

10 COMPLETE

Minnesota

MCA III

GRADE 5

MATH

PRACTICE TESTS

Standards-Based Review with
Mixed Practice and Detailed Answer Key



10 Complete Practice Tests

Build confidence and test readiness



Standards-Based Review

Covers key Grade 5 math standards



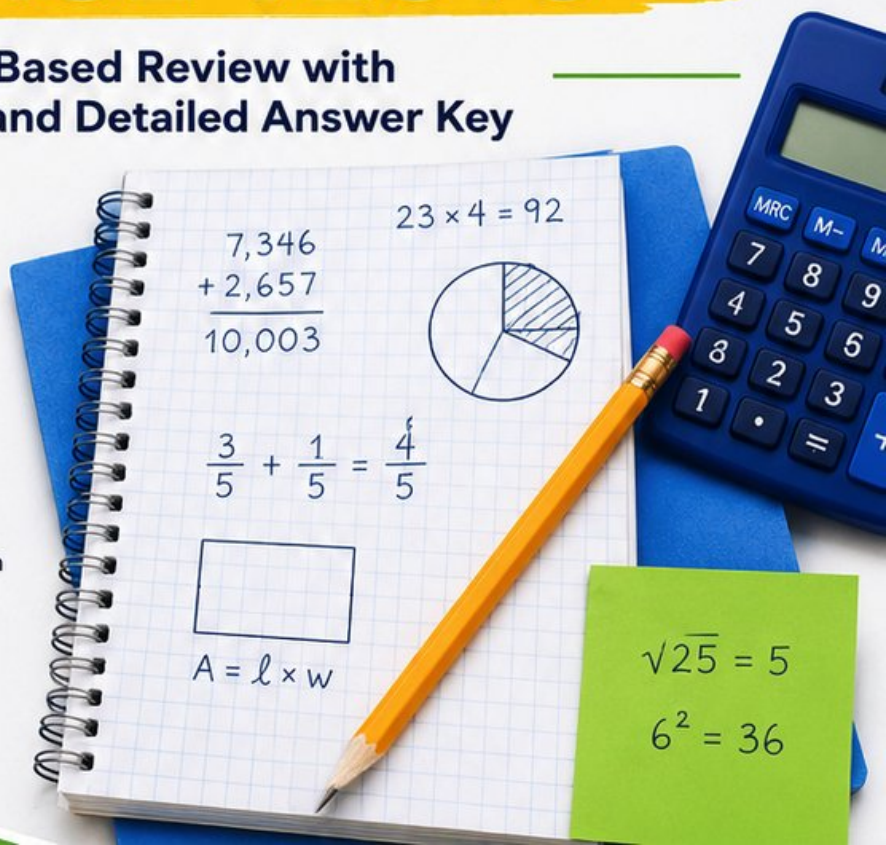
Mixed Practice

Variety of question types to strengthen skills



Detailed Answer Key

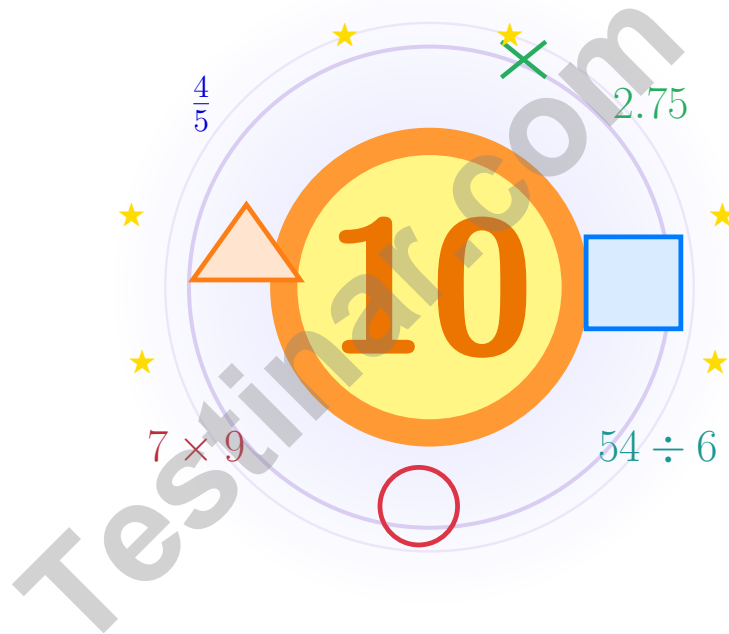
Step-by-step explanations for every question



**PREPARE.
PRACTICE.
SUCCEED!**

10 Minnesota MCA-III Grade 5 Math Practice Tests

Bright review, thoughtful practice, and steady confidence for Grade 5



Ten full tests, a focused quick review, and student-friendly support that keeps practice clear and encouraging.

Jay Daie and Reza Nazari



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Welcome!

This book is a place to practice bravely and think clearly

Dear Grade 5 Mathematician

This book gives you ten chances to read carefully, solve thoughtfully, and build steady math confidence. Some problems will feel friendly right away. Some will take more patience. Both kinds help you grow.

The goal is not to feel perfect before you begin. The goal is to practice honest effort, learn from corrections, and notice how much stronger your thinking becomes over time.

Read

Slow down and understand the task.

Solve

Show clear steps and good choices.

Learn

Use mistakes as clues for what comes next.

A strong habit from the start: keep your work neat, estimate when it helps, write units carefully, and do not let one hard problem decide your mood for the whole page.



How to Use This Book

A simple routine that turns practice into real progress

Step 1

Warm up with the quick review.

Spend a few minutes refreshing the ideas before the test begins.

Step 2

Take one full practice test.

Work in a calm spot and aim for careful thinking before speed.

Step 3

Check your work honestly.

Circle missed questions and notice which skills need another look.

Step 4

Fix and reflect.

Read the explanation, repair the work, and bring that lesson into the next test.



A Good 10-Week Rhythm

Week 1	Take Test 1 and notice your starting strengths.
Week 2	Take Test 2 and slow down on word problems.
Week 3	Take Test 3 and sharpen multiplication and division checks.
Week 4	Take Test 4 and focus on fractions and decimals.
Week 5	Take Test 5 and watch your labels and units closely.
Week 6	Take Test 6 and practice calmer pacing.
Week 7	Take Test 7 and compare your habits with the earlier weeks.
Week 8	Take Test 8 and focus on tidy, checkable work.
Week 9	Take Test 9 and compare your progress with the way you worked in the earlier weeks.
Week 10	Take Test 10 and finish with steady, confident effort while using every strong habit you built.



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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



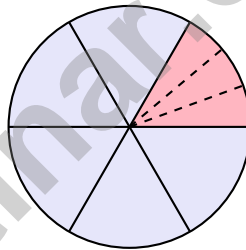
1) A display case measures 10 feet long, 3 feet wide, and 6 feet tall. What is its volume?

- A. 30 cubic feet C. 180 cubic feet
 B. 60 cubic feet D. 18 cubic feet

2) Find: $7 \div \frac{1}{6}$.

Record your answer in the space provided.

3) A circle is divided into 6 equal sectors. One sector is $\frac{1}{6}$ of the circle. This sector is then divided into 3 equal parts. What fraction of the whole circle is each small part?



- A. $\frac{1}{18}$ C. $\frac{3}{6}$
 B. $\frac{1}{9}$ D. $\frac{1}{3}$

4) A water tank in the shape of a rectangular prism has dimensions 14 feet, 10 feet, and 8 feet. What is its volume?

- A. 280 cubic feet C. 1,120 cubic feet
 B. 840 cubic feet D. 1,400 cubic feet



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

WEIGHT AND MASS

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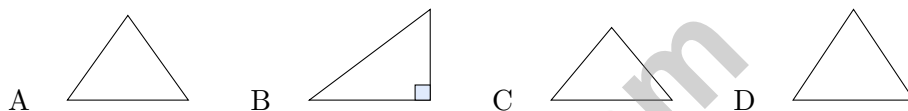
1) Emma says the expression $(15 + 9) \div 3$ equals $\frac{1}{3}$ of the sum of 15 and 9. Is she correct?

- A. Yes C. No, it's 3 more than the sum
 B. No, it's double the sum D. No, it's 3 less than the sum

2) Storage unit: base area 28 ft^2 , height 11 ft. Volume =?

- A. 308 ft^3 C. 17 ft^3
 B. 39 ft^3 D. 280 ft^3

3) Which diagram shows a right triangle?



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

4) Without calculating, which comparison is correct?

- A. $15 \times 8 > 16 \times 8$
 B. $24 \times 6 < 24 \times 5$
 C. $9 \times 14 = 14 \times 9$
 D. $30 \times 3 > 30 \times 4$

5) Place-value mastery: when 0.003 is multiplied by a power of 10, the result is 3. Which power of 10?

Original	Times	Result
0.003	$10^?$	3

- A. 10^1 C. 10^3
 B. 10^2 D. 10^4



Grade 5 Mathematics

10

Questions: 40 Duration: No time limit

Calculator Policy: Calculators are not allowed



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 C is correct.** (5.3.2.2) Use the rectangular-prism volume formula: $10 \times 3 \times 6 = 180$. So the volume is 180 cubic feet.
- The correct answer is 42.** (5.4.1.2) Each whole contains 6 sixths. Seven wholes contain $7 \times 6 = 42$ sixths, so the quotient is 42.
- Choice A is correct.** (5.1.1.1) $\frac{1}{6} \div 3 = \frac{1}{6} \times \frac{1}{3} = \frac{1}{18}$.
- Choice C is correct.** (5.3.2.4) The base is $14 \times 10 = 140$ square feet. With a height of 8 feet, the volume is $140 \times 8 = 1,120$ cubic feet.
- Choice A is correct.** (5.1.3.4) Write 18.40 so each place is lined up. Borrow from the tenths to subtract hundredths: $10 - 7 = 3$ hundredths. Then tenths: $3 - 2 = 1$; ones: $8 - 5 = 3$; tens: $1 - 0 = 1$. So $18.40 - 5.27 = 13.13$.
- Choice C is correct.** (5.4.1.2) $1 \text{ kg} = 1,000 \text{ g}$. Multiply: $8.5 \times 1000 = 8500 \text{ g}$.
- Choice C is correct.** (5.2.2.1) Simplify both parentheses first: $8 + 2 = 10$ and $5 - 1 = 4$. Then go left to right: $10 \times 4 = 40$, and $40 \div 5 = 8$.
- Choice C is correct.** (5.1.3.3) Multiply the price per pound by the number of pounds: $0.85 \times 6.5 = 5.525$ dollars. Money is written to the nearest cent, so this rounds to \$5.53.
- Choice A is correct.** (5.3.2.4) $V = 13 \times 2 \times 4 = 104 \text{ m}^3$.
- Choice C is correct.** (5.1.3.4) Total: $8.5 + 12.3 + 9.7 + 10.5 = 41.0 \text{ kg}$.
- Choice C is correct.** (5.4.1.2) First add the liquid amounts: $1\frac{1}{2} + \frac{1}{2} = 2$ cups. Since 1 cup is 8 fl oz, $2 \times 8 = 16$ fl oz.
- Choice D is correct.** (5.1.2.2) Dividing by 100 moves the decimal 2 places left: $0.3 \rightarrow 0.03 \rightarrow 0.003$.
- The correct answer is $\frac{13}{24}$.** (5.1.3.4) The least common denominator of 8 and 6 is 24. Rewrite $\frac{3}{8}$ as $\frac{9}{24}$ and $\frac{1}{6}$ as $\frac{4}{24}$. Then $\frac{9}{24} + \frac{4}{24} = \frac{13}{24}$.
- Choice B is correct.** (5.1.2.1) A fraction with denominator 10 equals a decimal with one place: $\frac{8}{10} = 0.8$.
- Choice A is correct.** (5.1.3.4) Both circles show the same shaded amount. Circle A has 1 part shaded out of 3; Circle B has 2 parts shaded out of 6. Since these represent equal portions, $\frac{1}{3} = \frac{2}{6}$.
- Choice D is correct.** (5.1.3.3) $3\frac{1}{9} \approx 3$ and $2\frac{7}{8} \approx 3$. So $3\frac{1}{9} + 2\frac{7}{8} \approx 3 + 3 = 6$ miles.
- Choice B is correct.** (5.2.2.1) $\text{LCM}(9,6) = 18$. $\frac{1}{9} = \frac{2}{18}$ and $\frac{1}{6} = \frac{3}{18}$. $\frac{2}{18} + \frac{3}{18} = \frac{5}{18}$.
- Choice A is correct.** (5.1.3.4) Each full cup makes 5 one-fifth-cup sauce cups. $9 \div \frac{1}{5} = 9 \times 5 = 45$ small cups.
- Choice D is correct.** (5.2.1.2) Each term is half the previous: $8 \div 2 = 4$.
- Choice B is correct.** (5.2.2.1) For pencils, every group of 3 costs \$1, so 12 pencils cost $12 \div 3$ dollars. The erasers cost 5×2 dollars, so add those two costs.
- Choices A, B are correct.** (5.1.3.4) C gives $\frac{5}{12}$; D gives $\frac{1}{8}$.
- Choice C is correct.** (5.1.2.2) 35×100 ends with 2 zeros, while $35 \times 1,000$ ends with 3 zeros. Multiplying by the larger power of 10 gives more zeros.
- Choice C is correct.** (5.1.3.4) The plot shows 2 fish at 2 lbs, 3 fish at $2\frac{1}{4}$ lbs, 2 fish at $2\frac{1}{2}$ lbs, and 2 fish at $2\frac{3}{4}$ lbs. The total is $21\frac{1}{4}$ lbs.
- Choice B is correct.** (5.1.2.2) $156 \times 10 = 1,560$. The total cost is \$1,560.
- Choice D is correct.** (5.1.2.1) Grid shows 0.405 shaded. Tenths: 0.405 has 4, 0.504 has 5. So $0.504 > 0.405$ because 5 tenths $>$ 4 tenths.
- Choice B is correct.** (5.1.3.4) Point V is positioned 6 units right and 8 units up from the origin, giving the coordinates (6, 8).
- Choice B is correct.** (5.2.2.1) Check each expression after simplifying the parentheses. A is $24 \div 4 = 6$, a whole number. B is $13 \div 6$, which is not a whole number. C is $16 \div 4 = 4$, so only B fits.
- The correct answer is 1000.** (5.1.2.2) $\frac{100,000}{100} = 1,000$, which is 10^3 .



Lab Notes for a Future Scientist

Dear Curious Scientist,

◇ 10 tests. Many experiments. Tons of data. You've been running a research project on yourself, and the results are clear: you are better at math today than you were when you started. That's what science calls progress, and you earned it. ◇

★ **What scientists know:** a failed experiment is still useful data. Every problem you missed taught you something. You used that data to adjust, retry, and improve. That's how science works. That's how you've been working. ★

Lab Results

- **Hypothesis:** CONFIRMED. Effort + practice = real growth.
- **Method:** STRONG. You try strategies, observe what works, and adjust.
- **Data Collection:** CAREFUL. You read carefully and copy numbers exactly.
- **Conclusion:** CONFIDENT. You're test-ready.

Scientist's tip: curious minds make great test-takers. On test day, be curious about each question. Ask, "What is this asking?" Ask, "What's the smartest way?" Then experiment, observe, and answer. You will do great.

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 Scientist (Keep Questioning)

PRACTICE TODAY. MASTER TOMORROW.

Give your child the confidence to excel in **Grade 5 Math!**
This book includes **10 complete practice tests** designed to build strong skills, improve test readiness, and achieve success.



10

COMPLETE
PRACTICE
TESTS

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- ✓ Results-Driven.

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Strengthen Skills

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



Improve Test Readiness

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Achieve Success

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- ✓ Fractions & Decimals
- ✓ Algebraic Thinking
- ✓ Geometry
- ✓ Measurement & Data
- ✓ Graphing & Data Analysis
- ✓ Number Patterns
- ✓ Word Problems
- ✓ Ratio & Proportion
- ✓ Perimeter, Area & Volume
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