

8 Michigan MSTEP

GRADE 6

MATH

PRACTICE TESTS

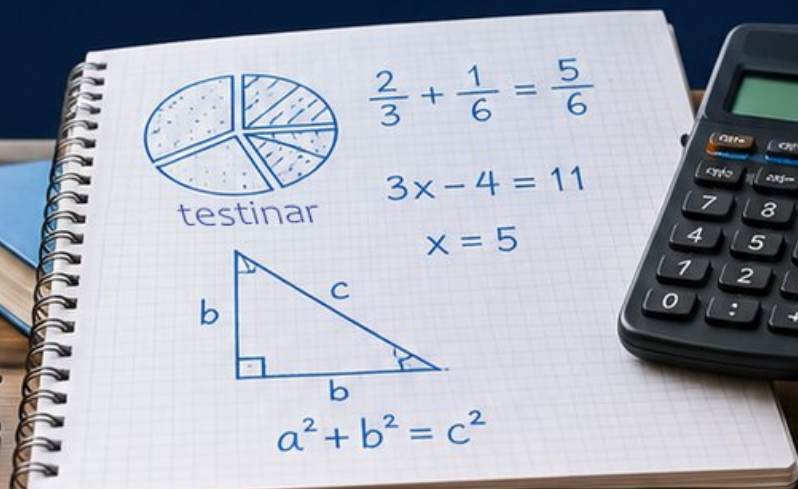
8
PRINTED
TESTS

+

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



You've
Got
This!



BUILT FOR
ACAP SUCCESS



REALISTIC TESTS
& QUESTION TYPES



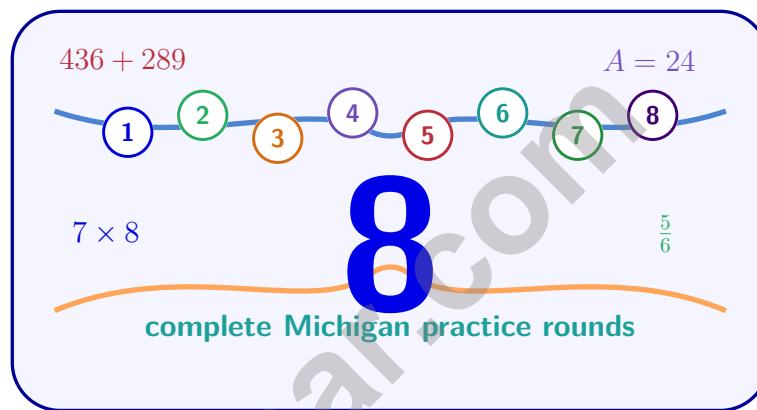
STRENGTHEN
MATH SKILLS



REVIEW, PRACTICE,
AND IMPROVE

8 Michigan M-STEP Grade 6 Math Practice Tests

Standards-Aligned Great Lakes Problem Solving for Michigan Student Test of Educational Progress



Eight complete 40-question Grade 6 practice rounds for M-STEP, built for Great Lakes problem solving with ratios, rational numbers, expressions, equations, geometry, statistics, answer keys, and clear explanations for every item.

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Welcome, Michigan Math Explorer!

Eight focused rounds using Great Lakes problem solving

This book gives you eight full Grade 6 practice tests for M-STEP. Each round uses lake shores, peninsulas, and steady route planning as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

Your Michigan Practice Promise

Keep your thinking on course: map the facts, select the operation, and check the destination.

Read

Plan

Check

How to Use This Book

A eight-session routine for Great Lakes problem solving

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

Michigan review rhythm: After each round, look for patterns in mistakes and steer the next practice session toward them.



What Is Inside?

Eight M-STEP 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. Great lakes problem solving means recognizing the skill even when the next question changes topic, changes format, or asks for an explanation.



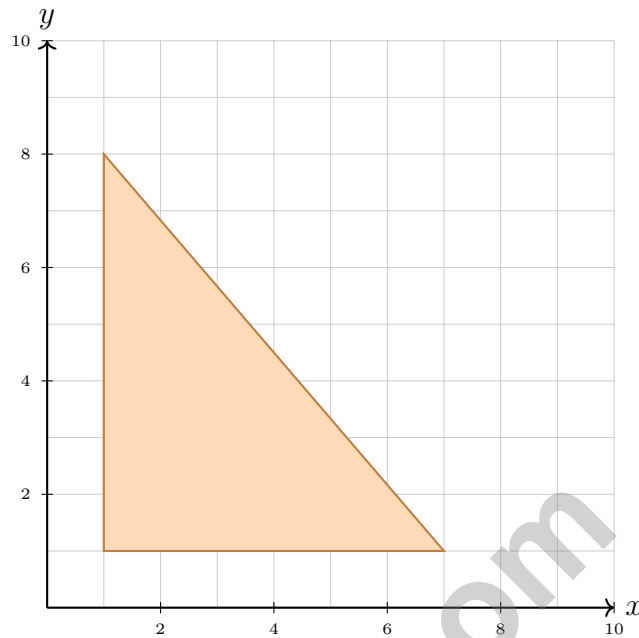
Scan me!
For more practice
& answers

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- 1) Sarah is 64 inches tall. How many feet tall is Sarah? (Use 1 foot = 12 inches.)
- A. $5\frac{1}{3}$ feet C. 5 feet
 B. $6\frac{1}{2}$ feet D. 7 feet
- 2) A plant grows 3 cm per week. If w is the number of weeks and h is the height in centimeters, write the equation.
- A. $h = 3w + 3$ C. $w = 3h$
 B. $h = 3w$ D. $h = w + 3$
- 3) A parallelogram has a base of 20 cm and an area of 140 cm^2 . What is its height?
- A. 5 cm C. 9 cm
 B. 7 cm D. 14 cm
- 4) A triangle has vertices at $(1, 1)$, $(5, 1)$, and $(3, 5)$. What is the length of the base?
- A. 3 units C. 5 units
 B. 4 units D. 6 units
- 5) A recipe calls for 3 cups of flour. Maya accidentally used 2 cups less. How much flour did she use?
- A. 5 cups C. 2 cups
 B. 1 cup D. -1 cup





11)

A right triangle has vertices at $(1, 1)$, $(7, 1)$, and $(1, 8)$. What is its area in square units?

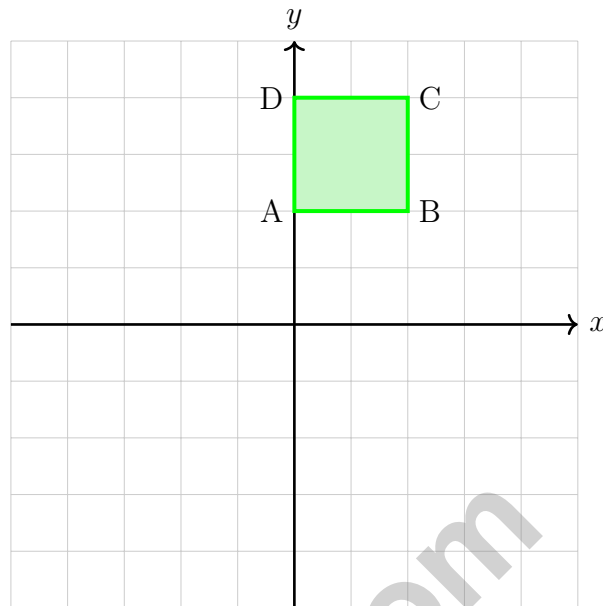
- A. 18 square units C. 24 square units
 B. 28 square units D. 21 square units

12) Three students write questions about pets. Which is statistical?

Student 1: How many pets do I have?
Student 2: How many pets do sixth graders have?
Student 3: What kind of pet do I prefer?

- A. Student 1 C. Student 3
 B. Student 2 D. None of them





5)

A rectangle with vertices at $A(0, 2)$, $B(2, 2)$, $C(2, 4)$, and $D(0, 4)$ is translated 1 unit right and 2 units down. What are the coordinates of the image of vertex A ?

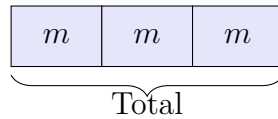
- A. $(1, 0)$
 C. $(-1, 0)$
 B. $(1, 4)$
 D. $(-1, 4)$

6) Which expression matches “the difference of 11 and the quotient of a number u and 3”?

- A. $11 - \frac{u}{3}$
 C. $\frac{u}{3} - 11$
 B. $\frac{11 - u}{3}$
 D. $\frac{11}{u - 3}$



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& answers



1)

The bar model shows three equal parts, each with value m . Which expression represents the total?

A. $m + 3$

B. $3m$

C. $m - 3$

D. $\frac{m}{3}$

2) Expand $7(4 + 9)$. What is the sum?3) A dot plot shows scores: $\{3, 5, 7, 7, 8, 8, 8, 9\}$. What is the mode?

A. 7

B. 3

C. 9

D. 8

4) Using the temperature data from Question 5, what is the median temperature?

A. 45°F

B. 50°F

C. 48°F

D. 46°F

5) What is $(-2) \times (-11)$?

A. -22

B. 22

C. 13

D. -13



Michigan M-STEP Practice Test Answer Keys

How to use this Michigan M-STEP 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 Great Lakes problem solving
3. rework the problem before reading the full explanation, using this reminder:
Keep your thinking on course: map the facts, select the operation, and check the destination.

A calm Michigan correction routine turns every missed item into useful practice. After each round, look for patterns in mistakes and steer the next practice session toward them.



Scan me!
For more practice
& answers

Michigan Practice Test Answers and Explanations

Review the eight printed M-STEP tests with steady, aware, and ready to keep navigating habits.

Practice Test 1 Answers and Explanations

- Choice A is correct. **(6.RP.A.3d)** Divide: $64 \div 12 = 5\frac{4}{12} = 5\frac{1}{3}$ feet.
- Choice B is correct. **(6.EE.C.9)** Height equals the growth rate of 3 cm per week times the number of weeks: $h = 3w$.
- Choice B is correct. **(6.G.A.1)** Using $140 = 20 \times h$, we get $h = 7$ cm.
- Choice B is correct. **(6.G.A.3)** The base is from (1, 1) to (5, 1). Length = $5 - 1 = 4$ units.
- Choice B is correct. **(6.EE.A.3)** Using less means: $3 - 2 = 1$ cup of flour.
- Choice D is correct. **(6.EE.A.2a)** “The product of 2 and a ” is $2a$. “12 less than $2a$ ” means subtract 12 from $2a$: $2a - 12$.
- Choice C is correct. **(6.EE.A.2c)** Substitute $p = 4$: $T = 12.5(4) + 8 = 50 + 8 = 58$ dollars.
- Choice D is correct. **(6.EE.B.6)** Multiply the number of tacos per day by 7 days: $7t$.
- Choice D is correct. **(6.EE.B.5)** To undo addition, we subtract. Adding gave the wrong answer. Subtracting 8 from both sides gives $x = 7$.
- Choice C is correct. **(6.EE.B.8)** $x > 3$ and $x < 9$ means x is between 3 and 9. Only 6 satisfies both: $6 > 3$ and $6 < 9$.
- Choice D is correct. **(6.G.A.1)** Base: $7 - 1 = 6$ units. Height: $8 - 1 = 7$ units. Area = $\frac{1}{2} \times 6 \times 7 = 21$ square units.
- Choice B is correct. **(6.SP.A.2)** Student 2’s question asks about many sixth graders (variability expected), requiring data collection. Students 1 and 3 ask about one person’s single preference, which have fixed answers.
- Choice C is correct. **(6.SP.A.2)** The bulk of the data is clustered on the right (75–85), with a tail extending left (60s). This is left-skewed. The one high score (95) doesn’t create skew because skew depends on the distribution of most values.
- Choice C is correct. **(6.SP.B.5c)** The median of 5 values is the 3rd value. For the median to be 12, the middle position must equal 12, so $x = 12$.
- Choice A is correct. **(6.SP.B.5c)** Range = max – min = $14 - 2 = 12$. IQR = $Q3 - Q1 = 10 - 4.5 = 5.5$.
- Choice A is correct. **(6.SP.B.4)** Add the number of people at each age: $5 + 8 + 3 = 16$ total people.
- Choice B is correct. **(6.RP.A.1)** Lower whisker length = $Q1 - \text{min} = 12 - 5 = 7$ units.
- Choice C is correct. **(6.NS.B.3)** Outcomes: HH, HT, TH, TT. Total outcomes = $2 \times 2 = 4$.
- The correct answer is 101. **(6.EE.B.8)** The least whole number greater than 100 is 101.
- Choice A is correct. **(6.NS.A.1)** 50% of 200 is $0.50 \times 200 = 100$ customers.
- The correct answer is B and C are correct. The absolute value of zero is 0, and opposites like 5 and -5 both have absolute value 5. **(6.NS.C.7c)** A is incorrect because $|0| = 0$, not positive. D is incorrect because the opposite of -5 is 5, which is positive. E is incorrect because absolute value is the distance from zero, not the opposite.
- Choice D is correct. **(6.RP.A.3)** With 50 continuous numerical values, a histogram groups them into intervals (e.g., 0–10, 11–20, etc.) to show the distribution pattern. A bar graph for each individual height would be too crowded; circle and pictographs don’t display numerical distributions.
- Choice C is correct. **(6.RP.A.3)** Corn is the 5-part amount. Since $30 \div 5 = 6$, each part is 6 rows, and beans are 3 parts: $3 \times 6 = 18$ rows.
- Choice A is correct. **(6.RP.A.3c)** $62.5\% = \frac{5}{8}$. So $\frac{5}{8} \times 240 = 150$ employees.
- Choice B is correct. **(6.RP.A.3)** Divide the actual length by the scale factor: $60 \div 12 = 5$ inches.
- Choice C is correct. **(6.NS.A.1)** Invert the divisor $\frac{2}{3}$ to get $\frac{3}{2}$, then multiply: $\frac{4}{5} \times \frac{3}{2} = \frac{12}{10} = \frac{6}{5}$.
- Choice B is correct. **(6.NS.C.5)** Starting at floor 0: up 6 brings us to floor 6. Down 10 from floor 6 brings us to floor $6 - 10 = -4$ (four floors below ground level).
- Choice C is correct. **(6.NS.C.7d)** $-6 < -4$ is the correct statement. All other comparisons are true.
- Choice C is correct. **(6.NS.C.8)** Distance on map: $|6 - 1| = 5$ units. Actual distance: $5 \times 200 = 1000$ meters.



Cheer Squad Final Pep Talk

Hi, Math Star!

◇ 8 practice tests! That's a LOT of work, and you did it ALL. I am cheering so loud right now. You earned every clap and every cheer! ◇

★ **Cheerleader truth:** confidence is built by showing up. You showed up 8 times. That's real confidence. It is not pretend! ★

Cheer Roll Call

- **Effort:** 100% YOU SHOWED UP!
- **Heart:** BIG!
- **Skills:** STRONG and growing!
- **Spirit:** BRIGHT!

Cheer tip: on test day, be your own cheerleader. Whisper to yourself: "I can do this. I practiced." Tiny cheers make a big difference!

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

Jay Daie

Your Math Cheerleader

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.



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
- ✓ Percents
- ✓ The Number System
- ✓ Statistics & Probability
- ✓ Expressions & Equations
- ✓ Data Analysis
- ✓ Geometry
- ✓ Measurement & Conversions
- ✓ Fractions & Decimals
- ✓ 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.



8 FULL-LENGTH
PRACTICE TESTS



2 ONLINE
PRACTICE TESTS



DETAILED ANSWER
EXPLANATIONS