

FULL-LENGTH

8

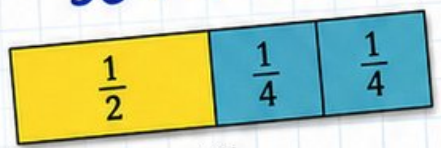
# Montana MAST

## GRADE 5

# MATH PRACTICE TESTS

Mixed Practice Questions with Answer Key  
for Students, Parents, and Teachers

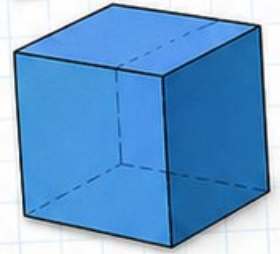
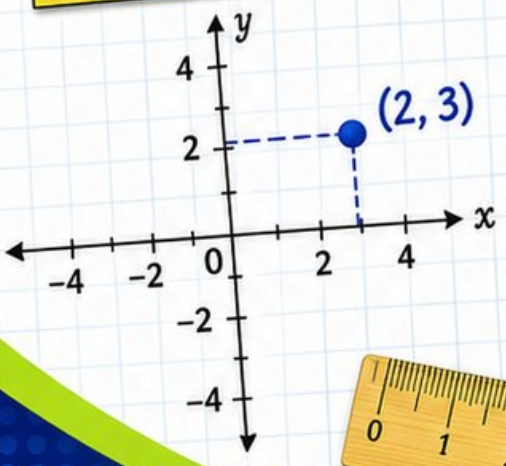
$$36 \div 4 = 9$$



$2.4 \times 7 = 16.8$

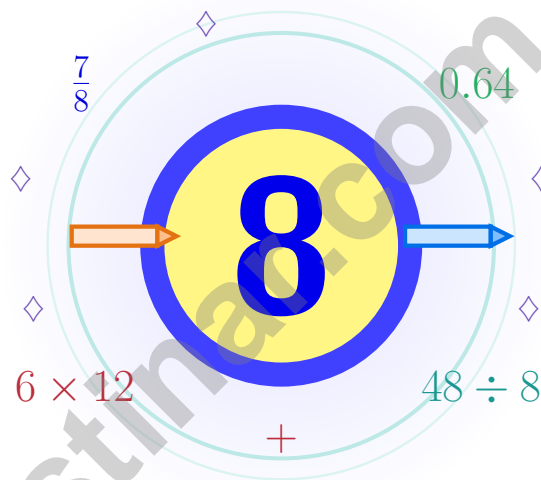
$7 \times (12 - 5) = 49$

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



# 8 Montana MAST Grade 5 Math Practice Tests

*A eight-step expedition for curious Grade 5 thinkers*



Eight full tests, a focused quick review, and helpful support that turns Grade 5 practice in The Treasure State into steady, confident growth from page one to the final check.

**Jay Daie and Reza Nazari**



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# Strap In, Montana – Eight-Test Journey

Eight full tests and a coach's voice on every page

## Montana Mathematicians, Read This First

This practice book is your steady companion for eight tests, not a place to be perfect. Math is like the Montana sky: wide, open, and full of room for clear, careful thinking.

Use these eight tests like stepping-stones. Take one test at a time, check your answers honestly, and notice which skills need more attention. Small improvements add up across seven rounds.

### Notice

Notice the numbers, units, and any tricky words.

### Sketch

Sketch a picture, table, or quick number line.

### Confirm

Confirm your answer with an estimate or check.

**A strong habit for Montana mathematicians:** read carefully, estimate when it helps, show your steps, and keep going even when a question feels tricky. That is how steady math confidence is built.

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# From Cover to Final Test

A simple routine that turns practice into progress

## Step 1: Plan

**Plan a quiet hour for one full test.**  
Spend a few minutes waking up your memory before the test begins.

## Step 2: Practice

**Take the test with calm focus.**  
Work in a calm spot and focus on careful thinking before speed.

## Step 3: Inspect

**Inspect every answer like a careful builder.**  
Circle missed questions and notice which topics keep showing up.

## Step 4: Adjust

**Adjust what needs adjusting for the next test.**  
Read the explanation, repair the work, and bring that lesson into the next test.



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## Grade 5 Mathematics Reference Materials

### PERIMETER AND AREA

Perimeter of Rectangle  $P = 2l + 2w$  or  $P = 2(l + w)$

Area of Rectangle  $A = l \times w$

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Volume of Rectangular Prism  $V = l \times w \times h$

### LENGTH

#### Customary

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### CAPACITY

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1 cup (c) = 8 fluid ounces (fl oz)

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1) Which shows the correct quotient and remainder?

Choice	Division	Quotient	Remainder
A	$850 \div 25$	34	1
B	$963 \div 18$	53	9
C	$741 \div 39$	18	0
D	$1,024 \div 32$	32	1

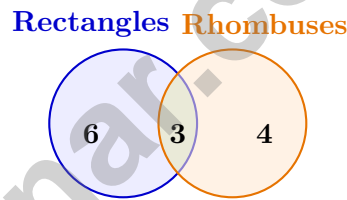
A. A

C. C

B. B

D. D

2) A Venn diagram has a circle for rectangles overlapping a circle for rhombuses. There are 6 rectangles only, 4 rhombuses only, and 3 squares in the intersection. How many figures are rectangles?



Record your answer in the space provided.

3) Estimate:  $\frac{5}{12} + \frac{9}{17}$ .

A. Close to 0

C. Close to 1

B. Close to  $\frac{1}{2}$

D. Close to  $\frac{3}{2}$

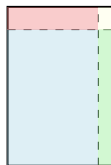


4) Which triangle cannot exist?

- A. Acute isosceles  
 B. Right scalene

- C. Acute equilateral  
 D. Obtuse equilateral

5) Which shows the area of a rectangle with length  $2\frac{1}{3}$  feet and width  $3\frac{1}{2}$  feet?



- A.  $8\frac{1}{6}$  square feet  
 B.  $8\frac{1}{3}$

- C.  $5\frac{5}{6}$   
 D. 9

6) A restaurant has 8 tables with 4 legs each. It also has 10 chairs, but 2 chairs are moved away. Evaluate:  $8 \times 4 + (10 - 2)$

- A. 40  
 B. 42

- C. 48  
 D. 50

7) A road is 3.25 kilometers long. How many meters is that?

- A. 325 m  
 B. 3,250 m

- C. 32,500 m  
 D. 325,000 m

8) Pattern A: 1, 2, 3, 4, ... Pattern B: 5, 10, 15, 20, ... Which ordered pair represents the 4th terms of Patterns A and B?

*Record your answer in the space provided.*



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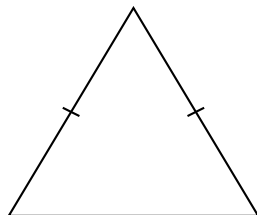
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- 1) Two sides of the triangle below are marked with a single tick mark to show they are the same length. What type of triangle is it?



- A. Scalene                       C. Equilateral  
 B. Right                          D. Isosceles
- 2) A hiker climbs  $\frac{3}{4}$  mile uphill, rests, then climbs  $\frac{2}{8}$  mile more. Total distance?
- A.  $\frac{1}{2}$  mile                       C. 1 mile  
 B.  $\frac{5}{8}$  mile                       D.  $\frac{7}{8}$  mile
- 3) Measurement addition: A path is 2.15 m long, then extends 3.46 m more. What is the total path length?
- A. 5.51 m                       C. 5.71 m  
 B. 5.61 m                       D. 6.61 m
- 4) A recipe calls for 6.75 cups of flour. You have already mixed 2.43 cups. How many more cups do you need?
- A. 4.32 cups                       C. 4.12 cups  
 B. 4.42 cups                       D. 3.92 cups
- 5) A rectangular prism has dimensions 15 cm, 12 cm, and 10 cm. It is split into two equal non-overlapping parts. What is the original volume, and what is the volume of each part?
- A. Original:  $1,800 \text{ cm}^3$ ; each part:  $900 \text{ cm}^3$      C. Original:  $1,800 \text{ cm}^3$ ; each part:  $1,800 \text{ cm}^3$   
 B. Original:  $900 \text{ cm}^3$ ; each part:  $450 \text{ cm}^3$      D. Original:  $37 \text{ cm}^3$ ; each part:  $18.5 \text{ cm}^3$



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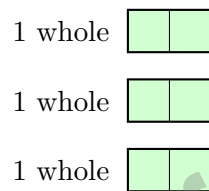
1) How many feet are in 54 inches? (Express as a mixed number if needed.)

- A.  $5\frac{1}{2}$  feet                       C. 5 feet  
 B.  $4\frac{3}{4}$  feet                       D.  $4\frac{1}{2}$  feet

2) A rectangular prism has dimensions 11 cm × 5 cm × 6 cm. What is the volume?

- A. 300 cm<sup>3</sup>                       C. 320 cm<sup>3</sup>  
 B. 310 cm<sup>3</sup>                       D. 330 cm<sup>3</sup>

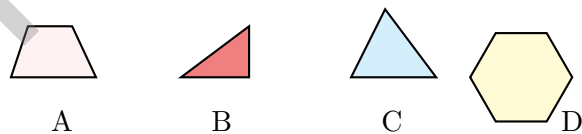
3) The model shows 3 wholes, with each whole cut into pieces of size  $\frac{1}{2}$ . How many pieces of size  $\frac{1}{2}$  are there in all?



3 wholes, each cut into pieces of size  $\frac{1}{2}$

- A. 5                                       C. 6  
 B. 2                                       D. 3

4) Which polygon is a regular polygon?



- A. A                                       C. C  
 B. B                                       D. D



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## Practice Test Answer Keys

### How to use this section:

1. check your answer
2. circle missed questions
3. rework them before reading the explanation

**Good correction habits build strong scores.**

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## Practice Test Answers and Explanations

### Practice Test 1 Answers and Explanations

- Choice B is correct.** **(5.NBT.6)** B is correct because  $18 \times 53 + 9 = 954 + 9 = 963$ . A should have remainder 0, C should have quotient 19, and D should have remainder 0.
- The correct answer is 9 rectangles.** **(5.G.4)** Rectangles include the rectangle-only region and the intersection:  $6 + 3 = 9$ . Accept either the number alone or the labeled answer.
- Choice C is correct.** **(5.NF.2)**  $\frac{5}{12} \approx \frac{1}{2}$  and  $\frac{9}{17} \approx \frac{1}{2}$ . So  $\frac{5}{12} + \frac{9}{17} \approx \frac{1}{2} + \frac{1}{2} = 1$ .
- Choice D is correct.** **(5.G.4)** An equilateral triangle has all angles equal to 60 degrees (acute), so it cannot have an obtuse angle.
- Choice A is correct.** **(5.G.4)**  $2\frac{1}{3} = \frac{7}{3}$  and  $3\frac{1}{2} = \frac{7}{2}$ . Multiply:  $\frac{7}{3} \times \frac{7}{2} = \frac{49}{6} = 8\frac{1}{6}$  square feet.
- Choice A is correct.** **(5.OA.1)** First count the table legs:  $8 \times 4 = 32$ . Then find the chairs left:  $10 - 2 = 8$ . Altogether,  $32 + 8 = 40$ .
- Choice B is correct.** **(5.OA.1)** 1 km = 1,000 m. Multiply:  $3.25 \times 1000 = 3250$  m.
- The correct answer is (4, 20).** **(5.MD.1)** The 4th term of Pattern A is 4, and the 4th term of Pattern B is 20. So the ordered pair is (4, 20).
- Choice C is correct.** **(5.G.2)** Choose the operation from the story, then keep the unit with the answer. Multiply:  $5 \times 3.25 = 16.25$  liters. This confirms the answer.
- Choice C is correct.** **(5.MD.1)** Total distance:  $7.25 + 8.5 + 6.75 = 22.5$  km. Convert to meters:  $22.5 \times 1,000 = 22,500$  meters.
- Choice C is correct.** **(5.NF.1)**  $8\frac{5}{6} - 3\frac{2}{6}$ : subtract whole numbers  $8 - 3 = 5$  and fractions  $\frac{5}{6} - \frac{2}{6} = \frac{3}{6}$ . Combine to get  $5\frac{3}{6}$ , which simplifies to  $5\frac{1}{2}$  yd.
- Choice A is correct.** **(5.NBT.2)** Moving the decimal 1 place right means multiplying by 10.
- Choice C is correct.** **(5.NF.5)**  $1\frac{1}{2} = \frac{3}{2} > 1$ , so the product is greater than 8.
- Choice A is correct.** **(5.NF.2)**  $1 - \frac{1}{8} - \frac{1}{4} = \frac{8}{8} - \frac{1}{8} - \frac{2}{8} = \frac{5}{8}$ .
- Choice C is correct.** **(5.OA.3)** The differences are 3, 5, 7, and 9. The next difference is 11, so  $27 + 11 = 38$ .
- Choice C is correct.** **(5.G.1)** For (2, 6): x-coordinate 2 means 2 units right; y-coordinate 6 means 6 units up.
- Choice C is correct.** **(5.NBT.7)**  $9.6 \div 4 = 2.4$ . Divide  $96 \div 4 = 24$ , then place decimal one place from right: 2.4.
- Choice B is correct.** **(5.NBT.7)**  $\frac{4}{5} \times \frac{5}{6} = \frac{20}{30}$ , which simplifies to  $\frac{2}{3}$  meter.
- Choice C is correct.** **(5.OA.1)** Evaluate inside the parentheses first:  $20 \div 2 = 10$ . Then add 6 to get 16.
- Choice A is correct.** **(5.OA.1)** The tenths digit is 6. The hundredths digit is 4. Since  $4 < 5$ , keep tenths as 6. So 8.642 rounds to 8.6 km.
- Choice A is correct.** **(5.NBT.4)** All have 2 ones. Tenths: 2.043 has 0; 2.304 and 2.34 have 3. Shortest = 2.043. Between other two:  $2.304 < 2.34 = 2.340$ . Order:  $2.043 < 2.304 < 2.34$ .
- Choices A, B are correct.** **(5.NBT.1)** The places are 3 ones, 4 tenths, 7 hundredths, and 2 thousandths. So A and B are true; the 2 is in the thousandths place and the 3 is in the ones place.
- Choice D is correct.** **(5.NBT.5)** Multiply:  $39 \times 28 = 39 \times (30 - 2) = (39 \times 30) - (39 \times 2) = 1,170 - 78 = 1,092$  seats.
- Choice C is correct.** **(5.NF.5)**  $10 \times \frac{3}{2} = 15$ . The product is greater than 10 because the scaling factor  $\frac{3}{2}$  is greater than 1.
- The correct answer is  $3\frac{1}{2}$ .** **(5.NF.4)** Four copies of  $\frac{7}{8}$  make  $\frac{28}{8}$ . Divide 28 by 8 to get  $3\frac{4}{8}$ , which simplifies to  $3\frac{1}{2}$ .
- Choice A is correct.** **(5.NF.4)**  $6 \div \frac{1}{2} = 6 \times 2 = 12$ .
- Choice B is correct.** **(5.NF.7)** If there are 2 layers with 6 cubes each:  $6 + 6 = 12$  or  $6 \times 2 = 12$  unit cubes.
- Choice C is correct.** **(5.NBT.2)** Dividing by 100:  $26.3 \div 100 = 0.263$  oz per customer.
- Choice C is correct.** **(5.NBT.2)** Use the rectangular-prism volume formula:  $5 \times 5 \times 4 = 100$ . So the volume is 100 cubic feet.
- Choice C is correct.** **(5.MD.2)** When making the line plot, place one X for each measurement.  $\frac{3}{4}$  appears 3 times, which is more than  $\frac{1}{4}$  (1 time),  $\frac{1}{2}$  (2 times), or 1 (2 times).



### From Your Math Family

#### Dear Member of the Math Family,

◇ Welcome to a special note from your math family. You finished 8 full practice tests, and that hard work matters more than any single score. We see you. We're proud of you. ◇

★ **What our math family knows:** math is a journey, not a one-time event. You've taken many steps already. The test is just one stop on a much longer path. Every skill you've built is yours forever. ★

#### What Your Math Family Sees

- **Effort:** STRONG! You showed up again and again.
- **Growth:** REAL! You can solve problems today you couldn't before.
- **Courage:** BRIGHT! You faced hard problems with brave thinking.
- **Future:** BIG! Your math journey is just beginning.

**Family tip:** on test day, picture us standing behind you, smiling and rooting for you. You're not alone. Your math family is with you. Now go show what you've learned.

If you'd like to share your experience or have questions, please email me at [reza@testinar.com](mailto:reza@testinar.com). I'd love to hear from you!

**Reza Nazari & Jay Daie**

Your Math Family (Always With You)

$45 \div 5 = ?$

# PRACTICE TODAY.

$\frac{3}{5} + \frac{1}{10} = ?$



## ACHIEVE TOMORROW!



$3^2 + 4^2 = 25$

This book includes **8** full-length **Grade 5** math practice tests to help students master essential skills, build confidence, and achieve success. Each test is carefully designed to reflect real math standards and cover a variety of question types with detailed answer explanations.

$7x - 4 = 17$

$1\frac{1}{2} + 2\frac{1}{3} = ?$

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