = 10\%$ of $\$360 = 0.10 \times 360 = \36 .
- 24) **Choice D is correct.** (6.1.2.2) Actual side: $2.5 \times 8 = 20$ feet. Area: $20 \times 20 = 400$ sq ft.
- 25) **Choice C is correct.** (6.1.3.2) When multiplying the number of slices by the fraction of each slice, you get the total fraction, not divide.
- 26) **Choice D is correct.** (6.1.3.5) $4,536 \div 19 = 238$ remainder 14. Rounding up gives 239 boxes per warehouse.



Math Detective at Work

Hi, Math Detective!

◇ You did such a great job! You finished 4 tests like a real detective. You found the clues, used your tools, and solved the math. ◇

★ **Detectives know:** good work takes time. You took your time. You looked carefully. You found the answers! ★

Your Detective Skills

- **Sharp Eyes:** You notice the small details.
- **Smart Plans:** You pick the right way to solve.
- **Brave Heart:** You try even when it's tricky.
- **Steady Work:** You finish what you start.

Detective tip: on test day, look carefully at each problem. Underline important words. Then solve like the detective you are!

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

Jay Daie

Your Math Detective Helper

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes 4 full-length Math practice tests and 2 online tests to help Grade 6 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:

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



2 ONLINE TESTS

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



VISIT [TESTINAR.COM/MATH6](https://www.testinar.com/math6)
FOR MORE PRACTICE TESTS
AND LEARNING RESOURCES



PRACTICE
REGULARLY



STAY
FOCUSED



SOLVE
CONFIDENTLY



SUCCEED
BRIGHTLY

PREPARE TODAY. SUCCEED TOMORROW!