

$\frac{2}{3}$

0,25



%

FULL-LENGTH**Montana**

Aligned to State Standards

MAST**MATH**

Grade

5

$\frac{2}{4}$

$7 \times 8 =$



7×8

$56 \div 7$

$(a+b)^2$

PRACTICE TESTS

**Complete State Standards Review
with Answer Key and
Essential Math Skills Practice**



3 Full-Length Practice Tests
Aligned to State Standards



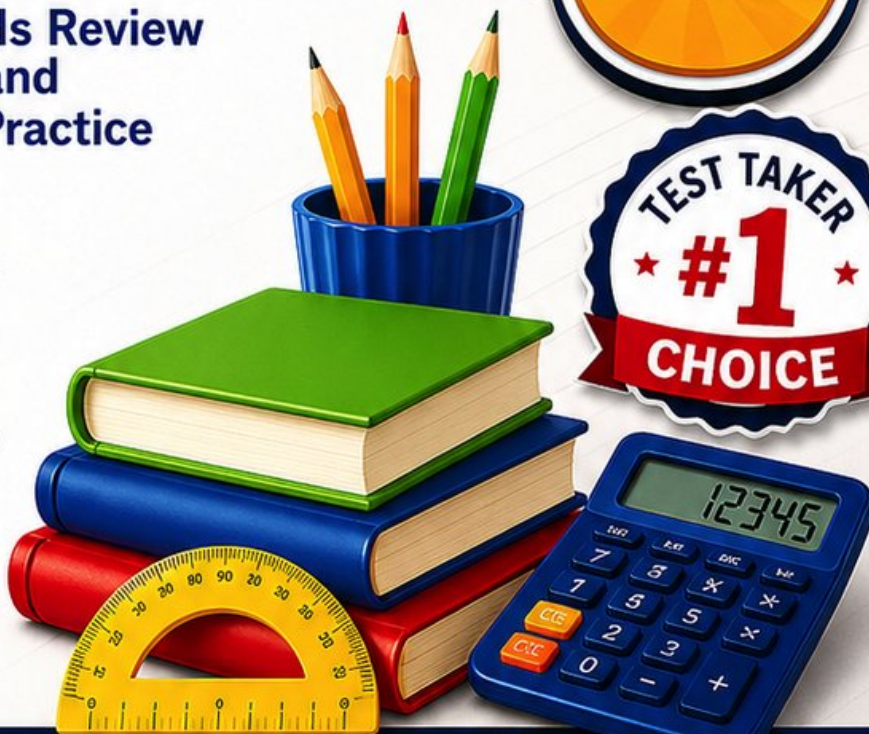
Covers All Grade 5 Math Topics
Numbers & Operations, Fractions,
Decimals, Geometry, Measurement,
Data & Problem Solving



Build Confidence
Strengthen Skills • Improve Accuracy
• Boost Test Readiness



Detailed Answer Key
Step-by-Step Explanations
for All Questions



**WRITTEN FOR
GRADE 5 STUDENTS**



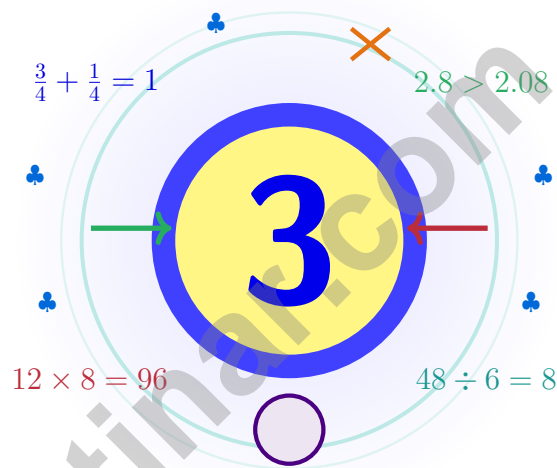
**PERFECT FOR
TEST PREP & REVIEW**



**CLASSROOM, HOME,
OR SELF-STUDY USE**

3 Montana MAST Grade 5 Math Practice Tests

Big-sky math for thinkers who think wide



Three full tests, a friendly quick review, smart strategy pages, and student-tested support that help Grade 5 mathematicians from The Treasure State walk in ready to think.

Jay Daie and Reza Nazari



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Montana, Step Inside Your Math Workshop

Big-sky math for thinkers who think wide

For Every Curious Brain in Montana

Math is like the Montana sky: wide, open, and full of room for clear, careful thinking.

Some questions will feel easy from the very first read. Others will ask you to pause, sketch, estimate, or try again. That is not a problem. That is practice doing exactly what it should do. Every honest attempt grows your math brain a little stronger.

Watch

Watch what the problem actually wants from you.

Choose

Choose the operation, model, or table that fits.

Polish

Check labels, units, and the final word of the question.

A Montana promise to yourself: I will give my mind the room a Montana sky gives a hawk – space to soar and time to focus.

Three Tests, Three Lessons

A simple game plan that turns practice into real progress

Step 1: Open

Open the quick review and warm up your math brain.

Wake up the big Grade 5 ideas before the test starts so your brain is already warmed up.

Step 2: Test

Take a full practice test like the real day.

Find a calm corner, settle in, and aim for careful, honest choices before quick ones.

Step 3: Reflect

Notice what felt strong and what felt shaky.

Circle missed questions, sort out what went sideways, and notice which skills are calling for more attention.

Step 4: Sharpen

Practice the shaky skills, then try the next test.

Read the explanation, fix the work, and carry that lesson forward into the next test.

Three Weeks, Three Tests, Three Wins

Week 1	Take Test 1 and write down one thing you noticed about your work.
Week 2	Take Test 2 and aim to fix one habit you noticed last week.
Week 3	Take Test 3 and celebrate the habits you carried through.



Scan me

Three Tests, Up Close

What these practice tests help Grade 5 students build

These three practice tests prepare Grade 5 students in the Treasure State for the Montana MAST with the wide, calm focus of a high ridge morning. The goal is bigger than getting answers right. Students are practicing how to read with care, choose a strategy, solve step by step, and explain their reasoning clearly – the same way mathematicians do every single day.

Selected-Response Questions

Students solve the problem and choose the best answer. Estimating first, ruling out weak choices, and checking for reasonableness can save both time and points.

Constructed-Response Questions

Students show their steps, explain a method, or back up an answer with clear math. Clean reasoning matters because it shows how the answer was actually found.

Grade 5 Ideas That Show Up Again and Again

- place value, comparing numbers, and rounding
- multi-digit addition, subtraction, multiplication, and division
- fractions, mixed numbers, and decimals
- perimeter, area, volume, and measurement conversions
- line plots, tables, numerical patterns, and coordinate points
- geometry and multi-step real-world problems

What strong work looks like on the MAST: the math is correct, the steps are readable, the labels and units match the problem, and the final answer truly answers the question being asked.



Table of Contents

★ Practice Test 1	_____	17
★ Practice Test 2	_____	32
★ Practice Test 3	_____	47
Practice Test Answer Keys	_____	62
Practice Test Answers and Explanations	_____	65

Grade 5 Mathematics Reference Materials

PERIMETER AND AREA

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

Area of Rectangle $A = l \times w$

Area of Triangle $A = \frac{1}{2} \times b \times h$

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

LENGTH

Customary

1 foot (ft) = 12 inches (in.)

1 yard (yd) = 3 feet (ft)

1 yard (yd) = 36 inches (in.)

Metric

1 meter (m) = 100 centimeters (cm)

1 centimeter (cm) = 10 millimeters (mm)

1 kilometer (km) = 1,000 meters (m)

CAPACITY

Customary

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

1 pint (pt) = 2 cups (c)

1 quart (qt) = 2 pints (pt)

1 gallon (gal) = 4 quarts (qt)

Metric

1 liter (L) = 1,000 milliliters (mL)

WEIGHT AND MASS

Customary

1 pound (lb) = 16 ounces (oz)

Metric

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TIME

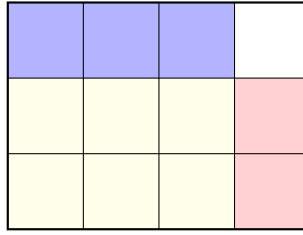
1 minute (min) = 60 seconds (sec) 1 week = 7 days

1 hour (hr) = 60 minutes (min) 1 year = 12 months

1 day = 24 hours (hr) 1 year = 52 weeks



1) Simplify: What is $\frac{3}{4} \times \frac{2}{3}$ in lowest terms?



- A. $\frac{6}{10}$
- B. $\frac{1}{2}$

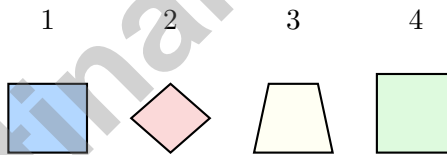
- C. $\frac{3}{7}$
- D. $\frac{2}{3}$

2) Evaluate: $[15 + (8 \div 4)] \times 2$

- A. 17
- B. 30

- C. 34
- D. 46

3) Teacher shows four shapes. One is NOT a parallelogram. Which should it be?



- A. Shape 1
- B. Shape 2

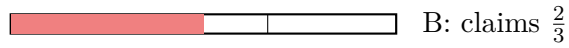
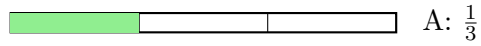
- C. Shape 3
- D. Shape 4

4) Find: 0.009×10^3 .

Record your answer in the space provided.

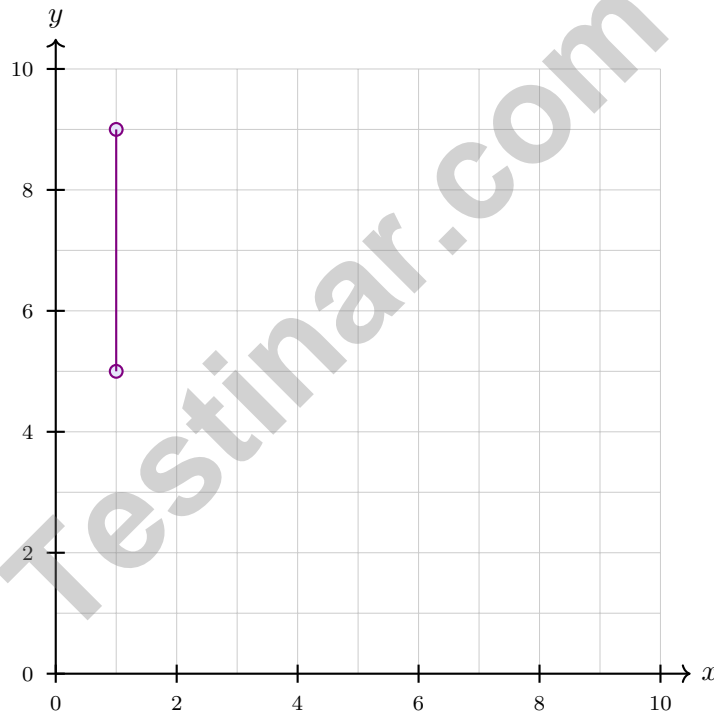


5) A student drew two fraction bars. Which shows an error?



- A. Student A made an error C. Both made errors
 B. Student B made an error (the bar shows $\frac{1}{2}$, not $\frac{2}{3}$) D. Neither made an error

6) On the coordinate plane, how far apart are the points (1, 5) and (1, 9)?



- A. 2 units C. 6 units
 B. 4 units D. 8 units



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1) What is 322×3 ?

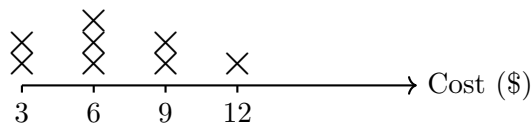
A. 960

C. 972

B. 966

D. 980

2) The line plot shows the cost (in dollars) of items bought at a shop:



How many items cost less than \$9?

A. 5 items

C. 7 items

B. 6 items

D. 8 items

3) A baker has $\frac{1}{2}$ pound of butter. She uses an equal amount in each of 4 batches of cookies. How many pounds of butter does each batch use?

A. $\frac{1}{2}$ pound

C. $\frac{1}{6}$ pound

B. $\frac{1}{4}$ pound

D. $\frac{1}{8}$ pound

4) A composite solid is made from two non-overlapping prisms. One prism measures 8 cm by 3 cm by 4 cm, and the other measures 5 cm by 3 cm by 4 cm. Which expression finds the total volume?

A. $8 + 3 + 4 + 5 + 3 + 4$

C. $8 \times 5 \times 4$

B. $(8 \times 5) + (3 \times 4)$

D. $(8 \times 3 \times 4) + (5 \times 3 \times 4)$



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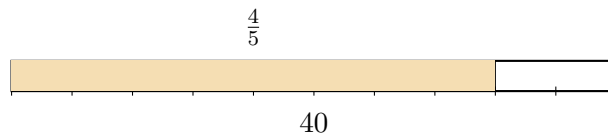
1 day = 24 hours (hr) 1 year = 52 weeks



1) A paper is folded in half repeatedly. After each fold, the number of sections doubles. After 5 folds, how many sections?

- A. 16
- B. 25
- C. 32
- D. 64

2) Find $\frac{4}{5}$ of 40.

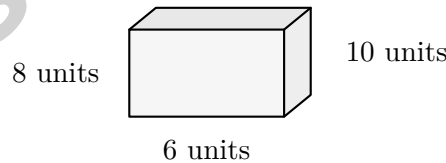


- A. 8
- B. 16
- C. 24
- D. 32

3) What is 78×100 ?

- A. 780
- B. 708
- C. 78,000
- D. 7,800

4) A rectangular prism with dimensions 3 units \times 4 units \times 5 units is enlarged so that each dimension is doubled. What is the volume of the enlarged prism?



- A. 120 cubic units
- B. 240 cubic units
- C. 480 cubic units
- D. 960 cubic units



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

- 1) **Choice B is correct.** (5.MD.5) $\frac{3}{4} \times \frac{2}{3} = \frac{6}{12} = \frac{1}{2}$.
- 2) **Choice C is correct.** (5.OA.1) Inside the brackets, handle the parentheses first: $8 \div 4 = 2$. Now the bracket is $[15 + 2] = 17$, and $17 \times 2 = 34$.
- 3) **Choice C is correct.** (5.G.4) Shape 3 is a trapezoid with only one pair of parallel sides. Shapes 1, 2, and 4 all have two pairs of parallel sides, making them parallelograms.
- 4) **The correct answer is 9.** (5.NBT.2) Move the decimal point three places right: $0.009 \rightarrow 9$.
- 5) **Choice B is correct.** (5.NF.2) Student A's bar is correctly labeled: 1 part out of 3 is $\frac{1}{3}$. Student B filled in 1.5 parts out of 3, which equals $\frac{1}{2}$, not $\frac{2}{3}$. To show $\frac{2}{3}$, you need 2 out of 3 parts filled.
- 6) **Choice B is correct.** (5.G.2) Both points have the same x -coordinate (1), forming a vertical line. The distance is $9 - 5 = 4$ units.
- 7) **Choice B is correct.** (5.NF.4) Simplify $\frac{5}{10} = \frac{1}{2}$. Then $\frac{1}{2} \times \frac{2}{3} = \frac{2}{6} = \frac{1}{3}$.
- 8) **The correct answer is 10000.** (5.NBT.2) 10^4 means $10 \times 10 \times 10 \times 10 = 10,000$ (a 1 followed by 4 zeros).
- 9) **Choice D is correct.** (5.NF.7) $\frac{1}{2} \div 8 = \frac{1}{2} \times \frac{1}{8} = \frac{1}{16}$.
- 10) **Choice B is correct.** (5.NF.2) $3\frac{11}{12} \approx 4$ and $4\frac{1}{11} \approx 4$. So $3\frac{11}{12} + 4\frac{1}{11} \approx 4 + 4 = 8$.
- 11) **Choice D is correct.** (5.G.1) Point D is 5 units right and 4 units up from the origin, so it is located at (5, 4).
- 12) **Choice D is correct.** (5.MD.1) 1 gallon = 4 quarts = 8 pints = 16 cups. So 3 gallons = $3 \times 16 = 48$ cups.
- 13) **Choice C is correct.** (5.OA.3) The block counts are 2, 4, 6, and so on, so Figure number n has $2n$ blocks. Figure 12 has $2 \times 12 = 24$ blocks.
- 14) **Choice B is correct.** (5.NF.5) When you multiply by a fraction less than 1, the result is smaller. Since $\frac{2}{3} < 1$, we have $8 \times \frac{2}{3} < 8$. Therefore, 8 is larger.
- 15) **Choice B is correct.** (5.NF.1) $\text{LCM}(4, 3) = 12$. $\frac{1}{4} = \frac{3}{12}$ and $\frac{1}{3} = \frac{4}{12}$. $\frac{3}{12} + \frac{4}{12} = \frac{7}{12}$.
- 16) **Choice A is correct.** (5.OA.3) The number of tomatoes is always 4 times the number of carrots: $3 \times 4 = 12$, $6 \times 4 = 24$, $9 \times 4 = 36$, $12 \times 4 = 48$.
- 17) **Choice D is correct.** (5.NF.1) $10\frac{3}{8} - 7\frac{5}{8}$: borrow 1 to get $9\frac{11}{8} - 7\frac{5}{8} = 2\frac{6}{8} = 2\frac{3}{4}$ cups.
- 18) **Choice D is correct.** (5.NF.7) $4 \div \frac{1}{6} = 4 \times 6 = 24$. We can fill 24 buckets.
- 19) **Choice C is correct.** (5.G.2) The first coordinate, 5, matches the x -axis label: weeks. The second coordinate, 25, matches the y -axis label: plant height in inches. So the point means plant height in inches is 25 when weeks is 5.
- 20) **Choices A, B are correct.** (5.MD.5) Since the height is 5 inches, the length-times-width part must be $60 \div 5 = 12$ square inches. A gives $4 \times 3 = 12$, and B gives $6 \times 2 = 12$; C and D are too large.
- 21) **Choice A is correct.** (5.NF.5) $\frac{1}{2} < 1$, so $\frac{1}{2} \times 20 < 20$.
- 22) **Choice D is correct.** (5.NBT.6) Use compatible numbers close to the original problem: $4,927 \approx 4,900$ and $73 \approx 70$. Then $4,900 \div 70 = 70$.
- 23) **Choice B is correct.** (5.NF.2) LCM of 5, 3, 6 is 30. $\frac{3}{5} = \frac{18}{30}$, $\frac{2}{3} = \frac{20}{30}$, $\frac{5}{6} = \frac{25}{30}$. Order: A, B, C.
- 24) **Choice C is correct.** (5.MD.5) The base layer has $9 \times 6 = 54$ square units. Divide the volume by the base area: $378 \div 54 = 7$, so the height is 7 feet.
- 25) **Choice D is correct.** (5.G.4) A square is both a rectangle and a rhombus, so it belongs in the intersection.
- 26) **Choice C is correct.** (5.NBT.4) The tenths place in 47.863 is 8. The hundredths place is 6. Since 6 is greater than or equal to 5, we round the tenths digit up from 8 to 9. Therefore, 47.863 rounded to the nearest tenth is 47.9.
- 27) **The correct answer is equilateral.** (5.G.4) The side lengths are 5 cm, 5 cm, and 5 cm, so all 3 sides are equal. The triangle is equilateral.
- 28) **Choice A is correct.** (5.NF.2) $\frac{1}{2} + \frac{1}{3}$: common denominator is 6. $\frac{1}{2} = \frac{3}{6}$ and $\frac{1}{3} = \frac{2}{6}$, so total is $\frac{5}{6}$ cup.
- 29) **Choice A is correct.** (5.MD.1) Two cups is 16 fluid ounces. Maria already measured 1 cup 4 fluid ounces, or 12 fluid ounces, so $16 - 12 = 4$ fluid ounces remain.



Mathematical Explorer's Journey

Welcome, Brave Explorer!

◇ Phenomenal expedition! You've successfully navigated through 3 mathematical territories, exploring every concept and discovering new strategies along the way! You've mapped out the landscape of Grade 5 math with the courage of a true adventurer. Each problem was uncharted territory, and you charted it with skill and determination! ◇

★ **Wisdom from veteran explorers:** the most rewarding journeys are the ones that challenge you most. Through 3 comprehensive practice tests, you've climbed mathematical mountains, crossed conceptual rivers, and discovered solutions in places you didn't know existed. Your exploration skills are strong, your map is detailed, and you're ready for any test-day adventure! ★

Explorer's Achievement Map

- **Territory Covered:** You've explored every major mathematical concept thoroughly!
- **Navigation Skills:** You can find your way through any problem with multiple solution paths!
- **Equipment Mastered:** You know exactly which strategies to use in different situations!
- **Expedition Ready:** You're fully prepared for the ultimate test day adventure!

Important explorer wisdom: experienced adventurers always review their maps before important journeys. Take a few moments before test day to mentally review your successful strategies. Visualize yourself confidently tackling each type of problem. You've already proven you can handle the expedition!

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

Reza Nazari & Jay Daie

Your Math Teacher and Test-Day Coach

Build Skills. Boost Confidence. Excel on the Grade 5 Math Test.

Help your child succeed with confidence! This book includes **3 full-length Grade 5 Math practice tests** aligned to state standards. With a focus on essential skills, problem solving, and test readiness, it's the perfect resource for classroom, home, or on-the-go practice.



WHAT'S INSIDE:



3 Full-Length Grade 5 Math Practice Tests

Realistic test format to build familiarity and confidence.



Covers All Essential Math Topics

Fractions, decimals, geometry, measurement, data, number operations, and more.



Build Strong Math Skills

Strengthen understanding and problem-solving through varied question types.



Detailed Answer Key

Step-by-step explanations to help your child learn from mistakes and improve.



Track Progress & Improve

Use score trackers to identify strengths and focus on areas that need more practice.



The Smarter Way to Prepare!

Consistent practice builds stronger skills, sharper thinking, and test-day success.

- ✓ Reinforce classroom learning
- ✓ Improve accuracy and speed
- ✓ Reduce test anxiety
- ✓ Achieve your best score!



Visit testinar.com/math5
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and practice materials!