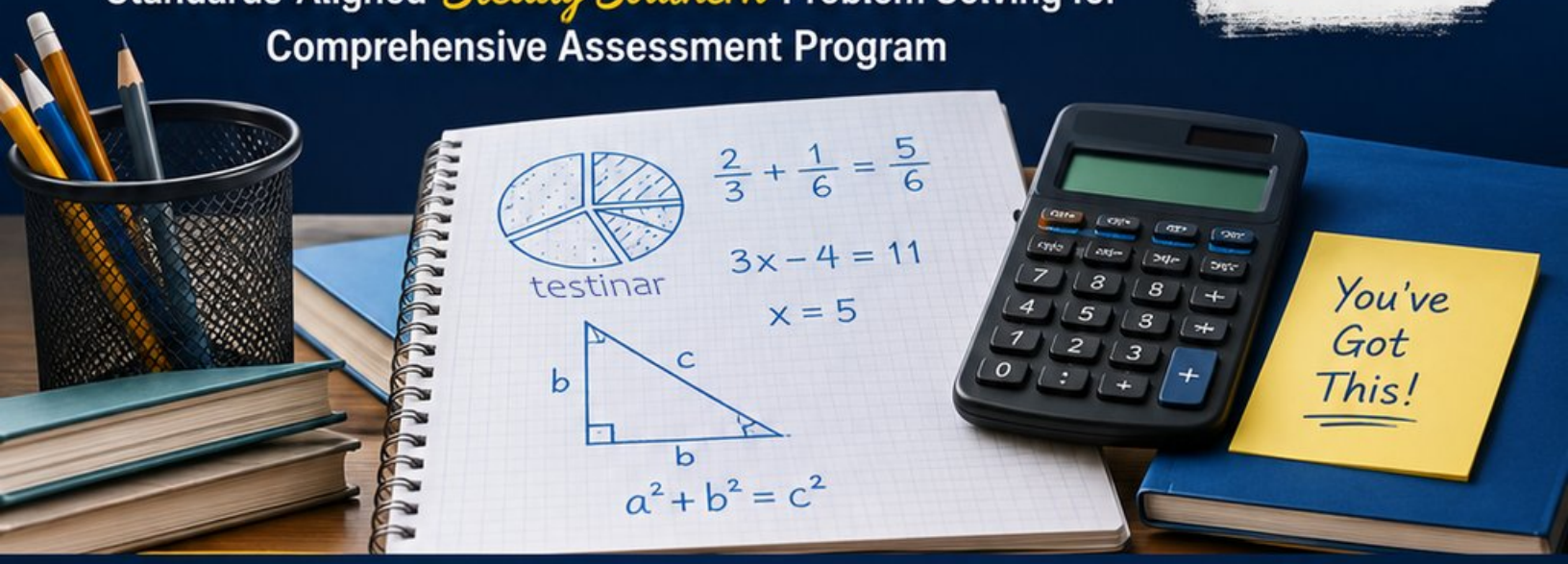
8 Minnesota MCA III

8 PRINTED TESTS + 2 ONLINE TESTS

GRADE 6 MATH PRACTICE 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



BUILT FOR ACAP SUCCESS

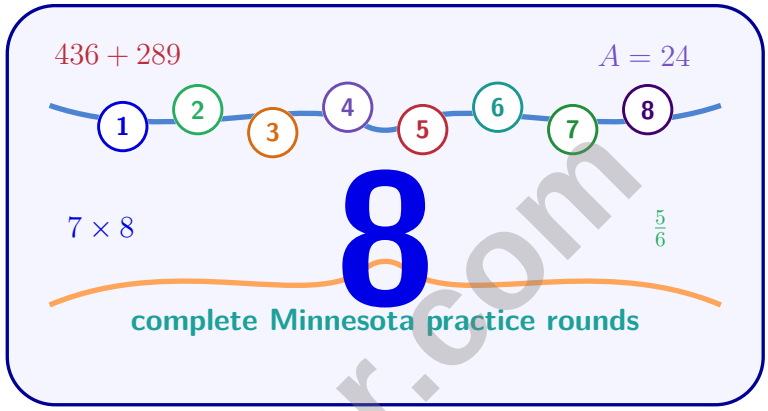
REALISTIC TESTS & QUESTION TYPES

STRENGTHEN MATH SKILLS

REVIEW, PRACTICE, AND IMPROVE

8 Minnesota MCA-III Grade 6 Math Practice Tests

Standards-Aligned North Star Review Habits for Minnesota Comprehensive Assessments



Eight 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

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Welcome, Minnesota Math Explorer!

Eight focused rounds using North Star review habits

This book gives you eight 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.

How to Use This Book

A eight-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?

Eight MCA-III 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.
Tests 7–8	Final stamina rounds 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. North star review habits means recognizing the skill even when the next question changes topic, changes format, or asks for an explanation.

Table of Contents

1) A trapezoid has bases of 7 m and 9 m with a height of 4 m. What is its area?

☐ A. 20 m^2
☐ B. 32 m^2
☐ C. 36 m^2
☐ D. 64 m^2

2) You can practice your instrument for more than 30 minutes but must stop before 60 minutes. If t is the time in minutes, which two inequalities best describe this?

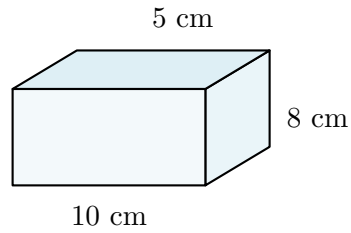
Inequality	Meaning
$t > 30$	more than 30 min
$t < 60$	less than 60 min

☐ A. $t < 30$ and $t < 60$
☐ B. $t > 30$ and $t > 60$
☐ C. $t > 30$ and $t < 60$
☐ D. $t \leq 30$ and $t \geq 60$

3) A baker makes cookies. For every batch, she uses 3 cups of flour. After making b batches, she has used f cups of flour. Which equation shows this relationship?

☐ A. $b = 3f$
☐ B. $b = f + 3$
☐ C. $b + f = 3$
☐ D. $f = 3b$

4) Evaluate $2n - 7$ when $n = 15$.



5) A rectangular tank is 10 cm long, 8 cm wide, and 5 cm tall. How many cubic centimeters of water can it hold?

☐ A. 200 cm^3
☐ B. 280 cm^3
☐ C. 400 cm^3
☐ D. 800 cm^3

6) A student solved $\frac{4}{9} \div \frac{2}{9}$ and got $\frac{8}{81}$. What was the error?

☐ A. Did not invert the second fraction
☐ B. Inverted the wrong fraction
☐ C. Added instead of multiplied after inverting
☐ D. Did not simplify the final answer

7) A student needs to save more than \$100. What is the least whole-dollar amount that works?

8) Which sequence shows integers in order from least to greatest?

☐ A. $-8, -3, 0, 5, 12$
☐ B. $12, 5, 0, -3, -8$
☐ C. $-3, -8, 0, 5, 12$
☐ D. $0, -3, -8, 5, 12$

9) At the end of a game, a player had a score of -15 points. They earned 25 points on their next turn. What is their new score?

☐ A. -40 points
☐ B. -10 points
☐ C. 10 points
☐ D. 40 points

10) A rectangle has vertices at $(1, 1)$, $(10, 1)$, $(10, 4)$, and $(1, 4)$. What is the perimeter of this rectangle?

11) A car travels at a constant speed of 55 miles per hour. The distance traveled in t hours is $55t$ miles. If the car travels for 3.5 hours, what does the coefficient 55 represent in this scenario?

☐ A. The distance traveled (in miles)
☐ B. The time traveled (in hours)
☐ C. The speed of the car (in miles per hour)
☐ D. The acceleration of the car

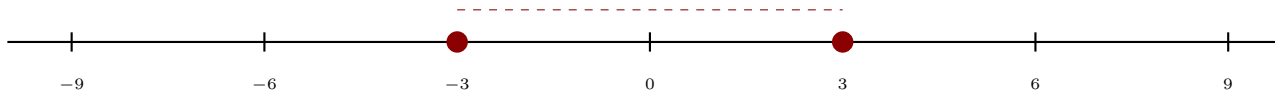
12) Evaluate $2x + y$ when $x = 2.5$ and $y = 3$.

☐ A. 5
☐ B. 6
☐ C. 8
☐ D. 11

13) A recipe calls for a certain amount of flour. When 2.25 cups are used, there are 3.75 cups remaining. Write and solve an equation for the original amount x.

☐ A. $x + 2.25 = 3.75$; $x = 1.5$ cups
☐ B. $\frac{x}{2.25} = 3.75$; $x = 8.44$ cups
☐ C. $2.25x = 3.75$; $x = 1.67$ cups
☐ D. $x - 2.25 = 3.75$; $x = 6$ cups

1)



These two points are opposites. What is the sum of their absolute values?

☐ A. 0
☐ B. 3
☐ C. 6
☐ D. −6

2) In a dataset, the median is 60 and the IQR is 20. If $Q_1 = 50$, what is Q_3?

☐ A. 40
☐ B. 60
☐ C. 70
☐ D. 80

3) Data Set A: $5, 6, 7, 8, 9$ (Mean $= 7$, Median $= 7$) Data Set B: $1, 5, 7, 8, 24$ (Mean $= 9$, Median $= 7$) Which statement is true?

☐ A. Set A is more skewed
☐ B. Set B has a larger outlier
☐ C. The means are equal
☐ D. Set A has a larger outlier

4) 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

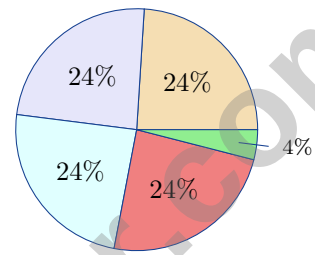
5) A researcher plots reaction times (in milliseconds) for 11 participants:

Stem	Leaf
20	2, 5, 7
21	1, 3, 6, 8
22	0, 4, 6, 9

What is the median reaction time?

☐ A. 213 ms
☐ B. 216 ms
☐ C. 218 ms
☐ D. 220 ms

6)



The circle graph shows data from 500 items. How many items are represented by the 4% section?

☐ A. 20
☐ B. 15
☐ C. 10
☐ D. 25

7) Which graph is MOST misleading if the vertical axis does not start at zero?

☐ A. Bar graph
☐ B. Line graph
☐ C. Circle graph
☐ D. Dot plot

1) What is the prime factorization of 84?

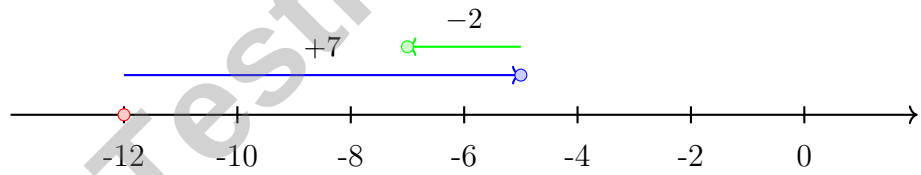
☐ A. $2^2 \times 21$
☐ B. $2^2 \times 3 \times 7$
☐ C. 3×28
☐ D. 4×21

2) Jamie receives $200 per month. He allocates 40% to expenses, 35% to savings, and the rest to entertainment. How much money does he allocate to entertainment?

3) A rectangle has a perimeter of 28 units. If the length is 9 units, what is the width?

☐ A. 4 units
☐ B. 5 units
☐ C. 6 units
☐ D. 7 units

4) What is $-12 + 7 + (-2)$?



☐ A. -21
☐ B. -7
☐ C. 7
☐ D. 21

5) Evaluate $3b - 2c + 1$ when $b = 4$ and $c = 3$.

☐ A. 5
☐ B. 7
☐ C. 12
☐ D. 18

6) Solve for x: $2x = 14$

☐ A. $x = 7$
☐ B. $x = 12$
☐ C. $x = 16$
☐ D. $x = 28$

7) A student needs to score more than 80% to pass. Which inequality represents passing scores?

☐ A. $s \leq 80$
☐ B. $s < 80$
☐ C. $s > 80$
☐ D. $s \geq 80$

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.

Minnesota Practice Test Answers and Explanations

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

Practice Test 1 Answers and Explanations

1) **Choice B is correct.** 6.3.1.2 Area of a trapezoid $= \frac{1}{2}(b_1 + b_2) \times h = \frac{1}{2}(7 + 9) \times 4 = \frac{1}{2} \times 16 \times 4 = 32$ m^2.
2) **Choice C is correct.** 6.2.3.1 "More than 30" is $t > 30$. "Stop before 60" is $t < 60$. Together: $t > 30$ and $t < 60$.
3) **Choice D is correct.** 6.2.1.1 Flour used equals 3 cups per batch times the number of batches: $f = 3b$.
4) **The correct answer is 23.** 6.2.3.1 Substitute $n = 15$: $2(15) - 7 = 30 - 7 = 23$.
5) **Choice C is correct.** 6.3.1.1 $V = 10 \times 8 \times 5 = 80 \times 5 = 400$ cm^3.
6) **Choice A is correct.** 6.1.3.2 The correct answer is $\frac{4}{9} \times \frac{9}{2} = \frac{36}{18} = 2$. The student calculated $\frac{4}{9} \times \frac{2}{9} = \frac{8}{81}$.
7) **The correct answer is 101.** 6.1.1.1 The least whole number greater than 100 is 101.
8) **Choice A is correct.** 6.2.3.1 Integers increase from left to right on a number line. $-8 < -3 < 0 < 5 < 12$.
9) **Choice C is correct.** 6.2.2.1 Adding earned points to negative score: $-15 + 25 = 10$ points.
10) **The correct answer is 26.** 6.1.1.1 Length $= 10 - 1 = 9$ units; width $= 4 - 1 = 3$ units. Perimeter $= 2(9 + 3) = 2(12) = 26$ units.
11) **Choice C is correct.** 6.1.1.6 The coefficient 55 in $55t$ represents the rate at which distance changes with time — the speed in miles per hour.
12) **Choice C is correct.** 6.2.2.1 Substitute: $2(2.5) + 3 = 5 + 3 = 8$.
13) **Choice D is correct.** 6.2.2.1 Original amount minus 2.25 used equals 3.75 left. So $x - 2.25 = 3.75$, giving $x = 6$ cups.
14) **Choice B is correct.** 6.3.2.3 Area of a trapezoid $= \frac{1}{2}(b_1 + b_2) \times h = \frac{1}{2}(10 + 8) \times 5 = \frac{1}{2} \times 18 \times 5 = 45$ square units.
15) **Choice A is correct.** 6.3.1.3 Reflection over the y-axis negates the x-coordinate: $(-4, 4) \to (4, 4)$.
16) **Choice C is correct.** 6.3.1.2 The diameter is twice the radius. $d = 2r = 2 \times 9 = 18$ inches.
17) **Choice A is correct.** 6.3.2.2 Range $=$ max $-$ min $= 14 - 2 = 12$. IQR $= Q3 - Q1 = 10 - 4.5 = 5.5$.
18) **The correct answer is A and C are correct.** 6.1.2.2 A: $6 \times 3 = 18$ feet (correct). B: $4 \times 3 = 12$ feet, not 10 (incorrect). C: $21 \div 3 = 7$ inches (correct). D: $9 \div 3 = 3$ inches, not 2 (incorrect). E: $5 \times 3 = 15$ feet, not 16 (incorrect).
19) **Choice D is correct.** 6.1.3.3 The mode is the value with the highest frequency. The frequency 7 for 1.5 inches is the largest, so 1.5 inches is the mode.
20) **Choice C is correct.** 6.1.1.4 Since $\frac{1}{3} \approx 0.333$, the 33.3% section is the closest match.
21) **Choice A is correct.** 6.2.2.1 Nuts have 6 parts. Dried fruit plus chocolate also has $4 + 2 = 6$ parts, so the ratio is $6 : 6$, which simplifies to $1 : 1$.
22) **Choice C is correct.** 6.1.2.1 The ratio is $3 : 7$. When espresso is 6 (multiply by 2), milk is $7 \times 2 = 14$ oz.
23) **The correct answer is 228.** 6.3.1.1 $SA = 2(9)(4) + 2(9)(6) + 2(4)(6) = 72 + 108 + 48 = 228$ cm^2.
24) **Choice C is correct.** 6.1.2.4 Time $=$ Distance $\div$ Rate $= 60 \div 15 = 4$ hours.
25) **Choice D is correct.** 6.3.1.1 Rent to Food: \$1200 : \$800 $= 12 : 8 = 3 : 2$ (dividing both by 400).
26) **Choice B is correct.** 6.1.1.6 GCF of 30 and 45 is 15. So $30 + 45 = 15(2 + 3)$. Choice A uses GCF 5, which works but is not the greatest. Choice B is correct.
27) **Choice C is correct.** 6.1.2.2 The x-coordinates are the same, so subtract the y-coordinates: $|4 - (-2)| = |4 + 2| = 6$ units.
28) **Choice A is correct.** 6.1.2.4 The diagram shows 3 groups (jumps) of size 4 added together: $4 + 4 + 4 = 12$, which is the same as $3 \times 4 = 12$.
29) **Choice D is correct.** 6.1.2.3 The 8 tomato parts represent 24 plants, so each part is $24 \div 8 = 3$ plants. Pepper plants are 3 parts, so $3 \times 3 = 9$.
30) **Choice B is correct.** 6.1.2.3 A price rate compares money to another unit. "Seventy cents per pound" compares cost to weight, so it is the price rate.

Hi, Math Builder!

◇ Through 8 practice tests, you built your math house brick by brick. The walls are strong. The roof is on. You are ready for anything test day brings. ◇

⋆ **Builders know:** good plans make strong houses. You learned to plan, then build. That helps with any problem. ⋆

Builder's Tools

- **Foundation:** ROCK SOLID. Math facts are in place.
- **Frame:** STRONG. You can break problems into parts.
- **Walls:** TIDY. Your work is neat and clear.
- **Roof:** DONE. You always answer the question.

Builder tip: on test day, build each answer like a tiny house. Read first. Plan next. Do the math. Then check!

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

Jay Daie

Your Math Builder

MASTER MATH. ACE YOUR TESTS.

This Grade 6 Math Practice Tests book is designed to help students build confidence, strengthen math skills, and excel on comprehensive assessments.

With 8 full-length printed tests and 2 online tests, this resource provides realistic practice, a variety of question types, and detailed answer explanations to help students achieve their best.

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

8 PRINTED TESTS

+

2 ONLINE TESTS

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.

Understand Key Concepts

Reinforce important math ideas 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
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- Fractions & Decimals
- Percents
- Statistics & Probability
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- Measurement & Conversions
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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.

8 FULL-LENGTH PRACTICE TESTS

2 ONLINE PRACTICE TESTS

DETAILED ANSWER EXPLANATIONS