

4

COMPLETE

Illinois IAR

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**



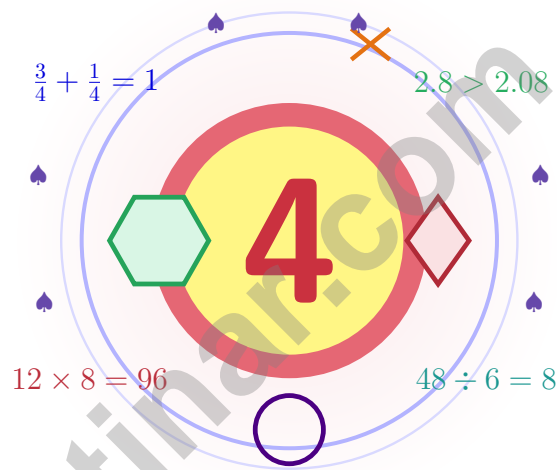
**PERFECT FOR
CLASSROOM,
HOME, OR
SELF-STUDY**



**ALIGNED TO
ILLINOIS
STATE STANDARDS
(IAR)**

4 Illinois IAR Grade 5 Math Practice Tests

Four chances to read carefully, solve smartly, and grow stronger



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

Jay Daie and Reza Nazari



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Hello, Illinois – Four Tests, Four Wins

Four chances to grow your math mind one careful step at a time

Illinois Grade 5: This Mission Is for You

This book gives you four chances to read closely, solve carefully, and level up your math thinking. Math is like a tower in Chicago: every floor stands on the one below, so the careful first steps lift the whole building.

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.

See

See the whole problem
before you start the
math.

Plan

Plan one careful step
before the next.

Reflect

Reflect after each
problem to lock the
lesson in.

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

Four Tests, One Routine

A four-step routine that turns practice into real improvement

Step 1: Set Up

Pencil ready, distractions gone.

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

Step 2: Work the Test

Take a full test like the real day.

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

Step 3: Look Back

Walk through your answers without rushing.

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

Step 4: Climb Higher

Pick one or two skills to sharpen next.

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

A Four-Week Illinois Mission Map

Week	Mission Focus
Week 1	Take Test 1 and sketch your starting blueprint.
Week 2	Take Test 2 and frame in word problems and clear written steps.
Week 3	Take Test 3 and reinforce fractions, decimals, and unit conversions.
Week 4	Take Test 4 and finish the floor plan with calm, careful, confident work.



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Test-Style Practice

What these four 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 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 IAR-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)

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



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1) A store sells ribbon by the meter. One spool has 5.5 meters. If each customer buys one half meter, or 0.5 meter, how many customers can be served from one spool?

- A. 9 customers C. 12 customers
 B. 10 customers D. 11 customers

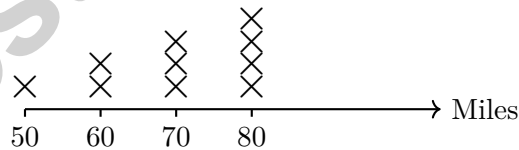
2) Order these products from smallest to largest: $4 \times \frac{1}{4}$, 4×1 , 4×2 .

- A. $4 \times 2 < 4 \times 1 < 4 \times \frac{1}{4}$ C. $4 \times 1 < 4 \times \frac{1}{4} < 4 \times 2$
 B. All are equal D. $4 \times \frac{1}{4} < 4 \times 1 < 4 \times 2$

3) On a graph of pages read, the x-axis shows minutes and the y-axis shows pages. The point (10, 20) is plotted. How many pages does this point show?

Record your answer in the space provided.

4) The line plot shows the number of miles traveled by delivery drivers:



Which distance was traveled most frequently?

- A. 50 miles C. 70 miles
 B. 60 miles D. 80 miles



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- 1) A recipe has 9 cups of oil. Each small sauce cup holds $\frac{1}{5}$ cup. How many small sauce cups can be filled?
- A. 45 sauce cups C. 35 sauce cups
 B. 40 sauce cups D. 50 sauce cups
- 2) Which number divided by 100 equals 0.45?
- A. 4.5 C. 450
 B. 4,500 D. 45
- 3) Evaluate: $3 + 18 \div 6 - 1$
- A. 2 C. 5
 B. 4 D. 20
- 4) Align the decimals and find: $12.3 - 4.56$.
- A. 7.74 C. 7.84
 B. 7.64 D. 8.24
- 5) How many sides does an octagon have?
- A. 6 C. 8
 B. 7 D. 9



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1) Subtract and simplify: $1 - \frac{3}{4}$

A. $\frac{3}{4}$

B. $\frac{2}{4} = \frac{1}{2}$

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

D. $\frac{2}{3}$

2) Convert 0.5 kilograms to grams.

A. 5 g

B. 50 g

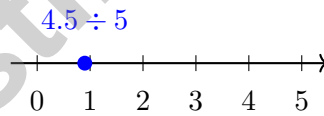
C. 500 g

D. 5,000 g

3) A teacher stacks 5 identical rectangular blocks. Each block is 4 inches by 3 inches by 2 inches. What is the total volume of the stack?

Record your answer in the space provided.

4) A number line shows division. If you divide 4.5 by 5, where does the quotient fall?

 A. Between 0 and 1 B. Between 1 and 2 C. Between 2 and 3 D. Between 4 and 5

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

- 1) **Choice D is correct.** **(5.NBT.B.7)** Each meter has two half-meter pieces. So 5.5 meters has $5.5 \times 2 = 11$ half-meter pieces, enough for 11 customers.
- 2) **Choice D is correct.** **(5.NF.B.5a)** The products are 1, 4, and 8 respectively, in increasing order.
- 3) **The correct answer is 20 pages.** **(5.G.A.2)** The x-coordinate shows minutes, and the y-coordinate shows pages. So (10, 20) means 10 minutes and 20 pages.
- 4) **Choice D is correct.** **(5.MD.B.2)** Count at each value: 50 miles (1 mark), 60 miles (2 marks), 70 miles (3 marks), 80 miles (4 marks). The most common value is 80 miles with 4 occurrences.
- 5) **Choice C is correct.** **(5.NBT.A.2)** $34 \times 10 = 340$. Multiply by 10 by appending one zero.
- 6) **Choice D is correct.** **(5.OA.A.2)** The distributive property lets 9 multiply both parts of the sum: 9×6 and 9×4 .
- 7) **Choice B is correct.** **(5.NBT.B.5)** Multiply: $15 \times 23 = 15 \times (20 + 3) = (15 \times 20) + (15 \times 3) = 300 + 45 = 345$ plants.
- 8) **Choice C is correct.** **(5.NBT.A.2)** Following the pattern, $1.2 \times 1000 = 1200$ (move decimal 3 places right).
- 9) **Choice C is correct.** **(5.MD.C.5)** Choose the operation from the story, then keep the unit with the answer. Multiply: $0.6 \times 5 = 3.0$ kilometers. This confirms the answer.
- 10) **Choice B is correct.** **(5.NF.B.4b)** The blue region is 2 out of 4 columns. The red region is 1 out of 3 rows. The overlap shows $\frac{2}{4} \times \frac{1}{3} = \frac{2}{12}$.
- 11) **Choice A is correct.** **(5.G.A.2)** The 4th input is 4 and the 4th output is 12. Put them in input-output order, so the ordered pair is (4, 12).
- 12) **Choice A is correct.** **(5.NF.B.7c)** Each whole contains 4 pieces of size $\frac{1}{4}$. With 3 wholes, there are $3 \times 4 = 12$ pieces.
- 13) **The correct answer is 100 in³.** **(5.MD.C.5a)** $10 \times 5 \times 2 = 100$ in³.
- 14) **Choice D is correct.** **(5.MD.C.4)** $2 \times 2 \times 4 = 16$ unit cubes. (A: 18, B: 18, C: 20)
- 15) **Choice B is correct.** **(5.NBT.A.2)** Dividing by 100 moves the decimal point two places to the left. $4,200 \div 100 = 42$.
- 16) **Choice A is correct.** **(5.OA.A.2)** First divide the cupcakes equally: $24 \div 6$ per box. Then 2 cupcakes are removed from each box, so subtract 2 after dividing.
- 17) **Choice C is correct.** **(5.NF.B.7c)** The unit fraction is the amount being shared, so divide $\frac{1}{7}$ by 2. The equation is $\frac{1}{7} \div 2 = n$.
- 18) **Choices A, C are correct.** **(5.OA.A.1)** Start with the grouped addition: $8 + 4 = 12$. Then $12 \div 2 = 6$, and $6 + 1 = 7$, so A and C are true. Choice B skips the grouping, and choice D gives the wrong final value.
- 19) **The correct answer is 1.7 ft.** **(5.NBT.B.7)** Total length cut: $2.75 + 3.8 + 4.25 = 10.8$ ft. Remaining length: $12.5 - 10.8 = 1.7$ ft.
- 20) **The correct answer is 6000.** **(5.NBT.A.2)** Multiplying by 10,000 moves the decimal point four places right: $0.6 \rightarrow 6,000$.
- 21) **Choice B is correct.** **(5.G.B.4)** The small square symbol marks a right angle, which measures exactly 90 degrees.
- 22) **Choice B is correct.** **(5.G.A.2)** Hour 3: Machine A produces $3 \times 3 = 9$, Machine B produces $5 \times 3 = 15$. Pair is (9, 15).
- 23) **Choice D is correct.** **(5.MD.A.1)** Two servings is $\frac{1}{4}$ of 8 servings. The full recipe uses 20 fluid ounces, so $20 \div 4 = 5$ fluid ounces.
- 24) **Choice D is correct.** **(5.NF.A.2)** $\frac{3 \times 4}{7 \times 4} = \frac{12}{28}$.
- 25) **Choice B is correct.** **(5.NBT.A.3b)** In the tenths place: $5 > 3$, so $2.53 > 2.35$ regardless of hundredths.
- 26) **Choice B is correct.** **(5.NF.A.1)** Convert to fourths: $2\frac{1}{2} = 2\frac{2}{4}$. Add: $1\frac{3}{4} + 2\frac{2}{4} = 3\frac{5}{4} = 4\frac{1}{4}$.
- 27) **Choice D is correct.** **(5.NF.B.5b)** $2\frac{1}{2} \times 12 = \frac{5}{2} \times 12 = \frac{60}{2} = 30$ inches.
- 28) **Choice B is correct.** **(5.NBT.A.2)** The diagram shows $73.5 \div 10 = 7.35$ grams. Dividing by 10 moves decimal 1 place left.
- 29) **Choice D is correct.** **(5.MD.A.1)** 1 liter = 1,000 milliliters. Divide: $5000 \div 1000 = 5$ L.



Authors' Notes

A Message From Your Math Partner

Hey there, Problem Solver!

◇ Incredible work! You've journeyed through 4 complete practice tests, and that's no small accomplishment! Each question you tackled strengthened your mathematical thinking. When you began, some problems might have felt overwhelming, but now you've developed the skills to break them down systematically. You've transformed into a confident mathematician who understands that persistence beats perfection every single time! ◇

★ **Here's something mathematicians understand:** mistakes are simply opportunities to learn something new. The greatest problem-solvers in history made countless errors before their breakthroughs. Through these 4 tests, you've practiced that same growth mindset. You've discovered that every challenging problem teaches you something valuable, and that knowledge stays with you forever! ★

Your Mathematical Growth Journey

- **Problem-Solving Skills:** EXCEPTIONALLY DEVELOPED! You can analyze complex situations with confidence!
- **Strategic Thinking:** SIGNIFICANTLY STRENGTHENED! You recognize patterns and apply effective strategies!
- **Persistence Level:** REMARKABLY HIGH! You've proven you can work through any challenge!
- **Test Readiness:** COMPLETELY PREPARED! You have all the tools you need to succeed!

Remember this: test day is your opportunity to demonstrate everything you've learned! You've completed 4 comprehensive practice tests; that's substantial preparation! You've analyzed problems, applied strategies, and developed mathematical confidence. Now it's time to showcase your abilities! Take a calming breath, trust your preparation, and remember that every skill you've built is ready to support you. You've got this!

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

Math Teacher and Your Cheer Squad

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.



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DETAILED ANSWER KEY

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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
on Test Day



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