

# 6

# Montana MAST

## GRADE 3

# MATH

## PRACTICE TESTS

Standards-Aligned Practice with  
Review, Answer Keys, and Explanations



6 Full-Length  
Practice Tests



Detailed Answer Keys  
and Explanations



Master Skills.  
Boost Scores.  
Succeed!

# 6 Montana MAST Grade 3 Math Practice Tests

*Standards-Aligned Review with Mixed Practice and Answer Key*



Six complete 30-question practice labs for Grade 3 math: operations, fractions, measurement, data, area, shapes, answer keys, and clear explanations for every item.

**Jay Daie and Reza Nazari**



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# Welcome to the Six Skill Labs

Six full tests, six focused resets, and a stronger Grade 3 problem solver



Notice the pattern. Choose a tool. Explain the answer.

## To the Grade 3 Math Builder

This book gives you six practice labs for the Montana MAST. Each lab is a complete 30-question test, so students can practice accuracy, stamina, and clear mathematical thinking.

Montana brings big-sky ranges, ranch roads, glacier views, and open plains. Strong math uses that same care: read the task, select a strategy, build the solution, and use space on the page to show clear thinking.

### Decode

Find the question, the units, and the useful numbers.

### Design

Use an equation, array, number line, graph, or sketch.

### Confirm

Make sure the answer matches the question.

**Six-lab promise:** I will work with patience, show useful thinking, and treat corrections as part of learning.

# How to Use This Book

A six-lab routine for steady Grade 3 growth

Use one practice lab at a time. The goal is not only to finish more pages. The goal is to finish, review, repair, and bring a smarter habit to the next test. For Montana students, each lab is a short route through big-sky ranges, ranch roads, glacier views, and open plains: steady, alert, and ready for the next clue.

1. **Warm up.** Skim the reference materials and remind yourself of common tools.
2. **Take one test.** Work steadily and mark problems that need a second look.
3. **Check answers.** Use the compact answer keys first.
4. **Read explanations.** Study missed items and any lucky guesses.
5. **Redo two problems.** Rewrite the work cleanly without peeking.
6. **Set the next lab goal.** Choose one skill or habit to improve.

**Best review habit:** A mistake is most useful when you can say why it happened and what you will do differently next time.



# What Is Inside?

Six complete practice tests with review support

| Part                | What You Do  | Why It Helps   |
|---------------------|--|--|
| Practice Tests 1–6  | Solve six different 30-question tests.                 | Build stamina and see Grade 3 skills mixed together. |
| Answer Keys         | Check each answer in compact boxes.                    | Find mistakes quickly without losing your place.     |
| Explanations        | Read why each answer works.                            | Turn missed items into a clear next step.            |
| Standards Reference | See how Montana Grade 3 standards connect to practice. | Understand the skills behind the questions.          |

Each test has 26 multiple-choice questions, 1 select-all question, and 3 open-ended questions. This gives students practice with quick decisions, careful reading, and short written math answers for the Montana MAST path.

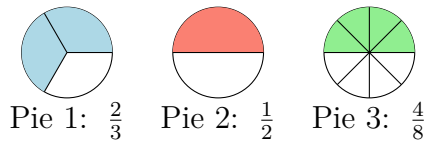


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1) Which two pie charts show equivalent fractions?



- A. Pies 1 and 2                       C. Pies 1 and 3  
 B. Pies 2 and 3                       D. All three pies

2) Round 662 to the nearest 10.

- A. 660                                       C. 665  
 B. 662                                       D. 670

3) A picture graph shows colored beads. Red: 5 symbols (scale: 4). Blue: 6 symbols (scale: 4). Green: 4 symbols (scale: 4). What is the total number of beads?

- A. 15     C. 60  
 B. 48     D. 64

4) Complete the fact family for 5, 9, and 45:

| Multiplication    | Division              |
|-------------------|-----------------------|
| $5 \times 9 = 45$ | $45 \div 5 = \square$ |
| $9 \times 5 = 45$ | $45 \div 9 = \square$ |

What are the missing numbers?

- A. 45 and 45                               C. 5 and 9  
 B. 4 and 4                                    D. 9 and 5



5) A square has how many right angles?



6) What number makes the equation true?

$$63 \div \square = 7$$

A. 7

C. 8

B. 10

D. 9

7) Below is a grouped representation showing 3 groups of items with 5 items in each group drawn as stars.



How many stars are there in total?

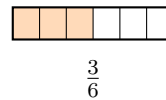
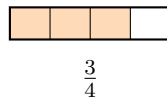
A. 8

C. 10

B. 12

D. 15

8)



Using the bars, which is larger?

A.  $\frac{3}{4}$  (shaded area bigger)

C. They are equal

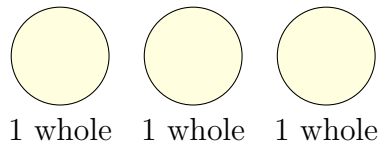
B.  $\frac{3}{6}$  (has 6 pieces)

D. Cannot tell from the bars



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9) Jon has 3 whole pizzas. How can we write this as a fraction?



- A.  $\frac{1}{3}$                        C.  $\frac{3}{3}$   
 B.  $\frac{3}{1}$                        D.  $\frac{1}{1}$

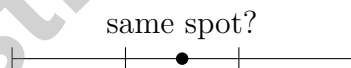
10) Mia and one friend share 16 cookies equally. How many cookies does each person get?

- A. 6                               C. 14  
 B. 18                             D. 8

11) Which sentence is true?

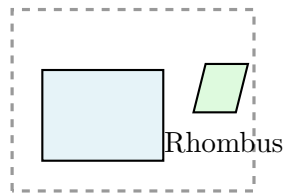
- A. A  $5 \times 2$  rectangle has area 14       C. A  $4 \times 2$  rectangle has area 8  
 B. A  $3 \times 3$  rectangle has area 6       D. A  $6 \times 6$  rectangle has area 12

12) Which number line shows  $\frac{3}{6}$  and  $\frac{1}{2}$  at the same position?



- A. They cannot both be shown.       C.  $\frac{3}{6}$  is to the left.  
 B.  $\frac{3}{6}$  is to the right.                   D. They are at the same spot.





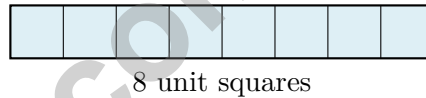
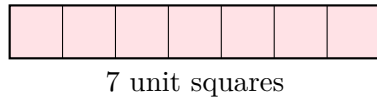
Rectangle

1)

Two shapes are shown. Which property do they share?

- |  |   |
|--|---|
| <input type="checkbox"/> A. Both have right angles | <input type="checkbox"/> C. Both have equal sides |
| <input type="checkbox"/> B. Both have 4 sides      | <input type="checkbox"/> D. Both are squares      |

2) Which area is the greatest?



- |  |  |
|--|--|
| <input type="checkbox"/> A. A rectangle made of 7 unit squares | <input type="checkbox"/> C. A rectangle made of 6 unit squares |
| <input type="checkbox"/> B. A rectangle made of 8 unit squares | <input type="checkbox"/> D. A square made of 4 unit squares    |

3) Eli shares 24 pencils equally among 3 friends. How many pencils does each friend get?

- |                               |                               |
|-------------------------------|-------------------------------|
| <input type="checkbox"/> A. 8 | <input type="checkbox"/> C. 6 |
| <input type="checkbox"/> B. 7 | <input type="checkbox"/> D. 4 |

4) A rectangular garden can be tiled into two smaller rectangles, each with width 3. One rectangle is 3 by 10 and the other is 3 by 6. What is the total area?

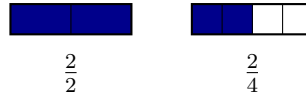
- |  |  |
|--|--|
| <input type="checkbox"/> A. $3 \times (10 + 6) = 3 \times 16 = 48$ | <input type="checkbox"/> C. $(10 + 6) = 16$                        |
| <input type="checkbox"/> B. $3 + 10 + 6 = 19$                      | <input type="checkbox"/> D. $3 \times 10 \times 3 \times 6 = 5400$ |



5) Which fraction is equivalent to  $\frac{1}{3}$ ?

- A.  $\frac{1}{6}$   
 B.  $\frac{2}{6}$

- C.  $\frac{3}{6}$   
 D.  $\frac{1}{2}$



6)

Which symbol makes this true?  $\frac{2}{4}$  \_\_\_\_\_  $\frac{2}{2}$

- A. <  
 B. >

- C. =  
 D.  $\neq$

7) A sack of potatoes weighs 10 kg. A basket of carrots weighs 3000 g. Which weighs more?

- A. Potatoes  
 B. Carrots

- C. They weigh the same  
 D. Cannot determine

8) Sam divides a number line from 0 to 1 into 4 equal parts. How many parts are between 0 and the second tick mark?

- A. 1  
 B. 2

- C. 3  
 D. 4

9) Look at products of 4: 4, 8, 12, 16, 20.

Why are all these numbers even?

- A. Because 4 is even, and every multiple of an even number is even  
 B. Because they go up by 4 each time

- C. Because 4 is odd  
 D. Because all products are less than 25



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## Addition

1)

| Hundreds | Tens | Ones |
|----------|------|------|
| 4        | 7    | 8    |
| +        | +    | +    |
| 2        | 5    | 4    |

Using the place-value chart, what is  $478 + 254$ ?

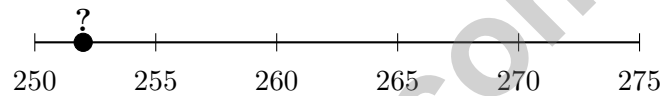
 A. 722

 C. 832

 B. 742

 D. 732

2)



Look at the number line. The number marked ? is closest to which value when rounded to the nearest 10?

 A. 250

 C. 260

 B. 265

 D. 270

3) Use this strategy to find  $7 \times 9$ : Think  $7 \times 10 = 70$ , then subtract one group of 7. What is  $7 \times 9$ ?

 A. 59

 C. 63

 B. 62

 D. 65


- 4) Lily has a sandwich shaped like a rectangle. She cuts it into 4 equal pieces to share with friends. What fraction is each piece?



- A.  $\frac{1}{3}$                        C.  $\frac{2}{4}$   
 B.  $\frac{1}{4}$                        D.  $\frac{4}{4}$
- 5) Noah uses  $3 \times (4+5)$ . Which shows this same problem using the distributive property?
- A.  $(3 \times 4) + (3 \times 5)$                        C.  $(3+4) \times 5$   
 B.  $3 + 4 + 5$                                        D.  $3 + (4+5)$
- 6) A composite figure is divided into two parts. Part A is 8 units by 4 units. Part B is 6 units by 2 units. What is the total area?
- A. 44 sq units                       C. 32 sq units  
 B. 12 sq units                       D. 384 sq units
- 7) A bar graph shows students' votes. Soccer: 4 units (scale: 5). Basketball: 3 units (scale: 5). Kickball: 2 units (scale: 5). How many students voted in total?



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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 turns every missed item into useful practice.**

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## Practice Test Answers and Explanations

### Practice Test 1 Answers and Explanations

- 1) **Choice B is correct.** **(3.NF.3)** Pie 2 shows  $\frac{1}{2}$  (half shaded) and Pie 3 shows  $\frac{4}{8}$  (half shaded). These are equivalent because  $\frac{1 \times 4}{2 \times 4} = \frac{4}{8}$ .
- 2) **Choice A is correct.** **(3.NBT.1)** The ones digit is 2. Since  $2 < 5$ , round down: 662 rounds to 660.
- 3) **Choice C is correct.** **(3.MD.3)** Red:  $5 \times 4 = 20$ . Blue:  $6 \times 4 = 24$ . Green:  $4 \times 4 = 16$ . Total:  $20 + 24 + 16 = 60$ .
- 4) **Choice D is correct.** **(3.OA.6)** In a fact family,  $45 \div 5 = 9$  and  $45 \div 9 = 5$ . Division reverses multiplication.
- 5) **The correct answer is 4 right angles.** **(3.G.1)** A square has 4 right angles.
- 6) **Choice D is correct.** **(3.OA.4)** Multiply:  $7 \times 9 = 63$ , so the divisor is 9. Check:  $63 \div 9 = 7$ .
- 7) **Choice D is correct.** **(3.OA.3)** Multiply: 3 groups  $\times$  5 stars per group = 15 stars.
- 8) **Choice A is correct.** **(3.NF.3)** Same numerator (3): three fourths covers more of its bar than three sixths covers of its bar. Fourths are bigger pieces than sixths.
- 9) **Choice B is correct.** **(3.G.2)** Three whole pizzas =  $\frac{3}{1}$  (three wholes, one part each).
- 10) **Choice D is correct.** **(3.OA.2)** There are 2 people total.  $16 \div 2 = 8$ , so each person gets 8 cookies.
- 11) **Choice C is correct.** **(3.MD.7)**  $4 \times 2 = 8$  is correct. Choice A:  $5 \times 2 = 10$ . Choice B:  $3 \times 3 = 9$ . Choice D:  $6 \times 6 = 36$ .
- 12) **Choice D is correct.** **(3.NF.2)**  $\frac{3}{6} = \frac{1}{2}$ . Both mark the halfway point on a number line.
- 13) **Choice C is correct.** **(3.MD.6)**  $6 \times 5 = 30$  unit squares.
- 14) **Choice C is correct.** **(3.NF.1)** Two parts split in half each gives  $2 \times 2 = 4$  parts.
- 15) **Choices A and C are correct.** **(3.NF.2)**  $\frac{4}{4}$  and 1 both refer to one whole unit. They mark the same point. Distractor  $\frac{2}{4} = \frac{1}{2}$  is different. Distractor  $\frac{1}{2}$  is different from 1. Distractor  $\frac{3}{4}$  is between  $\frac{1}{2}$  and 1.
- 16) **The correct answer is 24.** **(3.OA.5)** By the commutative property,  $4 \times 6 = 6 \times 4 = 24$ .
- 17) **Choice A is correct.** **(3.NBT.2)** Add:  $187 + 246 = 433$ . Ones:  $7 + 6 = 13$  (write 3, carry 1). Tens:  $8 + 4 + 1 = 13$  (write 3, carry 1). Hundreds:  $1 + 2 + 1 = 4$ .
- 18) **Choice B is correct.** **(3.NF.1)** Sam eats  $\frac{1}{4}$  and Mia eats  $\frac{1}{4}$ . Together:  $\frac{1}{4} + \frac{1}{4} = \frac{2}{4}$  is eaten, so  $\frac{2}{4}$  remains.
- 19) **Choice C is correct.** **(3.MD.5)** Vertical part:  $3 \times 8 = 24$  sq ft. Horizontal part:  $5 \times 2 = 10$  sq ft. Total:  $24 + 10 = 34$  sq ft.
- 20) **The correct answer is  $70\frac{1}{2}$ .** **(3.MD.4)** The value with the most X marks is  $70\frac{1}{2}$ , with 3 X's.
- 21) **Choice A is correct.** **(3.OA.9)**  $8 \rightarrow 16$  is +8;  $16 \rightarrow 24$  is +8;  $24 \rightarrow 32$  is +8. The row for 8 shows multiples of 8:  $8 \times 1 = 8$ ,  $8 \times 2 = 16$ ,  $8 \times 3 = 24$ , etc.
- 22) **Choice B is correct.** **(3.G.2)** If one part is  $\frac{1}{2}$ , the rectangle is divided into 2 equal parts.
- 23) **Choice C is correct.** **(3.MD.1)**  $4 : 07 + 18 \text{ min} = 4 : 25 \text{ PM}$ .
- 24) **Choice B is correct.** **(3.NF.2)** Sam is at tick 1 and Maya is at tick 3. The distance between them is  $3 - 1 = 2$  parts.
- 25) **Choice B is correct.** **(3.NF.3)**  $\frac{1}{2}$  and  $\frac{2}{4}$  represent the same amount. Both show half of a whole.
- 26) **Choice B is correct.** **(3.MD.8)** Area = width  $\times$  height =  $7 \times 8 = 56$  square inches.
- 27) **Choice C is correct.** **(3.OA.7)**  $80 \div 8 = 10$  because  $10 \times 8 = 80$ .
- 28) **Choice B is correct.** **(3.MD.7)** The rectangle has width 5 and combined height  $2 + 2 = 4$ , so  $5 \times (2 + 2) = 20$ .
- 29) **Choice B is correct.** **(3.MD.2)** Divide:  $600 \div 3 = 200$  g per bag.
- 30) **Choice D is correct.** **(3.OA.1)** The picture shows 4 columns with 2 circles in each column. This is 4 groups of 2, so  $4 \times 2 = 8$ .

### Practice Test 2 Answers and Explanations



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A Quiet Word From Your Mentor

Hi, Thoughtful Student,

◇ I want to take a moment to tell you something true: you did excellent work. 6 practice tests is a real promise that you kept to yourself. That matters. ◇

★ **Mentors notice:** growth is quiet. It doesn't shout. But it shows up in how you handle a problem today vs how you did weeks ago. That growth is your real prize. ★

**What I See in You**

- **Hard Work:** You don't quit when problems are tough.
- **Curiosity:** You wonder why and how.
- **Kindness:** You are patient with yourself.
- **Brave Heart:** You try things that scare you.

**Mentor's note:** on test day, treat yourself like you would a friend. Be kind. Be patient. Be encouraging. The skills are inside you!

If you want to share something or ask a question, please email me at [jay@testinar.com](mailto:jay@testinar.com).

**Jay Daie**

Your Math Mentor

# BUILD CONFIDENCE. MASTER MATH. ACHIEVE SUCCESS!



This **Grade 3 Math Practice Tests** book is the perfect companion for students who want to strengthen their math skills and excel in school. With **6** full-length practice tests designed to reflect real test formats, students get the practice they need to understand key concepts, build problem-solving skills, and tackle any challenge with confidence.

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