

6

Illinois IAR

GRADE 5 MATH

PRACTICE TESTS

Complete Standards-Based Practice
— for Grade 5 Math Success —



$$A = \frac{1}{2}bh$$



$$5^2 = 25$$



**6 FULL-LENGTH
PRACTICE TESTS**

Realistic style questions



**STANDARDS-BASED
PRACTICE**

Covers all Grade 5
Math standards



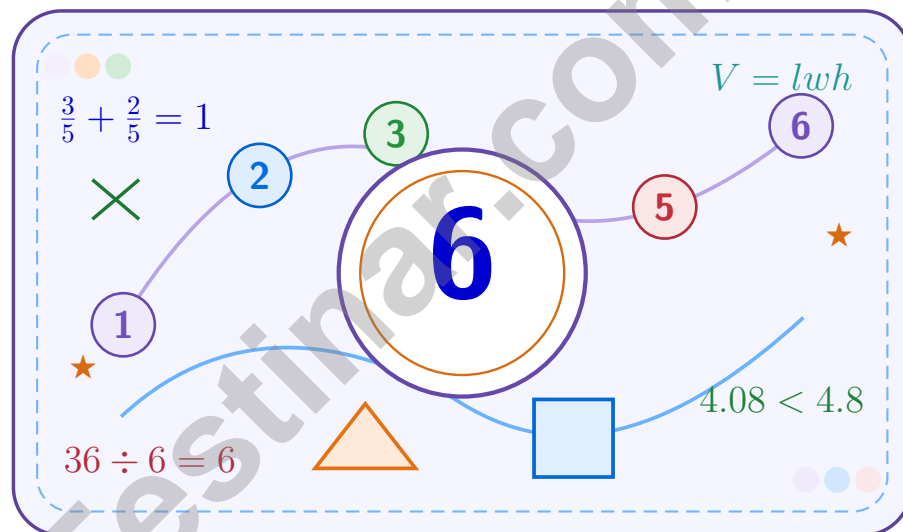
**BUILD CONFIDENCE.
IMPROVE SCORES.**

Target weak areas and
achieve success

★ STRONG PRACTICE. BRIGHT FUTURE. ★

6 Illinois IAR Grade 5 Math Practice Tests

A six-step confidence climb with clear review, smart strategy, and practice that gets stronger every round



Six full tests, a focused skill booster, and student-friendly support from start to finish for Grade 5 mathematicians who want to climb higher.

Jay Daie and Reza Nazari



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Welcome to the Confidence Climb

This book is here to help you practice with purpose and rise step by step

To the Grade 5 Mathematician

This practice book is a place to think, try, fix, and grow. You do not have to be perfect on the first question or the first test. What matters most is careful effort, clear work, and learning from each round of practice.

Use these six tests like stepping-stones. Take one test at a time, check your answers honestly, and notice which skills need more attention. Small improvements add up fast.

Try

Give each problem your best thinking.

Check

Study mistakes and learn what happened.

Rise

Bring that lesson into the next round.

A strong habit for every page: read carefully, estimate when it helps, show your steps, and keep going even when a question feels tricky. That is how steady math confidence is built.

How to Use This Book

A simple practice routine that turns six tests into steady growth

Step 1: Warm Up

Start with the quick review.
Spend a few minutes refreshing the ideas before you start a test.

Step 2: Take the Test

Take one full practice test.
Work in a quiet space and let accuracy matter more than speed.

Step 3: Study the Pattern

Check your work honestly.
Circle missed questions and notice patterns in the mistakes.

Step 4: Learn, Then Retry

Read the explanation and try again.
Learning happens after the test too. Fixing mistakes is one of the smartest parts of practice.

A Six-Week Climb Map

Week	Mission Focus
Week 1	Take Test 1 and review any place-value or operation slips.
Week 2	Take Test 2 and focus on showing neat, easy-to-read work.
Week 3	Take Test 3 and give extra time to fractions or decimals if needed.
Week 4	Take Test 4 and slow down on word problems and units.
Week 5	Take Test 5 and compare your score and habits with earlier rounds.
Week 6	Take Test 6 and finish with calm, careful, confident work that uses everything you practiced before.



Scan me

Test Overview

What this practice book helps students do

These practice tests are designed to help Grade 5 students get comfortable with the kind of thinking used on the Illinois IAR. The goal is bigger than only getting answers right. Students are practicing how to read closely, choose a strategy, solve carefully, and explain their work when needed.

Selected-Response Questions

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

Constructed-Response Questions

Students show their thinking, steps, models, or explanations. Even when unsure, writing what they know can help organize the problem.

Grade 5 Skills You Will Practice Often

- place value, comparing numbers, and rounding
- multi-digit addition, subtraction, multiplication, and division
- fractions, decimals, and mixed numbers
- perimeter, area, volume, and measurement conversions
- coordinate points, patterns, graphs, and tables
- geometry and multi-step word problems

What strong work looks like: the answer is correct, the steps are clear, the labels or units are included, and the final result makes sense.



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Grade 5 Mathematics

1

Questions: 40 Duration: No time limit

Calculator Policy: Calculators are not allowed



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)

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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) What is $36 \div 10^1$?

- A. 360 C. 0.36
 B. 36 D. 3.6

2) A student writes: $4 + 6 \times 2 = 10 \times 2 = 20$. What is the error?

- A. Multiplication should be done first; the answer is 16. C. The student added when they should have subtracted.
 B. Division comes before multiplication. D. The answer is correct.

3) Compare two addition patterns. Pattern Plus-3: starts at 1, adds 3 each time. Pattern Plus-5: starts at 1, adds 5 each time. How much bigger is Plus-5 than Plus-3 at step 5?

Step	Plus-3	Plus-5
1	1	1
2	4	6
3	7	11
4	10	16
5	?	?

- A. 5 C. 9
 B. 8 D. 10

4) A recipe uses $1\frac{1}{2}$ cups of milk and $\frac{1}{2}$ cup of water. How many fluid ounces of liquid is that in all?

Use: $1 \text{ cup} = 8 \text{ fl oz}$



Total cups \rightarrow fluid ounces

- A. 8 fl oz C. 16 fl oz
 B. 12 fl oz D. 20 fl oz



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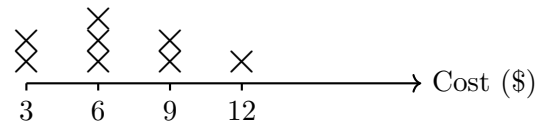
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- 1) The line plot shows the cost (in dollars) of items bought at a shop:



How many items cost less than \$9?

- A. 5 items C. 7 items
 B. 6 items D. 8 items
- 2) Multiply: $1\frac{3}{4} \times 2\frac{2}{5}$
- A. $4\frac{1}{5}$ C. $3\frac{9}{20}$
 B. $3\frac{1}{10}$ D. $5\frac{1}{5}$
- 3) Without calculating both products, which expression has the larger value?
 A: $\frac{5}{4} \times 16$ B: $\frac{3}{4} \times 16$

Record A or B in the space provided.

- 4) A candy store has 5 pounds of gummy bears. If they package them in bags of $\frac{1}{4}$ pound each, how many bags can they fill?
- A. 15 bags C. 18 bags
 B. 16 bags D. 20 bags



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1) A student incorrectly calculated the volume of a $7\text{ m} \times 5\text{ m} \times 4\text{ m}$ prism as $7 + 5 + 4 = 16\text{ m}^3$. What is the correct volume?

A. 70 m^3

C. 160 m^3

B. 140 m^3

D. 210 m^3

2) Evaluate the expression carefully: $10 + 2 \times (8 - 3) \div 5$

A. 12

C. 20

B. 14

D. 30

3) Find the sum: $\frac{5}{12} + \frac{1}{4}$.

Record your answer in the space provided.

4) A recipe uses 400 grams of rice twice in one week. How many kilograms of rice are used in all?

A. 0.4 kg

C. 4 kg

B. 0.8 kg

D. 8 kg

5) Which statement correctly describes a triangle?

A. An equilateral triangle has one angle of 90 degrees

C. An isosceles triangle has no equal sides

B. An obtuse triangle has no angle greater than 90 degrees

D. A scalene triangle has all sides different



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.A.2) A power of 10 tells how many factors of 10 to use. $36 \div 10 = 3.6$. This confirms the answer.
- 2) **Choice A is correct.** (5.OA.A.1) The student added before multiplying. Multiplication should happen first: $6 \times 2 = 12$, and then $4 + 12 = 16$.
- 3) **Choice B is correct.** (5.OA.B.3) Plus-3 at step 5: $1 + 3(4) = 13$. Plus-5 at step 5: $1 + 5(4) = 21$. Difference: $21 - 13 = 8$.
- 4) **Choice C is correct.** (5.MD.A.1) 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.
- 5) **The correct answer is $\frac{3}{8}$.** (5.NF.B.4b) Split into 4 columns and 2 rows = 8 parts; overlap is $3 \times 1 = 3$ parts: $\frac{3}{8}$.
- 6) **Choice B is correct.** (5.NBT.A.2) $6 \times 1000 = 6000$. Append three zeros to 6.
- 7) **Choice B is correct.** (5.NF.A.2) Total poured out: $\frac{2}{5} + \frac{1}{5} = \frac{3}{5}$. Remaining: $1 - \frac{3}{5} = \frac{2}{5}$ liter.
- 8) **Choice D is correct.** (5.NBT.B.7) Subtract: $4.92 - 1.67 = 3.25$. Check: $3.25 + 1.67 = 4.92$.
- 9) **Choice B is correct.** (5.NBT.A.2) Multiplying by 10 moves the digit 6 from the hundredths place to the tenths place, so 0.06 becomes 0.6.
- 10) **Choice C is correct.** (5.MD.C.4) Each layer has $6 \times 6 = 36$ unit cubes. With 6 layers, the cube has $36 \times 6 = 216$ unit cubes.
- 11) **Choice B is correct.** (5.MD.B.2) There are 2 X marks above $\frac{1}{4}$, so the total is $\frac{1}{4} + \frac{1}{4} = \frac{1}{2}$ cup.
- 12) **Choice B is correct.** (5.NF.B.7c) Use total amount divided by the size of one piece. The equation is $2 \div \frac{1}{5} = n$.
- 13) **Choice B is correct.** (5.MD.C.5) The base area is $12 \times 4 = 48$ square inches. Since $240 \div 48 = 5$, the height is 5 in.
- 14) **The correct answer is 8688.** (5.NBT.B.5) $362 \times 4 = 1,448$ and $362 \times 20 = 7,240$. Sum: $1,448 + 7,240 = 8,688$.
- 15) **Choice A is correct.** (5.G.B.4) The matching tick marks show Figure A has four equal sides. It has no right-angle marks, so it is a rhombus but not a square.
- 16) **Choice A is correct.** (5.OA.A.1) The words “four groups of the quantity $(6 + 2)$ ” mean the grouped quantity is multiplied by 4. That is represented by $4 \times (6 + 2)$.
- 17) **Choice D is correct.** (5.MD.C.5) Find both volumes: Box A is $8 \times 5 \times 4 = 160$, and Box B is $7 \times 5 \times 4 = 140$. The difference is 20 cubic feet.
- 18) **Choice A is correct.** (5.NBT.B.7) Subtract each column: ones $8 - 2 = 6$, tenths $6 - 3 = 3$, hundredths $4 - 1 = 3$. Result: 6.33.
- 19) **Choice D is correct.** (5.NBT.A.2) 60×500 is 6×5 with three factor zeros, making 30,000 with 4 zeros. $3,000 \times 10$ also makes 30,000, so it has the same number of zeros.
- 20) **Choice B is correct.** (5.G.A.2) Both points have the same y-coordinate (3), so the distance is $7 - 2 = 5$ units east.
- 21) **Choice D is correct.** (5.NBT.A.2) To convert meters to kilometers, divide by 1,000: $4,800 \div 1,000 = 4.8$. The road is 4.8 km long.
- 22) **Choices A, B are correct.** (5.G.B.4) A rhombus is a parallelogram with four equal-length sides. It does not have to have right angles, and it does have equal-length sides, so C and D are false.
- 23) **Choice B is correct.** (5.NF.B.7c) Since $3 \div \frac{1}{6} = 3 \times 6 = 18$, the whole number is 3.
- 24) **Choice D is correct.** (5.MD.C.5a) New height = 6 ft. $V = 6 \times 5 \times 6 = 180 \text{ ft}^3$.
- 25) **Choice D is correct.** (5.NBT.A.4) The tenths digit is 7. Since $7 \geq 5$, round ones up: $156 \rightarrow 157$. So 156.78 miles rounds to 157 miles.
- 26) **The correct answer is 7.5 m.** (5.MD.A.1) $750 \div 100 = 7.5$ m. Since 100 centimeters make 1 meter, divide centimeters by 100.
- 27) **Choice C is correct.** (5.G.A.2) The base \overline{AB} lies on $y = 3$. Point C is at $y = 7$, so it is $7 - 3 = 4$ units above the base.
- 28) **The correct answer is 343 cm^3 .** (5.MD.C.5a) A cube has the same side length in every direction. So the volume is $7 \times 7 \times 7 = 343 \text{ cm}^3$.
- 29) **Choice A is correct.** (5.G.A.2) The second coordinate is always 2 more than the first. Each coordinate increases by 1, so the next point is (3, 5).



Hey there, Mathematical Leader!

★ Leadership excellence demonstrated! You've guided yourself through six complete mathematical journeys, showing self-discipline, strategic thinking, and determination like a true leader! Each test required you to take charge of your learning, make strategic decisions, and persist through challenges. Your leadership of your own mathematical development has been truly impressive! ★

◇ **Here's what exceptional leaders understand:** great leaders prepare thoroughly, stay focused under pressure, and inspire confidence through their actions. They learn from every experience and continuously improve their skills. You've demonstrated those exact leadership qualities through these six tests! You've led yourself to mathematical excellence, and now you're ready to lead yourself to success on test day! ◇

Leadership Qualities Developed

- **Self-Direction:** You take initiative and guide your own problem-solving journey!
- **Strategic Vision:** You plan approaches carefully before executing solutions!
- **Resilient Mindset:** You persist through challenges without giving up!
- **Excellence Ready:** You're prepared to lead yourself to outstanding results!

Leadership wisdom: the strongest leaders trust their preparation when facing important challenges. You've prepared extensively through six complete practice tests. On test day, lead yourself with confidence. Trust the skills you've developed, trust the strategies you've practiced, and trust that you're ready. You've proven your mathematical leadership ability!

Want to share your leadership insights or celebrate a breakthrough moment? Share your journey at reza@testinar.com. Leaders inspire others, and your story matters!

Reza Nazari & Jay Daie

Your Math Coaches for Practice Wins

6 FULL-LENGTH TESTS. ENDLESS POTENTIAL.

PRACTICE TODAY. SUCCEED TOMORROW.

Give your child the tools they need to build strong math skills and test-taking confidence! This book includes **6 full-length practice tests** along with standards-based practice, mixed review, word problems, and a complete answer key.

★★★
PRACTICE
WITH PURPOSE.
ACHIEVE WITH
CONFIDENCE.

WHAT'S INSIDE:



6 FULL-LENGTH PRACTICE TESTS

Realistic tests designed to reflect the actual test format and help build confidence.



STANDARDS-BASED PRACTICE

Covers all essential Grade 5 math standards with clear explanations and examples.



MIXED REVIEW

Reinforces key concepts with a variety of question types and review exercises.



WORD PROBLEMS

Build critical thinking and problem-solving skills with real-world scenarios.



COMPLETE ANSWER KEY

Step-by-step explanations for every question to support learning and growth.



IMPROVE. PRACTICE. ACHIEVE.

Consistent practice leads to stronger skills, higher scores, and greater success.



WHY PRACTICE MAKES A DIFFERENCE



BUILD CONFIDENCE

Feel prepared and ready for any challenge.



IMPROVE ACCURACY

Strengthen skills and reduce careless mistakes.



THINK STRATEGICALLY

Develop problem-solving skills and deepen understanding.



MANAGE TIME

Practice under timed conditions to build stamina.



STAY MOTIVATED

Track progress and celebrate every win.



ACHIEVE SUCCESS

Reach goals and unlock your full potential!



Visit testinar.com/math5

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Smart Practice. Stronger Results.