

9

Michigan

M STEP

GRADE 5 MATHEMATICS PRACTICE TESTS

Full-Length Standards-Aligned Practice
for Strong Math Performance

$$A = l \times w$$

$$x^2 + 3x - 4 = 0$$

$$y = 2x + 1$$



9
FULL-LENGTH
PRACTICE
TESTS

$$2,345 \times 6 = 14,070$$



$$\frac{3}{4} + \frac{1}{8} = \frac{7}{8}$$

$$7.2 \div 0.8 = 9$$



$$(12 + 8) \div 4 = 5$$



Build Confidence



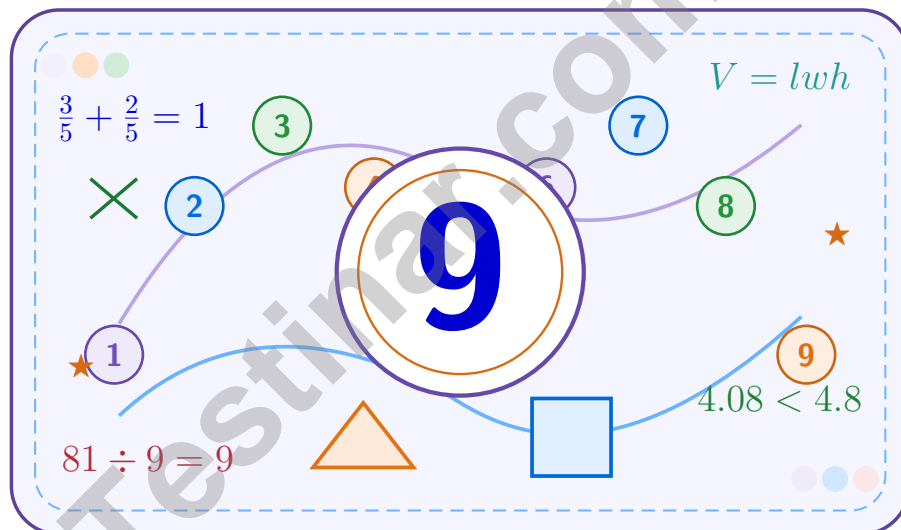
Improve Math Skills



Achieve Success

9 Michigan M-STEP Grade 5 Math Practice Tests

*A nine-step confidence climb with clear review, smart strategy, and practice
that gets stronger every round*



Nine full tests, focused skill boosters, and student-friendly support from start to finish for Grade 5 mathematicians who want to climb higher.

Jay Daie and Reza Nazari



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Welcome to the Confidence Climb

This book is here to help you practice with purpose and rise step by step

To the Grade 5 Mathematician

This practice book is a place to think, try, fix, and grow. You do not have to be perfect on the first question or the first test. What matters most is careful effort, clear work, and learning from each round of practice.

Use these nine 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 fast.

Try

Give each problem your best thinking.

Check

Study mistakes and learn what happened.

Rise

Bring that lesson into the next round.

A strong habit for every page: 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.

How to Use This Book

A simple practice routine that turns nine tests into steady growth

A Nine-Session Climb Map

Session	Mission Focus
1	Take Test 1; review place value and operation slips.
2	Take Test 2; keep work neat and easy to read.
3	Take Test 3; give extra time to fractions and decimals.
4	Take Test 4; slow down on word problems and units.
5	Take Test 5; compare scores and habits with earlier rounds.
6	Take Test 6; notice which habits are now automatic.
7	Take Test 7; explain open-ended answers clearly.
8	Take Test 8; review topics that still need attention.
9	Take Test 9; finish with calm, careful, confident work.

Step 1: Warm Up

Start with the quick review.
Spend a few minutes refreshing the ideas before you start a test.

Step 2: Take the Test

Take one full practice test.
Work in a quiet space and let accuracy matter more than speed.

Step 3: Study the Pattern

Check your work honestly.
Circle missed questions and notice patterns in the mistakes.

Step 4: Learn, Then Retry

Read the explanation and try again.
Learning happens after the test too. Fixing mistakes is one of the smartest parts of practice.



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Test Overview

What this practice book helps students do

These practice tests are designed to help Grade 5 students get comfortable with the kind of thinking used on the Michigan M-STEP. The goal is bigger than only getting answers right. Students are practicing how to read closely, choose a strategy, solve carefully, and explain their work when needed.

Selected-Response Questions

Students solve the problem and choose the best answer. Estimating first and crossing out weak choices can save time and points.

Constructed-Response Questions

Students show their thinking, steps, models, or explanations. Even when unsure, writing what they know can help organize the problem.

Grade 5 Skills You Will Practice Often

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

What strong work looks like: the answer is correct, the steps are clear, the labels or units are included, and the final result makes sense.



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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 $A = l \times w$

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)

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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



5) Evaluate: $9 + 8 \div 2 - 3$

A. 5

C. 10

B. 7

D. 14

6) A water tank holds 50 liters. A leak drains $\frac{3}{10}$ of the water. How many liters are drained?

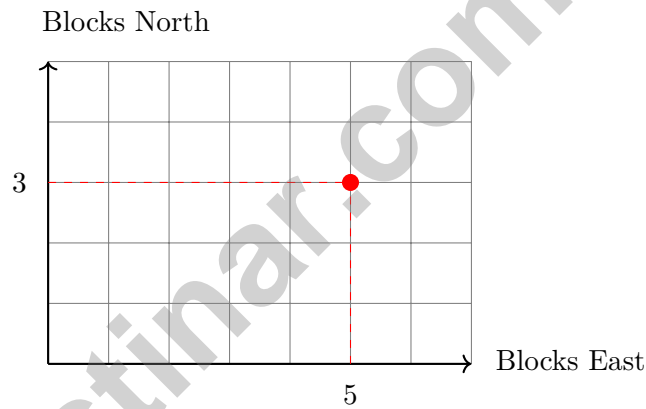
A. 5 liters

C. 35 liters

B. 10 liters

D. 15 liters

7) A point is located 5 blocks east and 3 blocks north from the origin. What are the coordinates of this point?



A. (3, 5)

C. (8, 3)

B. (5, 8)

D. (5, 3)

8) Look at the pattern: 5, 8, 11, 14, ... What is the 8th term?

Record your answer in the space provided.



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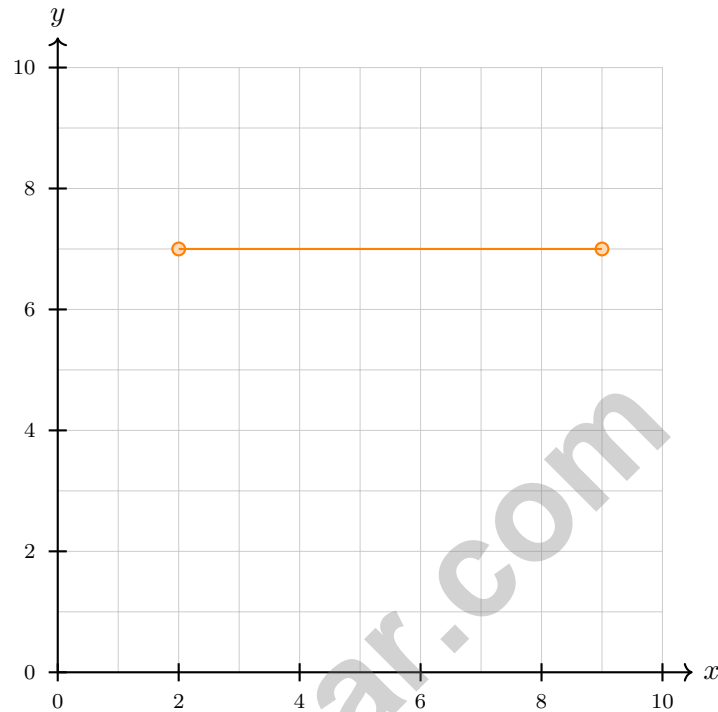
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- 1) What is the horizontal distance between the points $(2, 7)$ and $(9, 7)$?



- A. 5 units C. 7 units
 B. 6 units D. 9 units
- 2) Sam drinks $\frac{2}{3}$ of a $1\frac{1}{2}$ -liter water bottle. How many liters does he drink?

Record your answer in the space provided.



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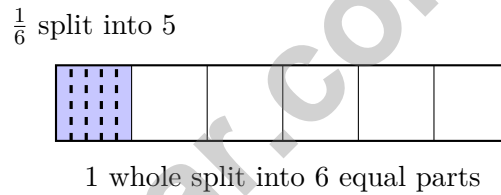


1) Pattern P: 2, 4, 6, 8, 10. Pattern Q: 6, 12, 18, 24, 30. What is the rule?

Position	Pattern P	Pattern Q
1	2	6
2	4	12
3	6	18

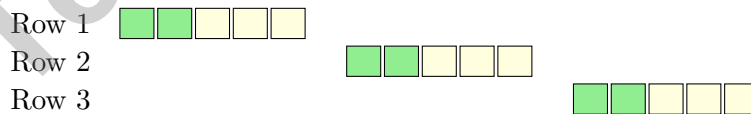
- A. $Q = P + 4$
 C. $Q = P \times 2 + 2$
 B. $Q = 3 \times P$
 D. $Q = P + 2$

2) The model shows $\frac{1}{6}$ of a whole split into 5 equal parts. What fraction of the whole is each small part?



- A. $\frac{1}{11}$
 C. $\frac{1}{5}$
 B. $\frac{1}{6}$
 D. $\frac{1}{30}$

3) Bar model for $3 \times \frac{2}{5}$:



What is the product?

- A. $\frac{2}{5}$
 C. $\frac{6}{15}$
 B. $\frac{2}{15}$
 D. $\frac{6}{5}$ or $1\frac{1}{5}$



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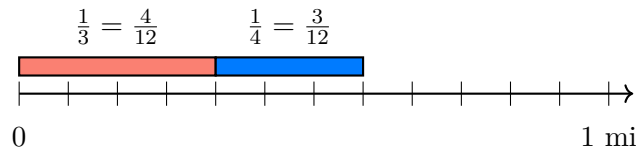
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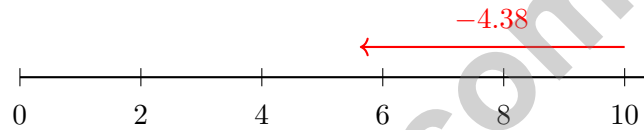
1 day = 24 hours (hr) 1 year = 52 weeks



- 1) On a hike, Jamal walked $\frac{1}{3}$ mile before lunch and $\frac{1}{4}$ mile after lunch. How far did he walk total?



- A. $\frac{2}{7}$ mile C. $\frac{2}{12}$ mile
 B. $\frac{7}{12}$ mile D. $\frac{3}{7}$ mile
- 2) Use the number line to subtract. Find $10.00 - 4.38$:



- A. 5.72 C. 5.62
 B. 6.12 D. 5.52
- 3) True or false: A right triangle cannot be equilateral.
- A. Always false C. Sometimes true
 B. False D. True
- 4) Simplify: $\frac{4}{6} \times \frac{3}{8}$ (after simplifying each fraction first)
- A. $\frac{12}{42}$ C. $\frac{1}{3}$
 B. $\frac{2}{3} \times \frac{3}{8} = \frac{1}{4}$ D. $\frac{2}{5}$
- 5) Which expression equals 24×15 ?
- A. $(24 + 15) \times 2$ C. $24 - 15$
 B. $24 + 15$ D. 15×24



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 Michigan scores.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- Choice D is correct.** **(5.MD.A.1)** Convert 2 kg to grams: $2 \times 1000 = 2000$ g. Add 500 g: $2000 + 500 = 2500$ g.
- Choice D is correct.** **(5.MD.A.1)** $2 \div \frac{1}{3} = 2 \times 3 = 6$. There are 6 one-third pizzas in 2 whole pizzas.
- Choice B is correct.** **(5.MD.C.3b)** Volume: $8 \times 6 \times 3 = 144$ cubic meters. Volume always uses cubic units, not square units.
- Choice D is correct.** **(5.MD.C.5)** Adult tickets: $3 \times 22.50 = 67.50$ dollars. Student tickets: $5 \times 15.00 = 75.00$ dollars. Total: $67.50 + 75.00 = 142.50$ dollars.
- Choice C is correct.** **(5.OA.A.1)** Division comes before addition and subtraction, so $8 \div 2 = 4$. Now finish left to right: $9 + 4 - 3 = 10$.
- Choice D is correct.** **(5.OA.A.1)** $50 \times \frac{3}{10} = 15$ liters. Multiplying by $\frac{3}{10}$ (less than 1) gives a smaller result.
- Choice D is correct.** **(5.NF.B.5a)** The x-coordinate is 5 (blocks east) and the y-coordinate is 3 (blocks north), so the coordinates are (5, 3).
- The correct answer is 26.** **(5.OA.B.3)** Each term increases by 3. Starting at 5: term 8 is $5 + (8 - 1) \times 3 = 5 + 21 = 26$.
- Choice D is correct.** **(5.OA.B.3)** $5.4 \times 2 = 10.8$. Since 10.8 is only 0.8 away from 10 but 4.2 away from 15, it is closer to 10.
- Choice B is correct.** **(5.NF.A.1)** $\text{LCM}(2,4,8) = 8$. $\frac{1}{2} = \frac{4}{8}$, $\frac{1}{4} = \frac{2}{8}$, $\frac{1}{8} = \frac{1}{8}$. $\frac{4}{8} + \frac{2}{8} + \frac{1}{8} = \frac{7}{8}$.
- Choice A is correct.** **(5.NF.A.1)** Use input 2 in the rule. Compute $6 \times 2 = 12$, then add 1 to get 13.
- Choice A is correct.** **(5.G.A.2)** $8 = 7\frac{5}{5}$. Then $7\frac{5}{5} - 2\frac{3}{5} = 5\frac{2}{5}$.
- Choice C is correct.** **(5.NF.A.1)** Count all X marks: $3 + 2 + 2 = 7$ total brushes.
- Choice D is correct.** **(5.G.B.4)** Rectangles and squares have four right angles, and their opposite sides are parallel.
- Choice A is correct.** **(5.G.A.1)** If the y-coordinate is 0, the point is on the horizontal line (x-axis).
- Choice C is correct.** **(5.NBT.B.6)** $1,632 \div 24 = 68$ plots. Check: $24 \times 68 = 1,632$.
- Choice C is correct.** **(5.MD.B.2)** Add the flower heights shown by the line plot: $(6 \times 3) + (8 \times 2) + (10 \times 2) + (12 \times 3) = 18 + 16 + 20 + 36 = 90$ inches.
- Choices A, B are correct.** **(5.OA.A.2)** A is true because 3 copies of (6 + 4) can be written as 2 copies plus 1 more copy. B is true because 10 groups of 7 are greater than 10 groups of 7 - 1. C adds an extra 9, and D leaves out one group of 5.
- Choice A is correct.** **(5.NBT.A.1)** $0.402 \times 10 = 4.02$. Multiplying by 10 shifts each digit one place to the left in the place-value chart.
- Choice A is correct.** **(5.NF.A.2)** $\frac{1}{3} = \frac{3}{9}$. $\frac{7}{9} - \frac{3}{9} = \frac{4}{9}$ meter.
- The correct answer is 9 ft.** **(5.NF.A.2)** $3 \times 3 = 9$ feet. Each yard has 3 feet, so 3 yards has three groups of 3 feet.
- Choice B is correct.** **(5.MD.A.1)** Work from the inside out. First $3 \times 4 = 12$, then the bracket becomes $[2 + 12] = 14$, and finally $14 \div 7 = 2$.
- Choice C is correct.** **(5.OA.A.1)** Volume = base area \times height = $35 \times 4 = 140$ cm³.
- Choice C is correct.** **(5.NBT.A.2)** A power of 10 tells how many factors of 10 to use. $10^3 = 10 \times 10 \times 10 = 1000$. This confirms the answer.
- Choice B is correct.** **(5.NBT.A.2)** One slice is $\frac{1}{8}$. Dividing by 2: $\frac{1}{8} \div 2 = \frac{1}{16}$.
- The correct answer is 2400.** **(5.MD.A.1)** Each kilogram has 1,000 grams. Two kilograms is 2,000 grams, and $2,000 + 400 = 2,400$ grams.
- The correct answer is about 1.** **(5.MD.A.1)** $\frac{11}{12} \approx 1$ and $\frac{1}{8} \approx 0$, so the estimate is about 1. Accept reasonable estimates close to 1, such as $\frac{9}{10}$, 0.9, or 1.
- Choice A is correct.** **(5.NF.A.2)** Bar A has one 2-unit length. Bar B has four copies of that same 2-unit length, so B is 4 times A.
- Choice D is correct.** **(5.NBT.A.2)** Use the inverse of multiplying by 100: divide 45 by 100. Moving two places left gives 0.45.
- Choice B is correct.** **(5.NBT.A.2)** $5,200 \div 100 = 52$. Marcus only divided by 10; Kevin divided by 1,000; Aisha did not divide.



Champion in Training!

◇ What a season! You've completed 9 full practice tests, and that's the kind of training that builds real champions. Every test was a workout, and your math muscles are stronger today than they were before. Your stamina, focus, and accuracy have all leveled up. ◇

★ **Here's what every great coach knows:** the team that practices the most plays the best. You've put in the practice. You know the plays. You've handled the drills. Now it's almost game day, and you are ready. ★

Your Training Camp Stats

- **Math Stamina:** HIGH! You can stay focused for a full test.
- **Strategy Playbook:** LOADED! You have multiple ways to attack a problem.
- **Mistake Recovery:** STRONG! You can pick yourself up and keep going.
- **Game Day Mindset:** READY! You know how to stay calm under pressure.

Pre-game tip: the night before test day, get a great sleep. Eat a good breakfast. Bring a sharp pencil and a positive attitude. And remember—you have already trained for this. Trust your training.

If you want to share a proud moment or ask a question, please email me at jay@testinar.com. I'd love to hear from you!

Jay Daie

Your Math Coaches (Game On!)

PRACTICE MORE. ACHIEVE MORE.

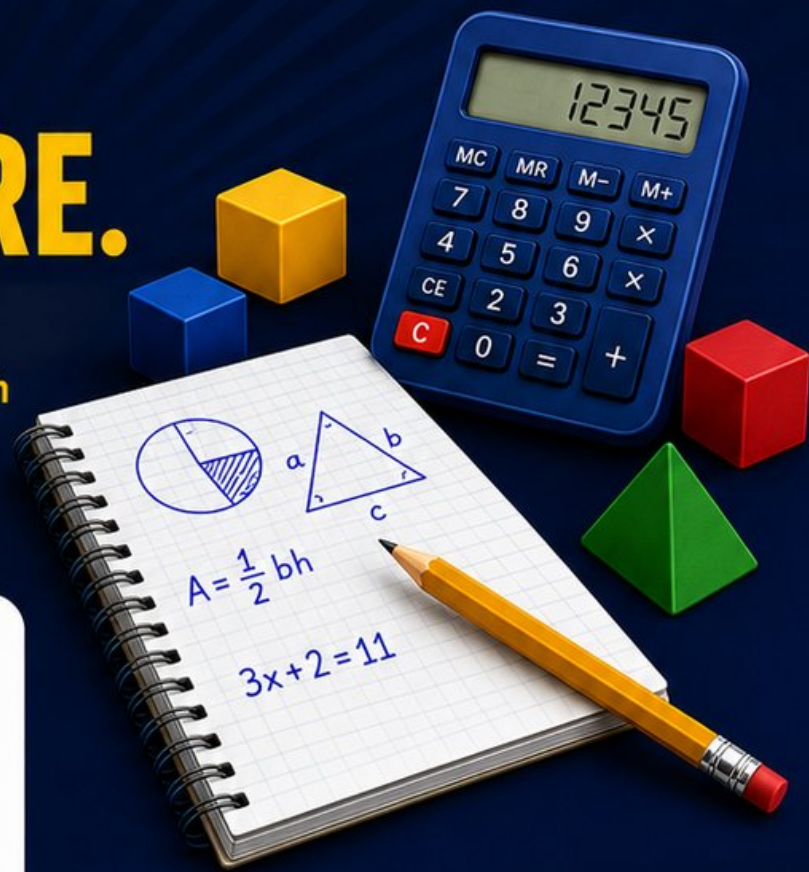
Give your child the edge they need to excel in **Grade 5 Math!** This book includes **9 full-length** practice tests designed to build confidence, sharpen skills, and improve test performance.

9

**FULL-LENGTH
PRACTICE
TESTS**

- ✓ Realistic.
- ✓ Rigorous.
- ✓ Results-Driven.

More practice today for a **stronger** tomorrow.



THIS BOOK HELPS YOUR CHILD:



Build Confidence

Familiar, focused practice reduces anxiety and boosts self-belief.



Strengthen Skills

Reinforces key math concepts through high-quality, standards-aligned questions.



Improve Test Readiness

Full-length tests help students understand test format, pacing, and question types.



Track Progress

Identify strengths and target areas with purposeful practice.



Achieve Success

Better preparation leads to higher scores and bright futures.

COVERS ALL ESSENTIAL TOPICS

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



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