

4

COMPLETE

Michigan M STEP

Grade

MATH

5

PRACTICE TESTS

Standards-Based Test Prep with
Mixed Review, Word Problems,
and **Full Answer Key**



- ✓ **4 COMPLETE PRACTICE TESTS**
Built to reflect the test format and rigor



- ✓ **COVERS ALL ESSENTIAL TOPICS**
Numbers & Operations, Fractions, Decimals, Geometry, Measurement, Data & Probability, and more



- ✓ **STRENGTHEN SKILLS & CONFIDENCE**
Mixed review, challenging questions, and strategic practice



- ✓ **FULL ANSWER KEY INCLUDED**
Detailed explanations for every question



BUILD STRONG
MATH SKILLS
& TEST READINESS



IMPROVE ACCURACY,
SPEED, AND
PROBLEM SOLVING



PERFECT FOR
CLASSROOM,
HOME, OR
SELF-STUDY



ALIGNED TO
MICHIGAN
STATE STANDARDS
(M STEP)

4 Michigan M-STEP Grade 5 Math Practice Tests

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



Four full tests, a smart quick review, mission-style strategy pages, and student-tested support that help Grade 5 mathematicians from The Great Lakes State build calm, careful, confident habits.

Jay Daie and Reza Nazari



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Suit Up, Michigan – Four-Test Mission

Four full practice tests and the habits that carry you to the real one

To Michigan Students Who Love a Puzzle

This book gives you four chances to read closely, solve carefully, and level up your math thinking. Math thinking is a lot like Lake Michigan – wide, deep, calm on top, and full of careful currents underneath.

You do not need to feel perfect before you begin. You just need to stay curious, use strategies, and learn from every correction. That is how confident mathematicians are built.

Notice

Notice numbers, units, labels, and tricky words.

Sketch

Sketch a model, table, or quick number line.

Confirm

Confirm your answer with a quick estimate.

A strong mission habit for Michigan: keep your work neat, estimate when it helps, label units carefully, and never let one hard question decide your mood for the whole page.

How This Book Wants to Help

A four-step routine that turns practice into real improvement

Step 1: Plan

Plan a quiet hour for one full test.
Wake up the big Grade 5 ideas before the test starts so your brain is already warmed up.

Step 2: Practice

Take the test with calm focus.
Find a calm corner, settle in, and aim for careful, honest choices before quick ones.

Step 3: Inspect

Inspect every answer like a careful builder.
Circle missed questions, sort out what went sideways, and notice which skills are calling for attention.

Step 4: Adjust

Adjust what needs adjusting for the next test.
Read the explanation, fix the work, and carry that lesson into the very next test.

A Four-Week Michigan Mission Map

Week	Mission Focus
Week 1	Take Test 1 and read your lake's surface and currents.
Week 2	Take Test 2 and aim attention at word problems and clear writing.
Week 3	Take Test 3 to polish fractions, decimals, and conversions.
Week 4	Take Test 4 with calm crossings and careful final checks.



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Inside the Four Practice Tests

What these four practice tests help Grade 5 students build

These three practice tests prepare Grade 5 students in the Great Lakes State for the Michigan M-STEP with the calm patience of a lakeshore morning. The goal is bigger than collecting right answers. Students are practicing how to read carefully, choose a strategy, solve step by step, and explain their reasoning clearly – the same way mathematicians do every day.

Selected-Response Questions

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

Constructed-Response Questions

Students show steps, explain a method, or support an answer with clear math. Strong reasoning matters because it shows how the answer was 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
- tables, line plots, patterns, and coordinate points
- geometry and multi-step real-world problem solving

What strong M-STEP-style work looks like: accurate math, readable steps, the right labels or units, and a final answer that really matches the question being asked.



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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)

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CAPACITY

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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

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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



- 1) When a whole number is divided by 10^3 , how many places does the decimal point move and in which direction?

- A. 3 places to the left
 B. 3 places to the right
 C. 2 places to the left
 D. 1 place to the left

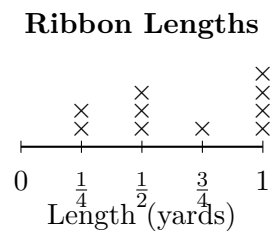
- 2) Evaluate the expression: $\{(9 + 3) \times 2\} - 4 \div 5$

Record your answer in the space provided.

- 3) Find: 362×24 .

Record your answer in the space provided.

- 4) The line plot shows ribbon lengths (in yards) measured by 10 students:



How many ribbons were longer than $\frac{1}{2}$ yard?

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



5) The y-coordinate of a point is 10. Which statement must be true?



- A. The point is on the x-axis C. The point is at the origin
 B. The point is 10 units above the x-axis D. The x-coordinate is also 10

6) What is $\frac{1}{3} \div 4$?

- A. $\frac{1}{12}$ C. $\frac{4}{3}$
 B. $\frac{1}{6}$ D. $\frac{3}{4}$

7) A prism's bottom layer has 12 unit cubes. The prism is 4 layers tall. What is the total volume?

Record your answer in the space provided.



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- 1) A student made an error. She calculated $7.5 \div 100$ and got 750. What is her mistake?
- A. She moved the decimal to the right instead of left
- B. She divided by 10 instead of 100
- C. She multiplied instead of dividing
- D. She ignored the decimal point
- 2) How many more unit cubes are needed to complete a $4 \times 3 \times 2$ rectangular prism if 15 unit cubes are already placed?
- A. 9 unit cubes
- B. 10 unit cubes
- C. 15 unit cubes
- D. 24 unit cubes
- 3) What is 45×7 ?
- A. 305
- B. 315
- C. 325
- D. 350
- 4) Add using a place-value table:

Ones	Tenths	Hundredths
4	2	6
+3	+1	+7

What is the sum $4.26 + 3.17$?

- A. 7.33
- B. 7.44
- C. 7.43
- D. 8.43



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1) If $n \times 10^2 = 4600$, what is n ?

A. 4.6

C. 460

B. 46

D. 0.46

2) Find: $4.36 + 2.85$.

Record your answer in the space provided.

3) Use compatible numbers to estimate $678 \div 23$:

A. 30

C. 20

B. 25

D. 15

4) At a farmers market, the price of apples is graphed as “pounds of apples” versus “total price.” If a point is at $(6, 12)$, what does this mean?

A. 6 apples cost \$12 each

C. 12 pounds cost \$6

B. 6 pounds of apples cost \$12 total

D. 18 pounds cost \$6 total

5) Evaluate: $3 \times [10 - (2 + 3)]$

A. 5

C. 15

B. 10

D. 30

6) Which product has 3 zeros?

A. 25×40

C. 30×10

B. 50×2

D. 15×6



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1) A farmer with 78 chickens sells them at 10 dollars each. How much money?

A. 88

C. 7800

B. 780

D. 780000

2) Error analysis: Two students round 11.348 to the nearest tenth. Maya gets 11.3, Jamal gets 11.4. Who is correct?

A. Neither is correct

C. Both are correct

B. Jamal is correct

D. Maya is correct

3) A jug holds $\frac{5}{6}$ gallon of juice. After pouring out $\frac{1}{3}$ gallon, how much remains?

Record your answer in the space provided.

4) Subtract using a common denominator: $\frac{11}{12} - \frac{1}{3}$.

A. $\frac{8}{12} = \frac{2}{3}$

C. $\frac{10}{12}$

B. $\frac{7}{12}$

D. $\frac{9}{12}$

5) A juice container holds 6 liters. Each family receives $\frac{1}{4}$ liter. How many families can receive juice?

A. 24 families

C. 18 families

B. 20 families

D. 12 families



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 A is correct.** (5.NBT.A.2) Dividing by $10^3 = 1,000$ makes the number smaller. The decimal point shifts three places to the left (one place per power of 10).
- The correct answer is 4.** (5.OA.A.1) $9 + 3 = 12$; $12 \times 2 = 24$; $24 - 4 = 20$; $20 \div 5 = 4$.
- The correct answer is 8688.** (5.NBT.B.5) $362 \times 4 = 1,448$ and $362 \times 20 = 7,240$. Sum: $1,448 + 7,240 = 8,688$.
- Choice C is correct.** (5.MD.B.2) Lengths longer than $\frac{1}{2}$ yard are $\frac{3}{4}$ and 1 yard. The plot shows $1 + 4 = 5$ such ribbons.
- Choice B is correct.** (5.G.A.1) The y-coordinate tells the vertical distance above the x-axis. A y-coordinate of 10 means the point is 10 units above the x-axis.
- Choice A is correct.** (5.NF.B.7c) When you divide a unit fraction by a whole number, multiply by the reciprocal: $\frac{1}{3} \div 4 = \frac{1}{3} \times \frac{1}{4} = \frac{1}{12}$.
- The correct answer is 48.** (5.MD.C.4) The bottom layer has 12 cubes, and the prism is 4 layers tall. That gives $12 \times 4 = 48$ cubic units.
- Choice A is correct.** (5.MD.A.1) Convert 3 L to milliliters: $3 \times 1000 = 3000$ mL. Since $3000 > 2500$, Container 1 has greater capacity.
- Choice B is correct.** (5.G.A.2) Each output is 4 times the input: $4 \times 6 = 24$.
- Choice C is correct.** (5.NBT.A.2) Multiplying by 1,000 moves the decimal three places right: $0.04 \rightarrow 0.4 \rightarrow 4 \rightarrow 40$.
- Choice B is correct.** (5.NF.B.4b) Garden A: $\frac{1}{2} \times \frac{2}{3} = \frac{2}{6} = \frac{1}{3}$ acre. Garden B: $\frac{3}{4} \times \frac{1}{2} = \frac{3}{8}$ acre. Since $\frac{3}{8} > \frac{1}{3}$, Garden B is larger.
- Choice A is correct.** (5.NBT.B.7) On a 10×10 grid, shading 4 columns (width) and 6 rows (height) covers $4 \times 6 = 24$ squares out of 100, which is 0.24.
- The correct answer is 45.** (5.NBT.B.6) $21 \times 40 = 840$, leaving 105. $105 \div 21 = 5$. Quotient: $40 + 5 = 45$.
- Choice C is correct.** (5.OA.A.2) Difference: $(14 - 5) = 9$; multiply by 8: $8 \times 9 = 72$.
- Choice B is correct.** (5.NBT.A.2) $156 \times 10 = 1,560$. The total cost is \$1,560.
- Choice A is correct.** (5.MD.C.5) Use the rectangular-prism volume formula: $12 \times 6 \times 8 = 576$. So the volume is 576 cubic inches.
- Choice A is correct.** (5.OA.A.1) First simplify inside the parentheses: $3 + 5 = 8$. Then multiply, $2 \times 8 = 16$, and subtract from 24 to get 8.
- Choice B is correct.** (5.G.B.4) A shape with opposite sides parallel and opposite sides equal is a parallelogram. The figure shown has these properties.
- Choices A, B are correct.** (5.NBT.B.7) Line up the decimal points: $1.25 + 2.50 = 3.75$ and $0.75 + 3.00 = 3.75$. C gives 4.00, and D gives 3.25.
- Choice A is correct.** (5.NF.A.2) Use a common denominator of 12. Since $\frac{4}{6} = \frac{8}{12}$ and $\frac{3}{4} = \frac{9}{12}$, $\frac{3}{4}$ is greater.
- Choice C is correct.** (5.G.A.2) Both points have the same y-coordinate (6), which means they lie on a horizontal line at height 6.
- Choice D is correct.** (5.NBT.A.2) The nonzero parts make $8 \times 9 = 72$, which has no trailing zero. The four zeros from 800 and 900 give 720,000, so the product has 4 zeros.
- Choice D is correct.** (5.NF.B.4) Two rows of $\frac{3}{8}$ each: $2 \times \frac{3}{8} = \frac{6}{8} = \frac{3}{4}$ (simplified).
- Choice D is correct.** (5.NBT.A.3b) Shortest time = fastest. Compare: $6.204 < 6.24 < 6.402 < 6.42$. Dana's time of 6.204 s is shortest.
- Choice B is correct.** (5.NF.B.6) $\frac{4}{5} \times \frac{5}{6} = \frac{20}{30}$, which simplifies to $\frac{2}{3}$ meter.
- Choice D is correct.** (5.OA.B.3) Each term in Pattern N is 3 more than the corresponding term in Pattern M: $5+3=8$, $10+3=13$, etc.
- Choice C is correct.** (5.G.B.4) All three sides have different lengths (3 cm, 4 cm, and 5 cm), so this is a scalene triangle.
- Choice D is correct.** (5.NBT.B.7) A: 7.25; B: 7.25; C: 7.55; D: 4.25. Option D is smallest.



Dear Hero of This Story,

◇ Once upon a time, there was a brave Grade 5 student who decided to take 4 practice tests. At first, the problems were tough. But the student kept showing up, kept trying, and kept learning. Slowly, the tough problems became easier. The student's confidence grew. By the time the 4th test was finished, that student had become the hero of their own math story. That student is you. ◇

★ **Storytellers know:** every great story has a hard middle. The hard middle is where the hero grows. You've lived your hard middle, and now your story is heading toward a strong ending: a confident test day. ★

Your Hero's Toolkit

- **Brave Heart:** You face hard problems instead of running.
- **Sharp Mind:** You think carefully before you act.
- **Steady Hand:** You write neatly and check your work.
- **Kind Spirit:** You're patient with yourself when you make mistakes.

Storyteller's tip: when you sit down on test day, remember the hero you've become. The chapters before this moment have made you stronger. Now, write your best chapter yet.

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 Storyteller (The Best Pages Are Ahead)

4 COMPLETE TESTS. CONFIDENCE. SUCCESS.



Give your child the practice and confidence they need to excel in **Grade 5 Math**. This book includes **4 full-length** practice tests designed to build skills, improve test readiness, and help students reach their full potential.

WHAT'S INSIDE:



4 COMPLETE PRACTICE TESTS

Full-length tests that reflect real test format and rigor.



COVERS ALL GRADE 5 TOPICS

Numbers & Operations, Fractions, Decimals, Geometry, Measurement, Data & Probability, and more.



MIXED REVIEW & WORD PROBLEMS

Build problem-solving skills with mixed review questions and real-world word problems.



DETAILED ANSWER KEY

Step-by-step explanations for every question to help students learn and improve.



BUILD CONFIDENCE & IMPROVE SCORES

Practice consistently, reduce test anxiety, and achieve your best score!



PRACTICE SMART. LEARN MORE. ACHIEVE YOUR BEST.



Strengthen
Math Skills



Improve
Accuracy
& Speed



Master
Essential
Concepts



Boost
Confidence
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