

$\frac{2}{3}$

FULL-LENGTH

$\frac{2}{4}$

Minnesota

$7 \times 8 =$

$0,25$



Aligned to State Standards

MCA III

7×8

MATH

$56 \div 7$

Grade

5

$(a+b)^2$

PRACTICE TESTS

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



3 Full-Length Practice Tests
Aligned to State Standards



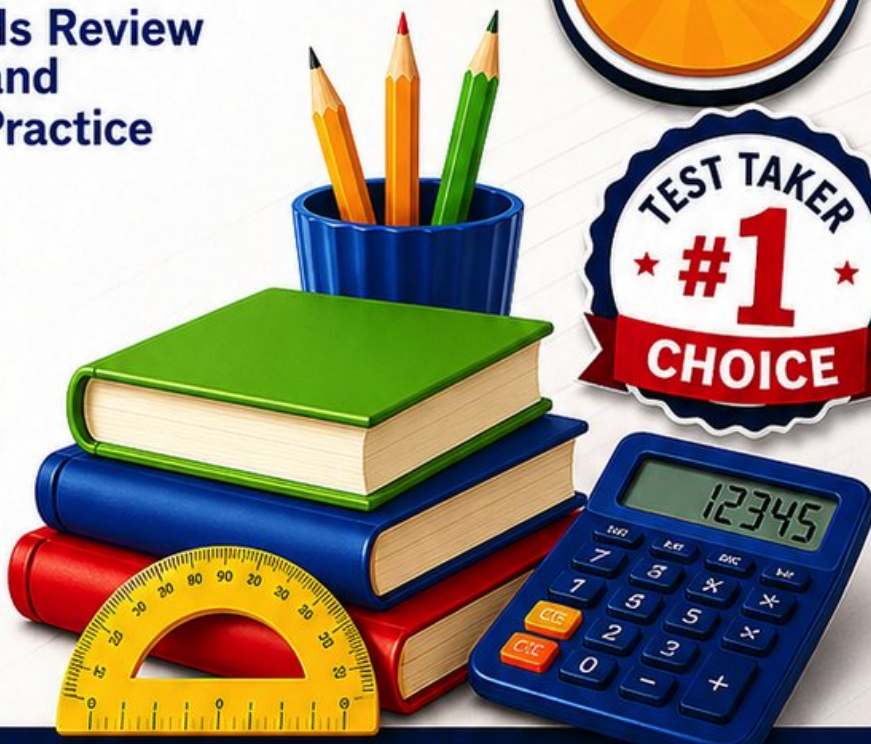
Covers All Grade 5 Math Topics
Numbers & Operations, Fractions,
Decimals, Geometry, Measurement,
Data & Problem Solving



Build Confidence
Strengthen Skills • Improve Accuracy
• Boost Test Readiness



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



WRITTEN FOR
GRADE 5 STUDENTS



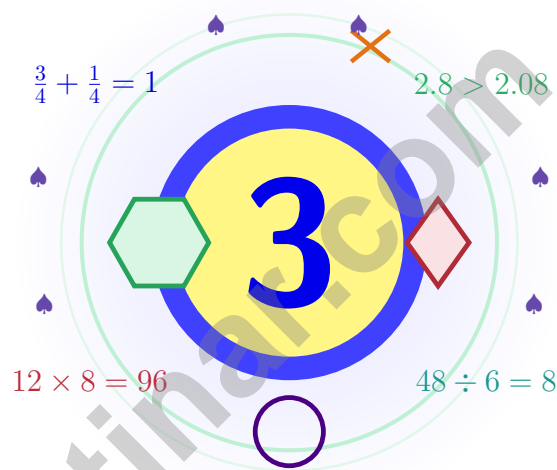
PERFECT FOR
TEST PREP & REVIEW



CLASSROOM, HOME,
OR SELF-STUDY USE

3 Minnesota MCA-III Grade 5 Math Practice Tests

Lake-country math for steady, kind thinkers



Three full tests, a friendly quick review, smart strategy pages, and student-tested support that help Grade 5 mathematicians from The Land of 10,000 Lakes walk in ready to think.

Jay Daie and Reza Nazari



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Step Up, Minnesota – Math Camp Begins

Lake-country math for steady, kind thinkers

To Every Grade 5 Problem Solver in Minnesota

Math practice is like canoeing the Boundary Waters – balanced strokes, patient eyes, and a calm trust in the route.

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.

Notice

Look closely at what the problem says, shows, and asks.

Try

Pick a plan and step through it carefully.

Grow

Use every correction as a clue for what to master next.

A Minnesota promise to yourself: I will paddle through problems with even strokes and a steady heart.

How to Get the Most Out

A simple game plan that turns practice into real progress

Step 1: Preview

Begin with the quick review.

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

Step 2: Practice

Take one full practice test.

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

Step 3: Reflect

Check your work honestly.

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

Step 4: Level Up

Repair and retry.

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

Your 3-Week Practice Map

Week 1	Take Test 1 to learn your starting strengths – not just your starting score.
Week 2	Take Test 2 and give extra attention to the spots where reading carefully or showing work can lift your score.
Week 3	Take Test 3 and bring everything forward: calm focus, smart checking, stronger habits.



Scan me

Meet the Tests

What these practice tests help Grade 5 students build

These three practice tests prepare Grade 5 students in the Land of 10,000 Lakes for the Minnesota MCA-III with the calm focus of a long paddle. 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 MCA-III: 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

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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)

Metric

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

WEIGHT AND MASS

Customary

1 pound (lb) = 16 ounces (oz)

Metric

1 kilogram (kg) = 1,000 grams (g)

1 gram (g) = 1,000 milligrams (mg)

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

A. $\frac{5}{3}$

B. $\frac{3}{15}$

C. $\frac{4}{5}$

D. $\frac{6}{10}$

2) Evaluate: $5 \times [(2 + 3) + (6 \div 2)]$

A. 25

B. 30

C. 35

D. 40

3) A student ate $\frac{5}{8}$ of an apple and $\frac{3}{7}$ of a banana. Estimate the fraction of fruit eaten.

A. $\frac{1}{2}$ of a fruit

B. About 1 whole fruit

C. About $1\frac{1}{2}$ fruits

D. More than 2 fruits

4) The models show $\frac{1}{4}$ and $\frac{1}{6}$. What is the sum?



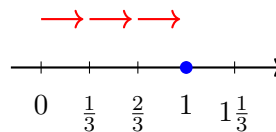
A. $\frac{2}{10}$

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

C. $\frac{5}{12}$

D. $\frac{2}{24}$

5) A number line shows repeated jumps of $\frac{1}{3}$.



This shows $3 \times \frac{1}{3}$. What is the answer?

A. $\frac{3}{1}$

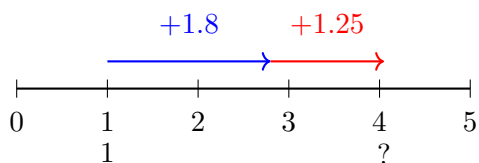
B. $\frac{1}{3}$

C. 1

D. 3



6) A number line visual for adding decimals:



What is $1 + 1.8 + 1.25$?

- A. 4.05 C. 4.25
 B. 4.15 D. 5.05

7) Which is greater: $\frac{3}{5}$ or $\frac{2}{3}$? By how much?

- A. $\frac{3}{5}$ by $\frac{1}{15}$ C. Equal
 B. $\frac{3}{5}$ by $\frac{1}{2}$ D. $\frac{2}{3}$ by $\frac{1}{15}$

8) Calculate 4.2×0.5 .

- A. 1.05 C. 4.7
 B. 2.1 D. 8.4

9) Two patterns form a multiplicative relationship. Pattern One: 2, 3, 4, 5. Pattern Two: 14, 21, 28, 35. Find the constant multiplier.

- A. 6 C. 8
 B. 7 D. 12

10) A student incorrectly says: "This shape has 4 equal sides, so it CANNOT be a rectangle." Why is this reasoning WRONG?

- A. Rectangles must have 4 equal sides. C. 4 equal sides means it is definitely a trapezoid.
 B. Having 4 equal sides does NOT prevent a shape from also being a rectangle. D. Equal sides and rectangles are unrelated.



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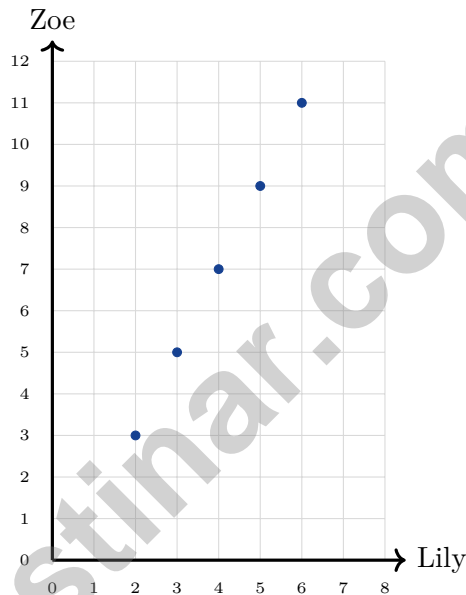
1 day = 24 hours (hr) 1 year = 52 weeks



- 1) Three students subtract $7\frac{1}{3} - 3\frac{2}{3}$. Whose answer is correct?

Student P: $3\frac{2}{3}$ Student Q: $4\frac{2}{3}$ Student R: $3\frac{1}{3}$

- A. P only C. R only
 B. Q only D. None of them
- 2) Lily starts with 2 and adds 1 each time (first sequence). Zoe starts with 3 and adds 2 each time (second sequence). Which point does NOT match the plotted pattern of (Lily, Zoe)?



- A. (3, 5) C. (5, 10)
 B. (4, 7) D. (6, 11)
- 3) A composite storage display is made from two non-overlapping rectangular prisms. Prism A is 6 feet long, 2 feet wide, and 3 feet tall. Prism B is 3 feet long, 5 feet wide, and 5 feet tall. What is the total volume?

- A. 36 cubic feet C. 111 cubic feet
 B. 75 cubic feet D. 123 cubic feet



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1 kilogram (kg) = 1,000 grams (g)

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TIME

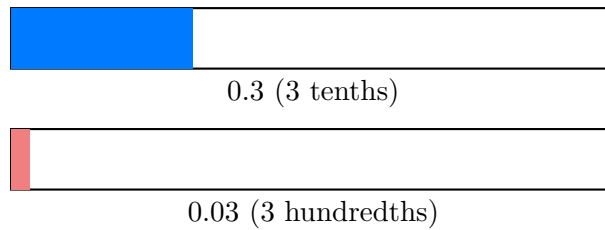
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1 hour (hr) = 60 minutes (min) 1 year = 12 months

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



- 1) Model place values to compare 0.3 and 0.03:



Which is greater?

- A. 0.3
- B. 0.03
- C. Equal
- D. Cannot tell
- 2) Find: 250×10^2 .

Record your answer in the space provided.

- 3) How many inches are in $\frac{1}{4}$ foot?
- A. 2 inches
- B. 3 inches
- C. 4 inches
- D. 5 inches
- 4) A recycling bin measures 11 meters long, 5 meters wide, and 2 meters tall. What is its volume?
- A. 55 cubic meters
- B. 22 cubic meters
- C. 10 cubic meters
- D. 110 cubic meters



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.

Testinar.com



Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice D is correct.** (5.1.3.4) Multiply both the numerator and the denominator of $\frac{3}{5}$ by 2: $\frac{3 \times 2}{5 \times 2} = \frac{6}{10}$. So $\frac{3}{5}$ and $\frac{6}{10}$ are equivalent.
- 2) **Choice D is correct.** (5.2.2.1) Solve the two inner groups first: $2 + 3 = 5$ and $6 \div 2 = 3$. The bracket becomes $5 + 3 = 8$, and $5 \times 8 = 40$.
- 3) **Choice B is correct.** (5.1.3.3) $\frac{5}{8} \approx \frac{1}{2}$ and $\frac{3}{7} \approx \frac{1}{2}$. So the total is about $\frac{1}{2} + \frac{1}{2} = 1$ fruit. The actual sum is a little more than 1, so "about 1 whole fruit" is the best estimate.
- 4) **Choice C is correct.** (5.2.2.1) The first bar model shows $\frac{1}{4}$ and the second bar model shows $\frac{1}{6}$. $\text{LCM}(4,6) = 12$. $\frac{1}{4} = \frac{3}{12}$ and $\frac{1}{6} = \frac{2}{12}$. $\frac{3}{12} + \frac{2}{12} = \frac{5}{12}$.
- 5) **Choice C is correct.** (5.1.2.3) Three jumps of $\frac{1}{3}$ land at $\frac{3}{3} = 1$.
- 6) **Choice A is correct.** (5.1.3.4) Add: $1 + 1.8 = 2.8$; then $2.8 + 1.25 = 4.05$ (hundredths: $0 + 5 = 5$; tenths: $8 + 2 = 10$, regroup; ones: $2 + 1 + 1 = 4$).
- 7) **Choice D is correct.** (5.1.3.4) $\text{LCD} = 15$. $\frac{3}{5} = \frac{9}{15}$; $\frac{2}{3} = \frac{10}{15}$. $\frac{10}{15} - \frac{9}{15} = \frac{1}{15}$.
- 8) **Choice B is correct.** (5.1.2.3) $4.2 \times 0.5 = 2.1$. Multiply: $42 \times 5 = 210$, then place decimal two places from right: $2.10 = 2.1$.
- 9) **Choice B is correct.** (5.2.1.2) Pattern Two is 7 times Pattern One: $2 \times 7 = 14$, $3 \times 7 = 21$, $4 \times 7 = 28$, $5 \times 7 = 35$.
- 10) **Choice B is correct.** (5.3.1.1) A square has 4 equal sides AND all right angles, making it both a rectangle and a rhombus. Equal sides do not exclude being a rectangle.
- 11) **The correct answer is 24.** (5.2.2.1) Left: $50 - 20 = 30$, $30 \div 5 = 6$. Right: $2 + 4 = 6$, $3 \times 6 = 18$. Sum: $6 + 18 = 24$.
- 12) **Choice D is correct.** (5.1.3.4) Area = $\frac{2}{3} \times \frac{1}{2} = \frac{2}{6}$, which simplifies to $\frac{1}{3} \text{ m}^2$.
- 13) **Choice B is correct.** (5.3.2.2) The base area is $20 \times 4 = 80$ square centimeters. Since $400 \div 80 = 5$, the height is 5 cm.
- 14) **The correct answer is 20 mi.** (5.1.3.4) The x-coordinate is 4, so it shows 4 hours. The y-coordinate is 20, so it shows 20 miles. Accept equivalent interpretations that correctly match 4 with hours and 20 with miles.
- 15) **Choice B is correct.** (5.1.2.2) Multiplying by 100 shifts the digits in 50 two places to greater place values: $50 \times 100 = 5,000$.
- 16) **Choice D is correct.** (5.1.2.2) Multiplying by 10,000 moves the decimal four places right, so 0.18 becomes 1,800. The student's 18 is too small.
- 17) **Choice D is correct.** (5.1.3.4) LCM of 2, 3, 4, and 6 is 12, so the least common denominator is 12.
- 18) **Choice A is correct.** (5.1.3.4) If y is 10 times x , multiply the x -value by 10. For $x = 3$, $3 \times 10 = 30$, so (3, 30) fits.
- 19) **Choice D is correct.** (5.1.2.2) $18 \times \frac{2}{3} = 12$ feet. Multiplying by $\frac{2}{3}$ (less than 1) scales the length down by one-third.
- 20) **Choice B is correct.** (5.1.2.2) $1\frac{1}{10} > 1 > \frac{9}{10} > \frac{4}{5}$, so the largest factor produces the largest product.
- 21) **Choices A, B are correct.** (5.3.2.3) Volume measures the space inside a three-dimensional figure and is counted in cubic units. Choices C and D describe flat area or two-dimensional figures.
- 22) **The correct answer is 12.009.** (5.1.2.1) Twelve wholes, then 9 thousandths means a 9 in the thousandths place: 12.009.
- 23) **Choice C is correct.** (5.1.1.1) 0.005 is five thousandths and 0.05 is five hundredths. They are not equal: $0.005 < 0.05$.
- 24) **The correct answer is 48.** (5.3.2.3) The bottom layer has 12 cubes, and the prism is 4 layers tall. That gives $12 \times 4 = 48$ cubic units.
- 25) **Choice B is correct.** (5.1.3.4) Use total amount divided by the size of one piece. The equation is $10 \div \frac{1}{2} = n$.
- 26) **Choice C is correct.** (5.1.1.4) $456 \div 12 = 38$ complete boxes. Check: $12 \times 38 = 456$.
- 27) **Choice C is correct.** (5.1.2.2) A power of 10 tells how many factors of 10 to use. Both equal 4000, so they are equal. This confirms the answer.
- 28) **Choice B is correct.** (5.1.2.2) Check each quotient: $3,500 \div 10 = 350$, $450 \div 100 = 4.5$, $8,600 \div 1,000 = 8.6$, and $1,200 \div 100 = 12$.
- 29) **Choice C is correct.** (5.1.2.2) $\frac{4}{5} \times \frac{1}{3} = \frac{4}{15}$ (multiply numerators and denominators).



Notes From Your Math Architect

Dear Builder of Big Ideas,

◇ Across 3 practice tests, you laid down brick after brick of math skill. The foundation is solid. The walls are strong. The roof is in place. You've built yourself a study sturdy enough to stand any storm test day might bring. ◇

★ **What architects know:** a great building starts with a great plan. You've practiced planning—reading carefully, picking your strategy, and working step by step. That blueprint thinking is what turns hard problems into clear answers. ★

Builder's Inspection Checklist

- **Foundation:** ROCK SOLID! Number sense, fractions, decimals—all in place.
- **Frame:** STRONG! You can break down a problem into clear parts.
- **Walls:** TIGHT! Your work is organized and easy to follow.
- **Roof:** FINISHED! You always answer the question that was asked.

Architect's tip: on test day, build each answer like a small building. Foundation: read the question. Frame: pick the strategy. Walls: do the math. Roof: check the answer. Each piece matters. Each piece is yours.

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 Architect (Built to Last)

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!



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and practice materials!