

$\frac{2}{3}$

0,25



%

FULL-LENGTH

Illinois

$\frac{2}{4}$

$7 \times 8 =$



7×8

$56 \div 7$

$(a+b)^2$

3

★★★★★
Aligned to State Standards

IAR

MATH

Grade

5

PRACTICE TESTS

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



3 Full-Length Practice Tests
Aligned to State Standards



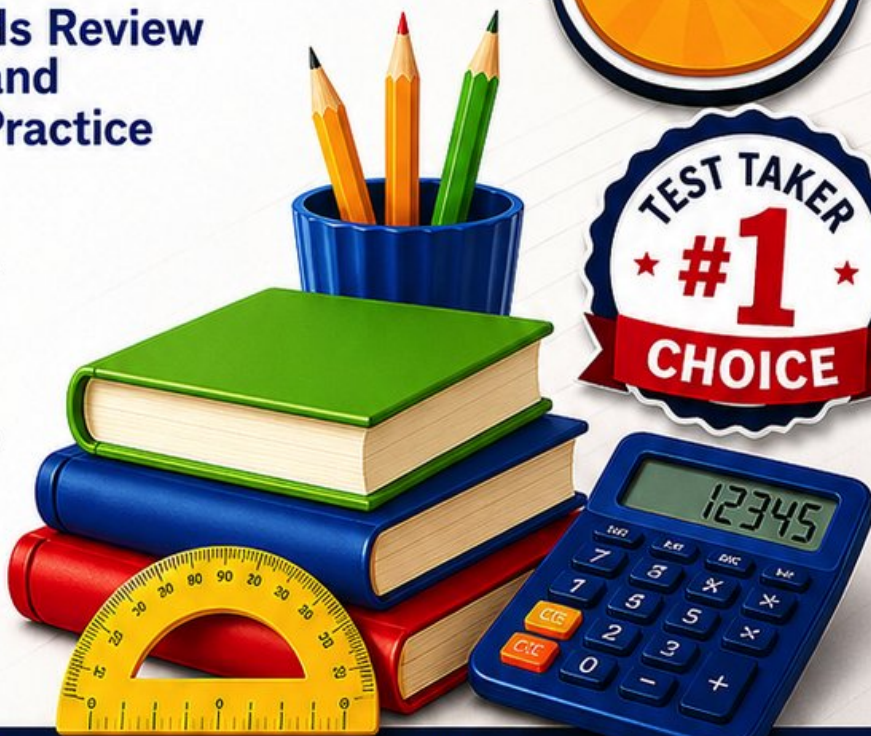
Covers All Grade 5 Math Topics
Numbers & Operations, Fractions,
Decimals, Geometry, Measurement,
Data & Problem Solving



Build Confidence
Strengthen Skills • Improve Accuracy
• Boost Test Readiness



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



WRITTEN FOR
GRADE 5 STUDENTS



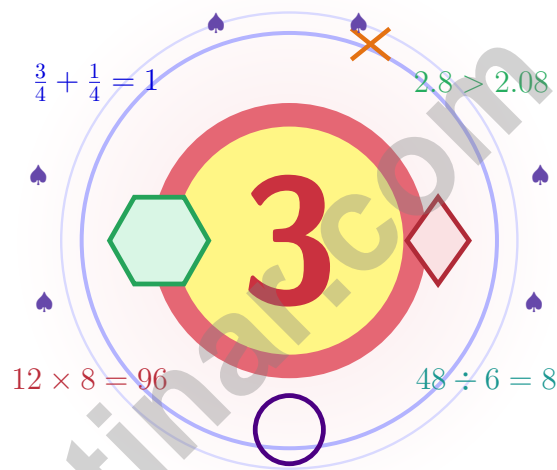
PERFECT FOR
TEST PREP & REVIEW



CLASSROOM, HOME,
OR SELF-STUDY USE

3 Illinois IAR Grade 5 Math Practice Tests

Skyline-tall thinking for prairie-wide curiosity



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

Jay Daie and Reza Nazari



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Welcome, Illinois Math Explorer

Skyline-tall thinking for prairie-wide curiosity

A Note to Grade 5 Mathematicians of Illinois

Math is like a tower in Chicago: every floor stands on the one below, so the careful first steps lift the whole building.

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

Notice the numbers, units, and any tricky words.

Sketch

Sketch a picture, table, or quick number line.

Confirm

Confirm your answer with an estimate or check.

An Illinois promise to yourself: I will build my thinking floor by floor, the way Chicago raises a skyline – strong base, careful frame, beautiful peak.

How to Use This Book

A simple game plan that turns practice into real progress

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 steady 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 more attention.

Step 4: Adjust

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

A Strong 3-Week Illinois Routine

Week 1	Begin with Test 1 – a low-pressure read of your math.
Week 2	Run Test 2 with one new habit, like always checking labels.
Week 3	Finish Test 3 with calm, careful, confident effort.



Scan me

Test Overview

What these practice tests help Grade 5 students build

These three practice tests prepare Grade 5 students in the Prairie State for the Illinois IAR with the steady focus of a builder reading blueprints. 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 IAR: 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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Practice Test Answers and Explanations	_____	68

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)

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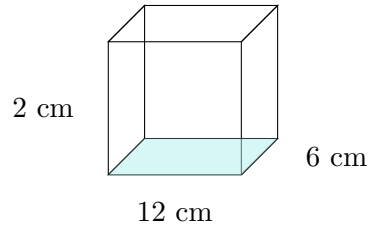
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1 hour (hr) = 60 minutes (min) 1 year = 12 months

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



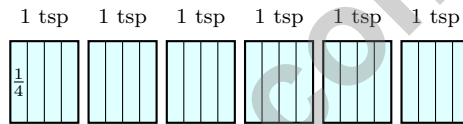


1)

A rectangular prism has dimensions shown. What is the volume?

- | | |
|---|--|
| <input type="checkbox"/> A. 20 cm^3 | <input type="checkbox"/> C. 36 cm^3 |
| <input type="checkbox"/> B. 72 cm^3 | <input type="checkbox"/> D. 144 cm^3 |

2) A recipe calls for $\frac{1}{4}$ -teaspoon portions of salt. How many portions are in 6 teaspoons?



6 teaspoons split into quarter-teaspoon portions

- | | |
|--------------------------------|--------------------------------|
| <input type="checkbox"/> A. 6 | <input type="checkbox"/> C. 24 |
| <input type="checkbox"/> B. 12 | <input type="checkbox"/> D. 30 |
- 3) Marcus says that 45×100 has 2 zeros. Is he correct?
- | | |
|--|--|
| <input type="checkbox"/> A. No; the product has 1 zero. | <input type="checkbox"/> C. No; the product has 4 zeros. |
| <input type="checkbox"/> B. No; the product has 3 zeros. | <input type="checkbox"/> D. Yes, he is correct. |
- 4) Write an expression for: add 25 to the product of 4 and 3, then divide the result by 2.

Record your expression in the space provided.



5) Find: $32.1 \div 10^2$.

Record your answer in the space provided.

6) What is the missing denominator? $\frac{2}{3} = \frac{8}{?}$

A. 10

C. 16

B. 18

D. 12

7) A movie lasts $2\frac{1}{4}$ hours. You watch $1\frac{3}{4}$ hours. How much of the movie is left?

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

C. 1 hr

B. $\frac{3}{4}$ hr

D. $1\frac{1}{4}$ hr

8) What is the value of $(2 + 3) \times (2 + 3)$?

A. 10

C. 25

B. 15

D. 30

9) Which comparison is correct?

A. $5 \times \frac{7}{8} > 5$

C. $5 \times \frac{7}{8} < 5$

B. $5 \times \frac{7}{8} = 5$

D. $5 \times \frac{7}{8}$ is undefined

10) Simplify before multiplying: $\frac{6}{8} \times \frac{4}{9}$. Which choice shows the product in simplest form?

A. $\frac{24}{72}$

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

B. $\frac{3}{4} \times \frac{4}{9} = \frac{1}{3}$

D. $\frac{12}{17}$



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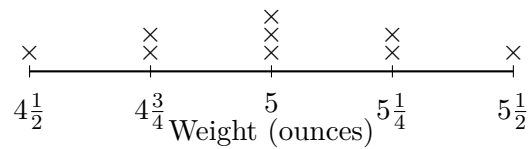
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- 1) The line plot displays the weights (in ounces) of small packages:

Package Weights



What is the total weight of the three packages that each weigh 5 ounces?

- A. 10 ounces
- B. 15 ounces
- C. 20 ounces
- D. 25 ounces
- 2) A runner training for a race completed 8.75 miles. She plans to run 12.5 miles. How many miles are left?
- A. 3.85 miles
- B. 3.95 miles
- C. 4.15 miles
- D. 3.75 miles
- 3) A 4-foot ribbon is cut into pieces that are each $\frac{1}{3}$ foot long. How many pieces can be cut?
- A. 6 pieces
- B. 9 pieces
- C. 18 pieces
- D. 12 pieces
- 4) Compare using $<$, $>$, or $=$: 7.20 ____ 7.2 .

Record your answer in the space provided.



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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.MD.C.5a) $V = 12 \times 6 \times 2 = 72 \times 2 = 144 \text{ cm}^3$.
- 2) **Choice C is correct.** (5.NF.B.7c) $6 \div \frac{1}{4} = 6 \times 4 = 24$. There are 24 portions.
- 3) **Choice D is correct.** (5.NBT.A.2) Yes. Multiplying by 100 gives 4,500, and that product ends with exactly 2 zeros.
- 4) **The correct answer is $(25 + 4 \cdot 3)/2$.** (5.OA.A.2) The product of 4 and 3 is 4×3 ; add 25 to that product, then divide the entire result by 2.
- 5) **The correct answer is 0.321.** (5.NBT.A.2) Move the decimal point two places left: $32.1 \rightarrow 0.321$.
- 6) **Choice D is correct.** (5.NF.A.2) The numerator increased from 2 to 8 (multiply by 4). Multiply the denominator by 4: $3 \times 4 = 12$.
- 7) **Choice A is correct.** (5.NF.A.1) Borrow 1: $1\frac{5}{4} - 1\frac{3}{4} = \frac{2}{4} = \frac{1}{2}$ hr.
- 8) **Choice C is correct.** (5.OA.A.1) Start with the parentheses: $2 + 3 = 5$. The expression becomes 5×5 , which equals 25.
- 9) **Choice C is correct.** (5.NF.B.5a) Since $\frac{7}{8} < 1$, multiplying 5 by it gives a smaller result. $5 \times \frac{7}{8} = \frac{35}{8} = 4.375 < 5$.
- 10) **Choice B is correct.** (5.NF.B.5b) Simplify $\frac{6}{8} = \frac{3}{4}$. Then $\frac{3}{4} \times \frac{4}{9} = \frac{12}{36} = \frac{1}{3}$.
- 11) **Choice C is correct.** (5.NBT.A.2) A power of 10 tells how many factors of 10 to use. $95 \times 10^2 = 95 \times 100 = 9500$. This confirms the answer.
- 12) **Choice D is correct.** (5.NBT.B.7) Add: $5.04 + 2.93 = 7.97$ (hundredths: $4 + 3 = 7$; tenths: $0 + 9 = 9$; ones: $5 + 2 = 7$).
- 13) **Choice B is correct.** (5.OA.A.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.
- 14) **Choice A is correct.** (5.MD.C.5) Use the rectangular-prism volume formula: $8 \times 5 \times 7 = 280$. So the volume is 280 cubic centimeters.
- 15) **Choice C is correct.** (5.G.B.4) Using this definition, a quadrilateral with exactly one pair of parallel sides is a trapezoid. Rectangles, rhombuses, and squares have two pairs of parallel sides.
- 16) **Choice A is correct.** (5.OA.B.3) Each term is made by multiplying the previous term by 10: 1, 10, 100, 1,000, ...
- 17) **Choice A is correct.** (5.OA.B.3) For each pair, Pattern Q is 1 more than Pattern P: $2 - 1 = 1$, $4 - 3 = 1$, and $6 - 5 = 1$.
- 18) **Choice A is correct.** (5.G.B.3) The arrows show that the top and bottom sides are parallel. They never intersect and are always the same distance apart.
- 19) **Choice B is correct.** (5.NBT.A.2) Multiplying by 10 moves the decimal one place right: $0.003 \rightarrow 0.03$.
- 20) **Choices A, B are correct.** (5.G.B.4) Every triangle has exactly 3 sides and 3 vertices. Some triangles have a right angle, but many triangles do not.
- 21) **Choice D is correct.** (5.NBT.B.5) Multiply: $31 \times 7 = (30 \times 7) + (1 \times 7) = 210 + 7 = 217$.
- 22) **The correct answer is $\frac{1}{24}$.** (5.NF.B.7c) A complete response shows one whole divided into 6 equal sixths, then one sixth divided into 4 equal parts. That makes 24 equal parts in the whole, so each part is $\frac{1}{24}$.
- 23) **Choice B is correct.** (5.NF.B.5a) $30 \times \frac{2}{3} = 20$ feet. Since $\frac{2}{3} < 1$, the painted length is less than 30 feet.
- 24) **Choice A is correct.** (5.OA.A.2) One-third of a whole amount means divide that whole amount by 3. The whole amount here is the sum $(27 + 18)$, so use $(27 + 18) \div 3$.
- 25) **The correct answer is (4, 20).** (5.G.A.2) The 4th term of Pattern A is 4, and the 4th term of Pattern B is 20. So the ordered pair is (4, 20).
- 26) **Choice C is correct.** (5.OA.A.2) Both expressions add the same three numbers: 6, 5, and 9. Changing the order or grouping of addition does not change the sum.
- 27) **Choice C is correct.** (5.NF.B.4) $2 \times 1\frac{1}{2} = 2 \times \frac{3}{2} = \frac{6}{2} = 3$ cups.
- 28) **Choice C is correct.** (5.G.B.4) The circle for squares is completely inside the circle for rectangles, so every square shown is also a rectangle.
- 29) **Choice B is correct.** (5.NBT.A.1) In 2.518, the digit 5 is in the first place after the decimal point, which is the tenths place.



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!



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and practice materials!