

9

Montana MAST

GRADE

6

MATH

PRACTICE TESTS

Standards-Aligned Review
Mixed Practice & Answer Key



9 PRINTED TESTS

Realistic practice to build confidence and mastery



DETAILED ANSWER EXPLANATIONS

Learn with step-by-step solutions



FOCUSED & EFFECTIVE

Target key math skills with purposeful practice



BUILD CONFIDENCE

Strengthen problem solving and test-taking skills



9 PRINTED TESTS
+2 ONLINE TESTS

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

PRACTICE TODAY.
SUCCEED TOMORROW.



PRACTICE



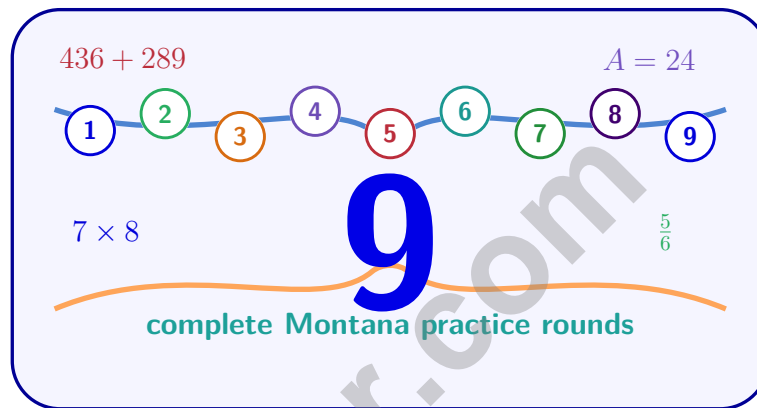
REVIEW



SUCCEED

9 Montana MAST Grade 6 Math Practice Tests

Standards-Aligned Big-Sky Math Stamina for Montana Aligned to Standards Through-Year



Nine complete 40-question Grade 6 practice rounds for MAST, built for big-sky math stamina 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, Montana Math Explorer!

Nine focused rounds using big-sky math stamina

This book gives you nine full Grade 6 practice tests for MAST. Each round uses wide valleys, mountain passes, and patient problem routes as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

Your Montana Practice Promise

Give the problem space: read, draw or list, solve, and check the scale of the answer.

Read

Plan

Check

How to Use This Book

A nine-session routine for big-sky math stamina

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.

Montana review rhythm: Work one round, mark the tough climbs, and practice those skills before the next ascent.



What Is Inside?

Nine MAST tests, 360 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 7–9	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. Big-sky math stamina 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) Alex saves \$100 from a \$500 income. Jordan saves \$75 from a \$400 income. Who saves a higher percentage of income?

A. Alex at 20%

C. Jordan at 18.75%

B. Alex at 25%

D. Jordan at 25%

2) What is the least common multiple (LCM) of 6 and 8?

A. 24

C. 14

B. 18

D. 48

3) Which of these situations would be represented by a negative integer?

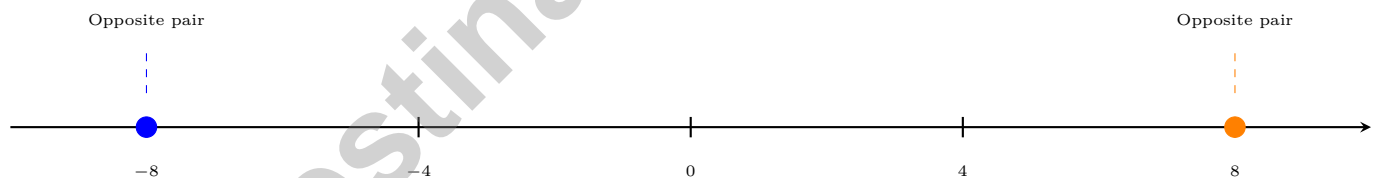
A. Climbing a mountain 200 meters

C. Swimming down 5 meters below the surface

B. A temperature increase of 10°

D. Earning 50 dollars

4)



Two numbers shown are opposites. What is $|-8| + |8|$?

A. 0

C. -16

B. 8

D. 16



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

- 6) What is $\frac{11}{12} \div \frac{1}{3}$?

A. $\frac{11}{36}$
 B. $\frac{4}{11}$

C. $2\frac{3}{4}$
 D. $\frac{12}{11}$

- 7) Divide 7,020 by 30.

A. 234
 B. 230

C. 240
 D. 244

- 8) A school is making care packages. They have 54 pencils and 72 erasers to distribute equally among students with no items left over. What is the greatest number of students who can receive a package?

A. 6
 B. 9

C. 18
 D. 27

- 9) Which number is located farthest from -1 on a number line?

A. -3.2
 B. -2.1

C. 0.8
 D. 1.5



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10) A student plotted a point and said it was at $(-4, -2)$ in Quadrant II. What mistake did the student make?

- A. The x -coordinate should be positive C. The coordinates are swapped
 B. Both coordinates should be negative for Quadrant II D. The point is actually in Quadrant III

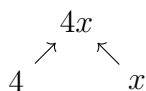
11) What is the sign of the product $(-1) \times (-1) \times (-1)$?

- A. Positive C. Zero
 B. Cannot be determined D. Negative

12) A mountain climber is at 3,200 meters. She climbs up 400 meters. What is her new elevation?

- A. 2,800 meters C. 3,800 meters
 B. 3,000 meters D. 3,600 meters

13) A train travels at 80 miles per hour for 2.5 hours. How far does the train travel?



14) Product

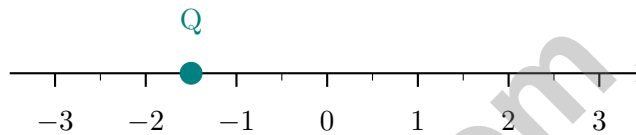
This expression tree represents which phrase?

- A. The sum of 4 and x C. The quotient of 4 and x
 B. The product of 4 and x D. 4 divided by x



- 6) A jar contains red and blue marbles. The ratio of red to blue is 3 : 5. If there are 18 red marbles, how many blue marbles are in the jar?

- 7) The number line below has tick marks at halves. Which fraction is located at point Q?

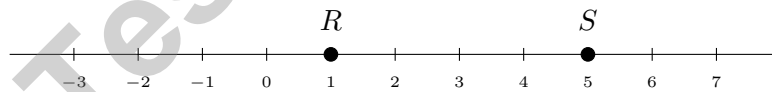


- A. -2
 C. -1
 B. $-\frac{1}{2}$
 D. $-1\frac{1}{2}$

- 8) Which point is on the negative y -axis?

- A. $(0, -7)$
 C. $(7, 0)$
 B. $(-7, 0)$
 D. $(0, 7)$

9)



If $R = 1$ and $S = 5$, which statement is true?

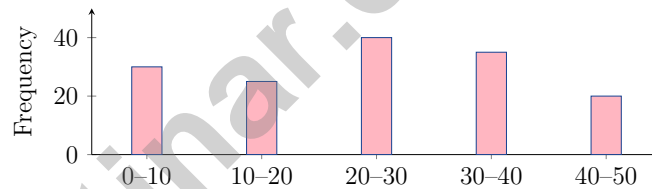
- A. $R > S$
 C. $R < S$
 B. $S - R = 3$
 D. $R + S = 5$



- 4) Calculate the mean of the following temperatures: 72°F , 68°F , 75°F , 71°F , 74°F .

- 5) Find the mean of 48, 50, 52, 49, 51, 50, 48. Round to the nearest tenth.

- 6) A histogram shows that the most common range is 20–30 with frequency 40. If the total number of data points is 150, what percentage of data falls in the 20–30 range?



- A. 20% C. 40%
- B. 26.7% D. 33.3%
- 7) In a box plot, what portion of the data is represented by the upper whisker only?
- A. The bottom 25% C. The top 25%
- B. The middle 50% D. All of the data



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& answers

Montana MAST Practice Test Answer Keys

How to use this Montana MAST 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 big-sky math stamina
3. rework the problem before reading the full explanation, using this reminder:
Give the problem space: read, draw or list, solve, and check the scale of the answer.

A calm Montana correction routine turns every missed item into useful practice. Work one round, mark the tough climbs, and practice those skills before the next ascent.



Montana Practice Test Answers and Explanations

Review the nine printed MAST tests with patient, strong, and ready for the next climb habits.

Practice Test 1 Answers and Explanations

- Choice A is correct.** (6.SP.4) Alex: $\frac{\$100}{\$500} = 0.20 = 20\%$. Jordan: $\frac{\$75}{\$400} = 0.1875 = 18.75\%$. Alex saves a higher percentage.
- Choice A is correct.** (6.NS.4) Multiples of 6: 6, 12, 18, 24, 30, ... Multiples of 8: 8, 16, 24, 32, ... The least common multiple is 24.
- Choice C is correct.** (6.NS.5) Negative integers represent values below zero, losses, or downward directions. Swimming down 5 meters below the surface is represented by -5 meters.
- Choice D is correct.** (6.SP.4) Opposites have equal absolute values. $|-8| = 8$ and $|8| = 8$, so $8 + 8 = 16$.
- The correct answer is 120.** (6.RP.1) 25% of 480 = $0.25 \times 480 = 120$ products were sold online.
- Choice C is correct.** (6.NS.1) $\frac{11}{12} \times 3 = \frac{33}{12} = \frac{11}{4} = 2\frac{3}{4}$.
- Choice A is correct.** (6.NS.2) $7,020 \div 30 = 234$. Verify: $30 \times 234 = 7,020$.
- Choice C is correct.** (6.NS.4) Find GCF(54, 72). Factors of 54: 1, 2, 3, 6, 9, 18, 27, 54. Factors of 72: 1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36, 72. GCF is 18. Each student gets 3 pencils and 4 erasers.
- Choice A is correct.** (6.SP.4) Distance from -1 : $|-3.2 - (-1)| = |-2.2| = 2.2$, which is greater than all other distances.
- Choice D is correct.** (6.NS.8) The point $(-4, -2)$ has both negative coordinates, placing it in Quadrant III (lower left), not Quadrant II. Quadrant II requires a negative x and positive y .
- Choice D is correct.** (6.NS.3) Three negatives (odd count): $(-1) \times (-1) = 1$ (positive), then $1 \times (-1) = -1$ (negative). An odd number of negatives yields a negative product.
- Choice D is correct.** (6.EE.3) Climbing up means adding elevation: $3,200 + 400 = 3,600$ meters.
- The correct answer is 200.** (6.RP.3) Distance = Rate \times Time = $80 \times 2.5 = 200$ miles.
- Choice B is correct.** (6.EE.3) The tree shows 4 and x combining via multiplication into $4x$. This represents the product of 4 and x .
- Choice B is correct.** (6.EE.6) Base cost is \$40. Each text costs \$0.10, so t texts cost $0.10t$. Total: $40 + 0.10t$.
- Choice D is correct.** (6.EE.8) A closed circle at 6 (includes 6) with arrow pointing left (toward smaller values) represents $x \leq 6$.
- Choice A is correct.** (6.G.1) Area of a parallelogram = base \times height = $6 \times 5 = 30$ square units.
- Choice C is correct.** (6.RP.1) Area = $\pi r^2 \approx \frac{22}{7} \times 7^2 = \frac{22}{7} \times 49 = 22 \times 7 = 154$ m².
- Choice B is correct.** (6.SP.3) This has a single fixed answer: 2. The other questions all involve variability and require collecting data from multiple sources or people.
- Choice C is correct.** (6.NS.3) Green sections = 3. Total sections = 8. Probability = $\frac{3}{8}$.
- The correct answer is Housing and Food are correctly calculated..** (6.EE.9) A: Housing is $40\% \times 2500 = \$1000$. Correct. B: Food is $24\% \times 2500 = \$600$. Correct. C: Utilities is $10\% \times 2500 = \$250$, not \$200. Incorrect. D: Transportation is $12\% \times 2500 = \$300$, not \$250. Incorrect. E: Savings is $14\% \times 2500 = \$350$, not \$400. Incorrect.
- Choice D is correct.** (6.NS.8) Length: $|5 - 1| = 4$ units. Width: $|4 - 1| = 3$ units. Area: $4 \times 3 = 12$ square units.
- The correct answer is 3.15.** (6.EE.9) Divide circumference by diameter: $12.6 \div 4 = 3.15$. So the ratio C/d is 3.15.
- Choice D is correct.** (6.EE.1) First, compute the exponent: $10^2 = 100$. Then divide: $100 \div 5 = 20$. Finally add: $20 + 3 = 23$.
- Choice D is correct.** (6.EE.3) Combine like terms: $(10 - 2 - 1)x = 7x$.
- Choice C is correct.** (6.EE.8) "Less than" directly translates to the $<$ symbol: $d < 5$.
- Choice D is correct.** (6.G.1) The height is defined as the perpendicular distance from the base to the opposite vertex, regardless of the triangle type.



Hi, Math Champion!

◇ Look what you did! 9 full practice tests. That's hundreds of math problems. You started as a learner. You are now a math athlete. ◇

★ **Champions know:** hard work pays off. You did the hard work. Your math skills are strong because you practiced. ★

Champion's Stats

- **Focus:** HIGH! You stay on task.
- **Speed:** STRONG! You move at the right pace.
- **Accuracy:** SHARP! You catch your own mistakes.
- **Mindset:** CHAMPION! You believe in yourself.

Champion tip: on test day, walk in proud. You trained for this. You are ready!

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

Jay Daie

Your Math Coach

PRACTICE MORE. ACHIEVE MORE.

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 any test.

With 9 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 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.



9 PRINTED
PRACTICE TESTS



2 ONLINE
PRACTICE TESTS



DETAILED ANSWER
EXPLANATIONS