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Montana MAST

GRADE 3

MATH PRACTICE TESTS

Standards-Aligned
Practice for Stronger
Math Skills and
Test Readiness



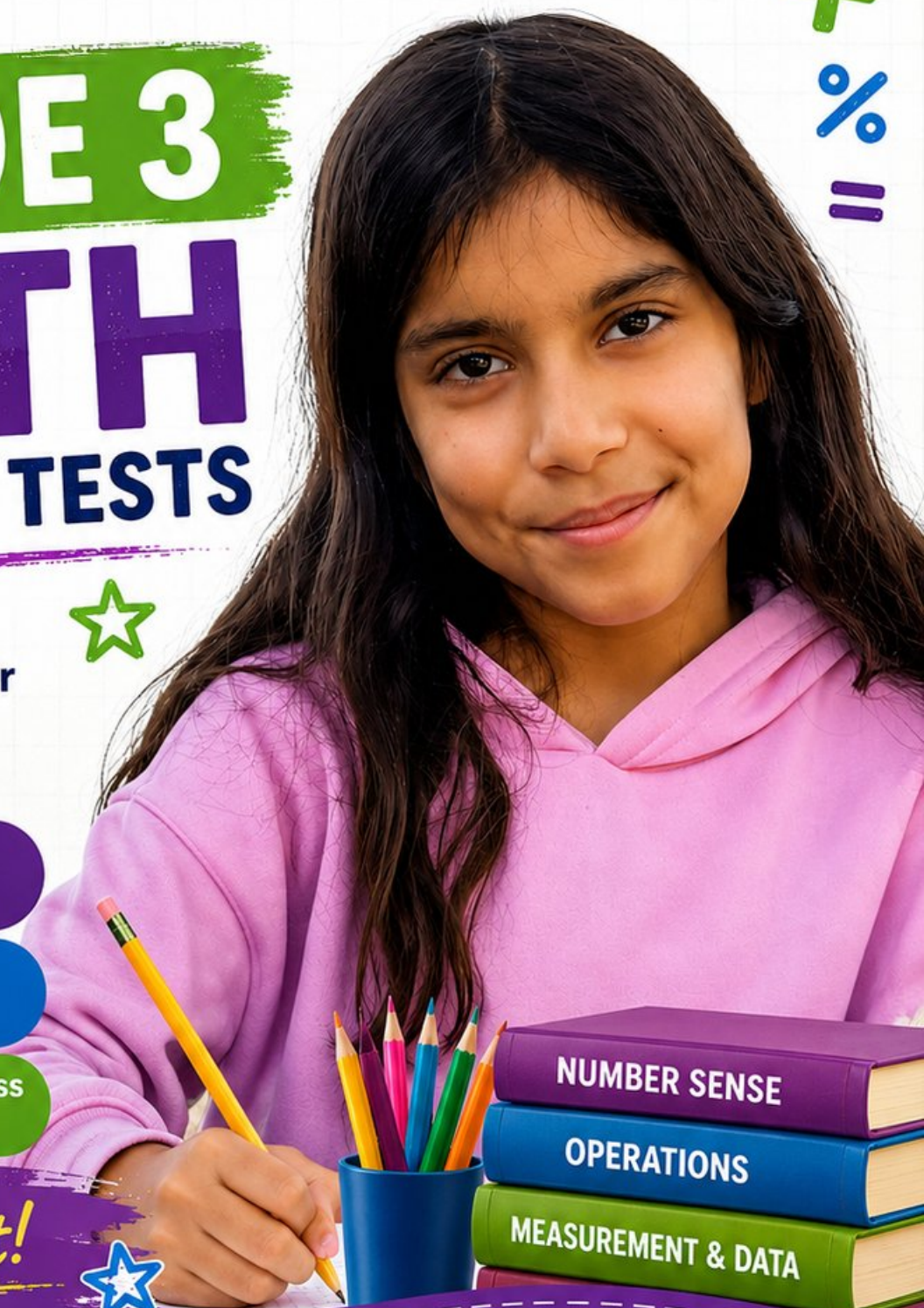
Build Confidence
with Targeted Practice



Strengthen Skills
in Key Math Concepts



Improve Test Readiness
with Realistic Practice



Be Ready.
Do Your Best!



3 Montana MAST Grade 3 Math Practice Tests

Standards-Aligned Practice for Stronger Math Skills and Test Readiness



Three 30-question trail tests packed with Grade 3 review, Montana MAST strategy tips, answer keys, and step-by-step explanations that turn every miss into the next move.

Jay Daie and Reza Nazari



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Welcome to the Montana Math Trail

Three tests, one trail, and a stronger Grade 3 thinker at the end



To the Grade 3 Trail Scout

This book is your practice trail for the Montana MAST. You will multiply and divide, read graphs, work with fractions, measure time, find area, and explain your thinking – one trail marker at a time.

Some problems will feel quick, like a clear stretch of wide open trail. Some will ask you to slow down, draw, count, or try again. That slow part is where strong math grows. Every page gives your brain another chance to spot, choose, and build.

Spot

Read carefully and find what the problem is really asking.

Sketch

Use numbers, arrays, number lines, or labels to make your thinking visible.

Signal

Check that your answer makes sense before you wave the next question on.

Trail promise: I will read like a tracker, sketch like a planner, and check like a careful scout. I do not have to be perfect to keep moving forward.

How to Use This Book

A four-step trail plan that turns practice into progress

Step 1: Pack Your Pack

Read the Quick Review first.
Wake up the Grade 3 ideas you will need before you set foot on the trail.

Step 2: Hit the Trail

Take one full test.
Thirty questions. Pencil sharp, work shown, calm pace – one marker at a time.

Step 3: Campfire Check

Check answers honestly.
Circle missed questions. Star any problem that felt confusing – those are tomorrow’s clues.

Step 4: Track Back

Fix a few mistakes.
Read the explanation, rework the problem, and carry that lesson up the next stretch of trail.

A Three-Week Trail Plan

Week 1	Hike Test 1. Map what feels strong and what needs a second look.
Week 2	Hike Test 2. Sharpen the habits: read slow, sketch the model, label every number.
Week 3	Hike Test 3. Bring everything – facts, models, checks, and calm focus.

Best trail habit: Do not only ask, “What did I score?” Ask, “What did I learn how to do better?”



Test Overview

What waits on the trail and what each practice test builds

Each practice test has 30 questions. Together they walk you through the kind of math thinking the Montana MAST asks Grade 3 students to use: read carefully, choose a strategy, show work, and check whether an answer makes sense.

Selected-Response Questions

Pick the best answer from the choices. Strong scouts estimate first, cross out answers that cannot be right, and reread the question before circling.

Open-Ended Questions

Write the answer and show the thinking. A clear response uses neat numbers, helpful labels, and a short model or explanation.

Grade 3 Ideas You Will Meet on the Trail

- multiplication, division, arrays, equal groups, and fact fluency
- rounding, adding, subtracting, and multiplying by multiples of 10
- fractions, number lines, equivalent fractions, and comparing fractions
- time, mass, liquid volume, picture graphs, bar graphs, and line plots
- area, perimeter, unit squares, rectangles, and shapes
- two-step word problems and explaining a solution path

What strong MAST work looks like: the scout reads the whole problem, picks a sensible strategy, writes numbers neatly, labels the answer, and checks that the answer truly fits the question.



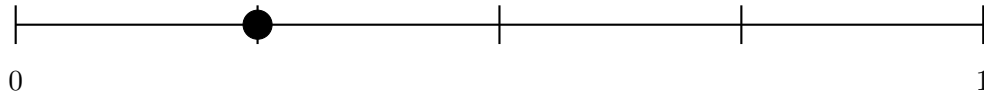
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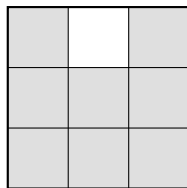
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- 1) On a number line from 0 to 1 split into 4 equal parts, the distance from 0 to $\frac{1}{4}$ is what part of the whole line?



- A. $\frac{1}{4}$ of the line
 B. $\frac{2}{4}$ of the line
 C. $\frac{3}{4}$ of the line
 D. The whole line
- 2) Which is true?
- A. $\frac{1}{8} > \frac{1}{4}$ (8 pieces, so more)
 B. $\frac{1}{8} < \frac{1}{4}$ (eighths are smaller pieces)
 C. $\frac{1}{8} = \frac{1}{4}$
 D. $\frac{1}{4} < \frac{1}{8}$ (quarter is less than an eighth)
- 3) A rectangle has perimeter 20 cm. If the length is 6 cm, what is the width?
- A. 4 cm
 B. 2 cm
 C. 8 cm
 D. 14 cm
- 4) What is $56 \div 7$?
- A. 7
 B. 10
 C. 9
 D. 8
- 5) Eli sees a checkerboard with a 3×3 pattern of unit squares. How many unit squares are on the board?



- A. 6 unit squares
 B. 8 unit squares
 C. 9 unit squares
 D. 12 unit squares



6) Which number sentence represents “How many groups of 3 are in 24?”

A. $24 \div 3$

C. $3 + 24$

B. $3 \div 24$

D. 3×24

7) A rectangle is 6 units long and 4 units wide. What is its area in square units?

A. 20 sq units

C. 26 sq units

B. 24 sq units

D. 30 sq units

8) Mia sees a number line from 0 to 3 divided into thirds. She marks $\frac{5}{3}$. Is this past the 1 on the number line?

 A. No, before 1 C. Right at 1 B. Way past 3 D. Yes, past 1

9) This shape is made of unit squares on a grid.



Count all the unit squares. What is the area?

A. 12 sq units

C. 32 sq units

B. 24 sq units

D. 36 sq units

10) A rectangular game board is 5 inches long and 4 inches wide. What is the area of the game board?



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Two Fountains

Fountain A



8000 mL

Fountain B



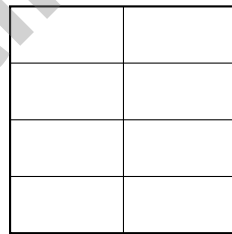
6000 mL

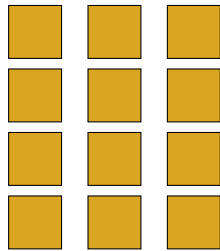
11)

A park has two water fountains. Fountain A holds 8000 mL and Fountain B holds 6000 mL. Which fountain holds less water?

 A. Fountain A C. Both hold the same B. Fountain B D. Cannot determine12) Eli has $\frac{8}{2}$ sheets of stickers. Each sheet is one whole. How many whole sheets does he have? A. 2 C. 8 B. 4 D. 6

13) A square is divided into 8 equal parts by drawing 1 vertical line and 3 horizontal lines through the middle. What fraction of the square is one part?

 A. $\frac{1}{4}$ C. $\frac{2}{8}$ B. $\frac{1}{8}$ D. $\frac{1}{2}$ 



1)

How many rectangles are shown?

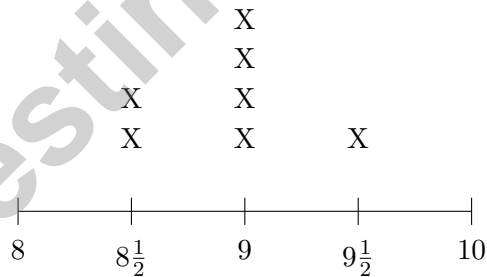
- A. 7 rectangles C. 4 rectangles
 B. 10 rectangles D. 12 rectangles

2) What number makes the equation true?

$$\square \times 5 = 35$$

- A. 9 C. 6
 B. 8 D. 7

3) A line plot displays insect body lengths in millimeters: $8, 8\frac{1}{2}, 9, 9\frac{1}{2}, 10$.



How many insects are longer than $8\frac{1}{2}$ millimeters?

- A. 3 C. 5
 B. 4 D. 6



4) Ben says that a circle divided into 6 equal parts has each part as $\frac{1}{5}$. Is this correct?

A. Yes, because $6 - 1 = 5$

C. Yes, because 5 is a unit fraction

B. No, each part is $\frac{1}{6}$

D. No, the circle must have 5 parts

5) Which is closer to 1: $\frac{1}{3}$ or $\frac{1}{2}$?

6) Sam starts his homework at 3 : 20 PM. He finishes at 3 : 55 PM. How many minutes did Sam spend on homework?

A. 30 minutes

C. 40 minutes

B. 35 minutes

D. 20 minutes

7) $9 \times 10 = 90$. What place-value name describes the digit 9 in the number 90?

A. The ones place

C. The hundreds place

B. The tens place

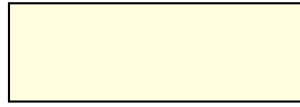
D. The zero place

8) A square has side length 6 meters. What is its perimeter?



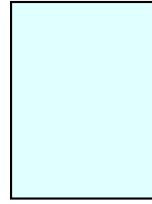
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- 1) Look at these two rectangles. Rectangle A is 6 units by 2 units. Rectangle B is 3 units by 4 units. Which has the greater area?



Rectangle A

6×2



Rectangle B

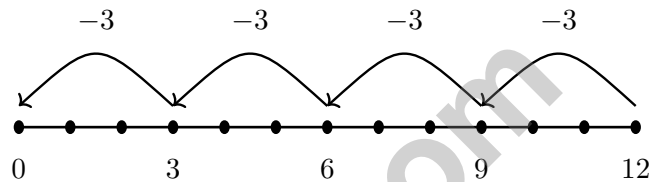
3×4

- A. Rectangle A
- B. Rectangle B
- C. Cannot determine
- D. They are equal
- 2) A T-shaped sign is divided into three rectangles with areas 8 sq m, 5 sq m, and 5 sq m. What is the total area of the sign?
- A. 13 sq m
- B. 40 sq m
- C. 18 sq m
- D. 200 sq m
- 3) What is 147 rounded to the nearest 10?
- A. 140
- B. 147
- C. 150
- D. 200
- 4) A garden is divided into 6 equal sections. What unit fraction represents one section?
- A. $\frac{6}{1}$
- B. $\frac{1}{6}$
- C. $\frac{5}{6}$
- D. $\frac{1}{7}$



- 5) Look at the line plot showing pencil lengths in inches: $5, 5\frac{1}{4}, 5\frac{1}{2}, 5\frac{3}{4}, 6$. There are 2 X's at 5 inches, 1 X at $5\frac{1}{4}$ inches, 3 X's at $5\frac{1}{2}$ inches, 2 X's at $5\frac{3}{4}$ inches, and 1 X at 6 inches. How many pencils are there in total?

- 6) Which division sentence is shown on the number line?



- A. $12 \div 3 = 4$
 C. $12 \div 6 = 2$
 B. $12 \div 4 = 3$
 D. $12 - 3 = 9$
- 7) A rectangular piece of paper is 9 inches long and 5 inches wide. How much area does the paper cover?
- A. 14 sq in
 C. 45 sq in
 B. 28 sq in
 D. 90 sq in



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Practice Test Answer Keys

How to use this section with a Grade 3 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 builds stronger math habits.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- Choice A is correct.** **(3.NF.2)** From 0 to $\frac{1}{4}$ is exactly one of the four equal parts, so it is $\frac{1}{4}$ of the whole line.
- Choice B is correct.** **(3.NF.3)** Same numerator (1): eighths divide the whole into 8 tiny pieces (each piece is small), fourths divide into 4 larger pieces. One eighth (1 tiny piece) < one fourth (1 larger piece). Rule: same numerator, larger denominator means smaller pieces.
- Choice A is correct.** **(3.MD.8)** $P = 2\ell + 2w$, so $20 = 2(6) + 2w = 12 + 2w$. Thus $2w = 8$ and $w = 4$ cm.
- Choice D is correct.** **(3.OA.7)** $56 \div 7 = 8$ because $8 \times 7 = 56$. Seven groups of 8 equals 56.
- Choice C is correct.** **(3.MD.6)** A 3×3 checkerboard contains $3 \times 3 = 9$ unit squares.
- Choice A is correct.** **(3.OA.2)** Measurement division: Divide 24 by 3 to find how many groups of 3 fit in 24. The answer is 8 groups.
- Choice B is correct.** **(3.MD.5)** Cover it with rows of unit squares: $6 \times 4 = 24$ square units.
- Choice D is correct.** **(3.NF.2)** $\frac{5}{3} = 1\frac{2}{3} \approx 1.67$. This is past 1.
- Choice C is correct.** **(3.MD.6)** $8 \times 4 = 32$ unit squares.
- The correct answer is 20 square inches.** **(3.MD.8)** Area = length \times width, so $5 \times 4 = 20$ square inches.
- Choice B is correct.** **(3.MD.2)** 8000 mL is more than 6000 mL. So Fountain B holds less.
- Choice B is correct.** **(3.G.2)** $\frac{8}{2}$ means 8 halves. 2 halves make 1 whole, so $8 \div 2 = 4$ wholes.
- Choice B is correct.** **(3.G.2)** When divided into 8 equal parts, each part is $\frac{1}{8}$ of the whole square.
- Choice D is correct.** **(3.OA.9)** Add 10 each time: $40 + 10 = 50$. This is skip counting by 10.
- Choices A and C are correct.** **(3.OA.5)** A shows $5 \times (3 + 2) = 5 \times 3 + 5 \times 2$, which is the distributive property. C shows $3 \times (2 + 4) = 3 \times 2 + 3 \times 4$, also distributive. B is commutative, D is associative, and E is just a fact.
- The correct answer is 8.** **(3.OA.3)** $48 \div 6 = 8$.
- Choice A is correct.** **(3.NBT.2)** Ones: $0 - 7$ requires regrouping, so $10 - 7 = 3$. Tens: $1 - 8$ requires regrouping, so $11 - 8 = 3$. Hundreds: $5 - 3 = 2$. Answer: 233.
- Choice B is correct.** **(3.MD.7)** Area = $7 \times 2 = 14$ square inches.
- Choice B is correct.** **(3.MD.3)** Piano: $6 \times 2 = 12$. Guitar: $4 \times 2 = 8$. More: $12 - 8 = 4$.
- Choice D is correct.** **(3.OA.8)** Step 1: Find cars per section: $8 \times 3 = 24$ cars. Step 2: Find total: $4 \times 24 = 96$ cars.
- Choice A is correct.** **(3.NF.1)** Six equal parts means each is $\frac{1}{6}$.
- Choice C is correct.** **(3.NF.3)** $\frac{4}{8}$ and $\frac{1}{2}$ mark the same location on the number line.
- Choice B is correct.** **(3.NF.3)** Multiply numerator and denominator by 2: $\frac{1 \times 2}{3 \times 2} = \frac{2}{6}$.
- Choice B is correct.** **(3.MD.5)** Find each rectangle: top is $5 \times 3 = 15$ sq m; bottom is $4 \times 2 = 8$ sq m. Total: $15 + 8 = 23$ sq m.
- Choice C is correct.** **(3.NBT.3)** The array shows 6 rows with 20 items each: $6 \times 20 = 120$ items.
- The correct answer is 12 : 00.** **(3.MD.1)** $10 : 45 + 1$ hour is $11 : 45$, plus 15 minutes is $12 : 00$.
- Choice C is correct.** **(3.MD.8)** Wide rectangle: $8 \times 3 = 24$ square units.
- Choice C is correct.** **(3.NF.2)** $\frac{3}{4} = \frac{6}{8}$ because both represent three-fourths of the rectangle.
- Choice A is correct.** **(3.MD.7)** $2 \times (8 + 4) = 2 \times 12 = 24$ or $(2 \times 8) + (2 \times 4) = 16 + 8 = 24$.
- Choice D is correct.** **(3.OA.6)** $40 \div 5 = \square$ means $\square \times 5 = 40$. Since $8 \times 5 = 40$, the answer is 8.

Practice Test 2 Answers and Explanations

- Choice D is correct.** **(3.OA.1)** The picture shows 3 columns with 4 rectangles in each column. So $3 \times 4 = 12$ rectangles.
- Choice D is correct.** **(3.OA.4)** Use the inverse: $35 \div 5 = 7$. Check: $7 \times 5 = 35$.



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Hi, Hero!

◇ Once there was a Grade 3 student who took 3 practice tests. At first, the math was tricky. But this student kept showing up, kept trying, and kept learning. By the end, the student became a math hero. That hero is you! ◇

★ **Storytellers know:** every story has a hard middle. The hard middle is where heroes grow. You lived your hard middle. Your story ends with confidence! ★

Your Hero Toolkit

- **Brave Heart:** You try hard problems.
- **Sharp Mind:** You think carefully before you act.
- **Steady Hand:** You write neatly and check.
- **Kind Spirit:** You are patient with yourself.

Storyteller tip: on test day, remember the hero you became. The chapters before today made you stronger. Now write your best chapter!

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

Jay Daie

Your Math Storyteller

3 GRADE 3 MATH PRACTICE TESTS

Practice Today. *Succeed* Tomorrow!



Give your child the tools to build strong math skills and test confidence!

This book includes 3 full-length Grade 3 Math practice tests that mirror real test formats and cover all key math standards. With a wide range of question types and real-world problems, students will gain the practice and confidence they need to do their best!

What's Inside?



Standards-Aligned Practice

Questions designed to cover essential Grade 3 math standards.



Variety of Question Types

Multiple-choice, short answer, and more to build well-rounded skills.



Real-World Applications

Engaging problems that connect math to everyday life.



Step-by-Step Progress

Track improvement and build confidence with every test.



Build Skills & Boost Confidence

Strengthen understanding and feel prepared for test day.

COVERS ALL ESSENTIAL TOPICS

- ✓ Whole Numbers & Operations
- ✓ Fractions & Decimals
- ✓ Algebraic Thinking
- ✓ Geometry
- ✓ Measurement & Data
- ✓ Number Patterns
- ✓ Word Problems
- ✓ Ratio & Proportion
- ✓ Perimeter, Area & Volume
- ✓ Graphing & Data Analysis
- ✓ And More!



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PRACTICE. PREPARE. SUCCEED.