

8 Illinois IAR

GRADE 6

MATH PRACTICE TESTS

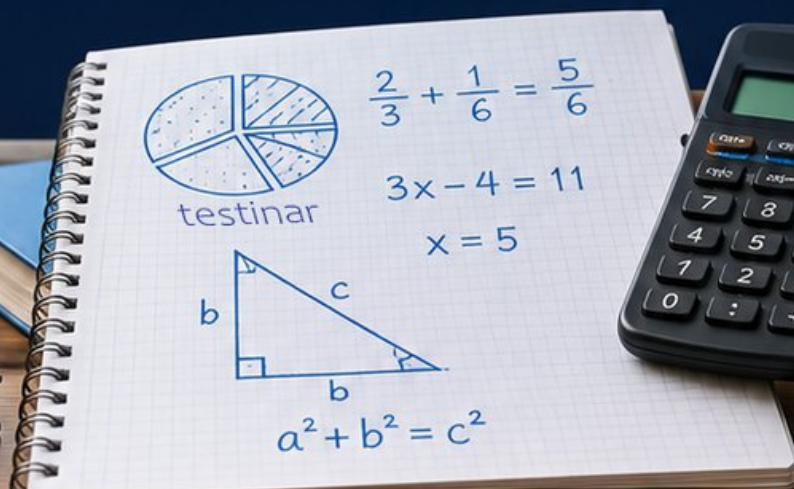
8
PRINTED
TESTS

+

2
ONLINE
TESTS

Use these two additional online practice tests for extra review after the printed tests in this book.

Standards-Aligned *Steady Southern* Problem Solving for
Comprehensive Assessment Program



You've
Got
This!



BUILT FOR
ACAP SUCCESS



REALISTIC TESTS
& QUESTION TYPES



STRENGTHEN
MATH SKILLS



REVIEW, PRACTICE,
AND IMPROVE

8 Illinois IAR Grade 6 Math Practice Tests

Standards-Aligned Prairie-To-City Reasoning for Illinois Assessment of Readiness



Eight complete 40-question Grade 6 practice rounds for IAR, built for prairie-to-city reasoning with ratios, rational numbers, expressions, equations, geometry, statistics, answer keys, and clear explanations for every item.

Jay Daie and Reza Nazari



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Welcome, Illinois Math Explorer!

Eight focused rounds using prairie-to-city reasoning

This book gives you eight full Grade 6 practice tests for IAR. Each round uses prairie grids, city routes, and clear written work as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

Your Illinois Practice Promise

Keep the logic visible: line up numbers, label units, and use the answer choices as a final check.

Read

Plan

Check

How to Use This Book

A eight-session routine for prairie-to-city reasoning

1. **Preview the skills.** Scan the quick review pages before beginning the first round.
2. **Work in order.** Take one 40-question test at a time in a quiet place.
3. **Mark confidence.** Put a small star beside problems where your plan felt strong.
4. **Correct actively.** Retry missed items before reading the full explanation.
5. **Plan the next round.** Use the growth log to choose one habit and one skill to practice.

Illinois review rhythm: Complete a round, review patterns in the misses, and set a short Chicago-strong target for next time.



What Is Inside?

Eight IAR tests, 320 questions, and a full review path

Part	What You Will Practice
Tests 1–3	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Tests 4–6	Skill-building rounds with expressions, equations, geometry, data, and problem models.
Tests 7–8	Final stamina rounds for mixed review, neat work, and flexible strategy choices.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Prairie-to-city reasoning means recognizing the skill even when the next question changes topic, changes format, or asks for an explanation.

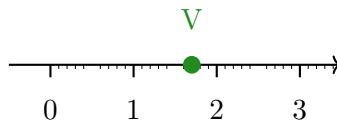


Scan me!
For more practice
& answers

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- 1) The number line below shows tick marks at tenths. Which decimal is at point V?



- A. 1.5 C. 1.7
 B. 1.6 D. 1.8
- 2) Check whether $x = 6$ is a solution to $x - 2 = 4$.
- A. Yes, because $6 - 2 = 4$ C. No, because $6 \times 2 = 12$
 B. No, because $6 + 2 = 8$ D. Yes, because $6 \div 2 = 3$
- 3) You can practice your instrument for more than 30 minutes but must stop before 60 minutes. If t is the time in minutes, which two inequalities best describe this?

Inequality	Meaning
$t > 30$	more than 30 min
$t < 60$	less than 60 min

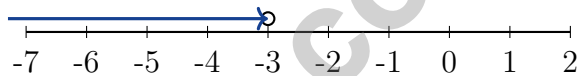
- A. $t < 30$ and $t < 60$ C. $t > 30$ and $t < 60$
 B. $t > 30$ and $t > 60$ D. $t \leq 30$ and $t \geq 60$
- 4) After simplifying $4x + 7 + 2x - 3$, what is the coefficient of x ?



5)

Notebooks Purchased	Total Cost (\$)
3	12
5	20
8	k

Use the table to find the cost per notebook and calculate the value of k when 8 notebooks are purchased.

6) Which number line shows $x < -3$?

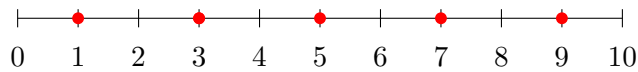
- A. Open circle at -3 , arrow left C. Open circle at -3 , arrow right
 B. Closed circle at -3 , arrow left D. Closed circle at 3 , arrow left
- 7) A composite figure includes a rectangle (12 m by 5 m) with a triangular roof (base 12 m, height 3 m). What is the total area?
- A. 42 m^2 C. 78 m^2
 B. 60 m^2 D. 90 m^2
- 8) Jamal receives a salary of \$2000. He pays 15% for taxes and saves 20% of what remains. How much does he save?
- A. \$200 C. \$340
 B. \$300 D. \$400



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1) A golfer is 12 strokes under par. Which representation shows the integer score?

- A. $|-12|$ representing the magnitude of the score C. 12 representing 12 strokes under
 B. -12 representing 12 strokes under D. $|12|$ representing 12 strokes over



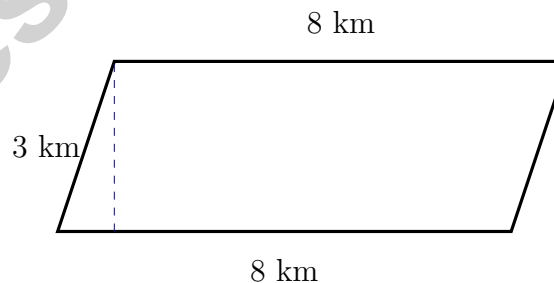
2)

A dot plot shows the data: one dot at 1, two dots at 3, one dot at 5, one dot at 7, one dot at 9. What is the range?

- A. 6 C. 2
 B. 8 D. 5

3) A pennant in the shape of a triangle has a base of 12 inches and an area of 60 in^2 . What is its height?

- A. 5 in C. 15 in
 B. 10 in D. 20 in



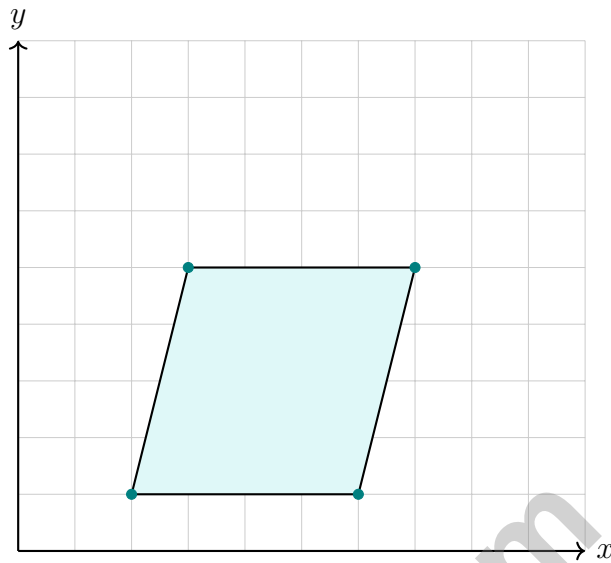
4)

What is the area of this parallelogram?

- A. 11 km^2 C. 24 km^2
 B. 16 km^2 D. 64 km^2



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5)

What is the name of this quadrilateral?

- A. Parallelogram C. Quadrilateral
 B. Rectangle D. Trapezoid

6) A triangular prism has a triangular base with area 12 cm^2 and a perimeter of 18 cm . The height of the prism is 5 cm . What is the lateral surface area (the area of the three rectangular faces)?

- A. 60 cm^2 C. 120 cm^2
 B. 90 cm^2 D. 132 cm^2

7) Which characteristic indicates a distribution is skewed LEFT?

- A. Mean $>$ Median C. Mean = Median
 B. Median $>$ Mean D. Mode $>$ Mean



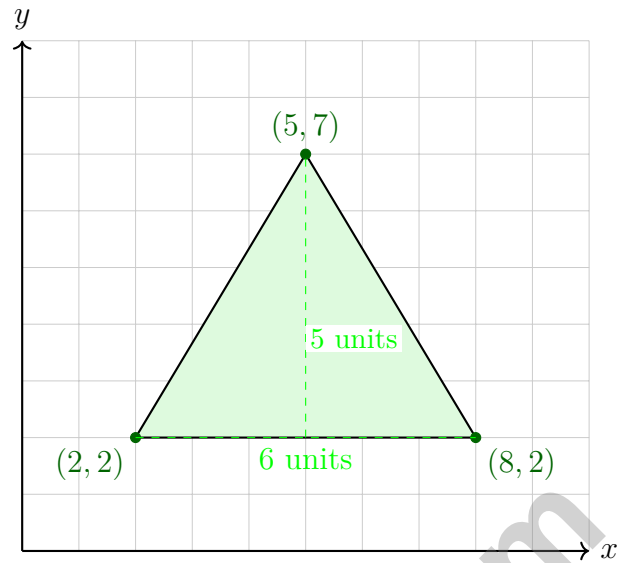
- 1) A school cafeteria serves hamburgers and hot dogs in a 7 : 3 ratio. If the cafeteria serves 21 hamburgers, how many hot dogs are served?

Hamburgers	Hot Dogs
7	3
14	6
21	?

- A. 7
- B. 9
- C. 12
- D. 15
- 2) What is the base of a triangle with area 88 ft^2 and height 11 feet?
- A. 8 ft
- B. 16 ft
- C. 22 ft
- D. 44 ft
- 3) A trapezoid has bases of 7 m and 9 m with a height of 4 m. What is its area?
- A. 20 m^2
- B. 32 m^2
- C. 36 m^2
- D. 64 m^2



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4)

What is the area of this triangle?

- A. 15 square units C. 25 square units
 B. 20 square units D. 30 square units

5) Which ordered pair is located in Quadrant III?

- A. (2, 5) C. (-4, -2)
 B. (-1, 3) D. (3, -6)

6) Which inequality is true?

- A. $-3 > -6$ C. $0 < -2$
 B. $-5 < -8$ D. $4 < -1$



Illinois IAR Practice Test Answer Keys**How to use this Illinois IAR answer section with a Grade 6 student:**

1. check the answer first, then write one quick reason the choice is correct
2. mark questions to try again, especially the skills that feel connected to prairie-to-city reasoning
3. rework the problem before reading the full explanation, using this reminder:
Keep the logic visible: line up numbers, label units, and use the answer choices as a final check.

A calm Illinois correction routine turns every missed item into useful practice. Complete a round, review patterns in the misses, and set a short Chicago-strong target for next time.



Scan me!
For more practice
& answers

Illinois Practice Test Answers and Explanations

Review the eight printed IAR tests with organized, resilient, and ready for the next set habits.

Practice Test 1 Answers and Explanations

- 1) **Choice C is correct.** **(6.NS.C.6c)** Point V is located 0.7 units to the right of 1, placing it at 1.7.
- 2) **Choice A is correct.** **(6.EE.B.5)** Substitute $x = 6$ into the equation. Check: $6 - 2 = 4$ is true.
- 3) **Choice C is correct.** **(6.EE.B.8)** “More than 30” is $t > 30$. “Stop before 60” is $t < 60$. Together: $t > 30$ and $t < 60$.
- 4) **The correct answer is 6.** **(6.EE.A.3)** Combine like terms: $4x + 2x = 6x$.
- 5) **The correct answer is 32.** **(6.EE.B.6)** Cost per notebook = $\$12 \div 3 = \4 . For 8 notebooks: $k = 8 \times 4 = 32$ dollars.
- 6) **Choice A is correct.** **(6.EE.B.8)** $x < -3$ means -3 is not included (open circle) and we want all numbers less than -3 (arrow pointing left).
- 7) **Choice C is correct.** **(6.G.A.1)** Rectangle: $12 \times 5 = 60 \text{ m}^2$. Triangle: $\frac{1}{2} \times 12 \times 3 = 18 \text{ m}^2$. Total: $60 + 18 = 78 \text{ m}^2$.
- 8) **Choice C is correct.** **(6.NS.C.7d)** After taxes: $\$2000 \times (1 - 0.15) = \$2000 \times 0.85 = \$1700$. Savings: 20% of $\$1700 = 0.20 \times 1700 = \340 .
- 9) **Choice D is correct.** **(6.NS.B.3)** We have $1 + 1 = 2$ decimal places total. So 480 becomes 4.80.
- 10) **Choice B is correct.** **(6.NS.C.8)** The point $(-3, 4)$ has a negative x -coordinate and a positive y -coordinate. Points with $(-, +)$ are in Quadrant II.
- 11) **Choice B is correct.** **(6.NS.C.7d)** -1.2 is closer to zero than -1.5 , so -1.2 is greater.
- 12) **Choice A is correct.** **(6.EE.A.3)** Under par means strokes below par: $72 + (-3) = 72 - 3 = 69$ strokes.
- 13) **Choice D is correct.** **(6.EE.A.2a)** “The sum of x and 4” is $(x + 4)$. “The product of 2 and” that sum requires parentheses: $2(x + 4)$.
- 14) **Choice C is correct.** **(6.G.A.1)** Length = $8 - 2 = 6$; width = $5 - 1 = 4$. Area = $6 \times 4 = 24$ square units.
- 15) **Choice D is correct.** **(6.SP.B.5c)** With 4 values, median is the average of the 2nd and 3rd positions. If ordered as 5, 8, 12, x , then median = $\frac{8 + 12}{2} = 10$ ✓, so $x \geq 12$.
- 16) **Choice D is correct.** **(6.RP.A.1)** Range = max - min = $8 - 0.5 = 7.5$.
- 17) **Choice B is correct.** **(6.SP.B.5)** Same mean and median indicate similar centers, but Student Y’s higher standard deviation (5 vs 2) shows much greater variability. Student Y’s dataset has students doing anywhere from very little to very much homework; Student X’s is more clustered around 8 hours.
- 18) **Choice B is correct.** **(6.NS.B.3)** Complement probability = $1 - 0.75 = 0.25$ or 25%.
- 19) **Choice C is correct.** **(6.NS.A.1)** 40% of the circle: $0.40 \times 360^\circ = 144^\circ$.
- 20) **Choice B is correct.** **(6.RP.A.3d)** A price rate compares money to another unit. “Seventy cents per pound” compares cost to weight, so it is the price rate.
- 21) **The correct answer is Both 2 : 3 and 8 : 12 are equivalent to 4 : 6.** **(6.RP.A.3)** 4 : 6 simplifies to 2 : 3 (divide by 2), so A is correct. 8 : 12 simplifies to 2 : 3 (divide by 4), so B is correct. 6 : 8 simplifies to 3 : 4 — not equivalent. 12 : 16 simplifies to 3 : 4 — not equivalent. 10 : 14 simplifies to 5 : 7 — not equivalent.
- 22) **Choice A is correct.** **(6.RP.A.3b)** Unit rate: $180 \div 3 = 60$ pages per minute.
- 23) **Choice C is correct.** **(6.RP.A.3c)** $\frac{3}{6} = \frac{1}{2} = \frac{50}{100} = 50\%$.
- 24) **Choice B is correct.** **(6.NS.A.1)** “Half the recipe” means multiply each ingredient by $\frac{1}{2}$, not divide by $\frac{1}{2}$. So you want $\frac{3}{4} \times \frac{1}{2} = \frac{3}{8}$ cup of sugar.
- 25) **Choice D is correct.** **(6.RP.A.1)** Do not compare wins to losses here; the question asks for wins to total games. The total is $12 + 4 = 16$, and $12 : 16$ simplifies to 3 : 4.



Star Player Pep Talk

Hi, Star Player!

◇ 8 practice tests. Every one of them was a chance to grow. You took every chance. That's why you're a math star today! ◇

★ **Star players know:** confidence comes from practice. You can't fake it. You build it. You built yours over 8 tests. It's real now! ★

Star Player Stats

- **Practice:** OFF THE CHARTS!
- **Skills:** BROAD! You can do many problem types.
- **Toughness:** HIGH! You don't quit on hard problems.
- **Game Plan:** READY! You know your strategies.

Star tip: on test day, take it one play at a time. One problem. Then the next. You will earn your stars!

If you want to share something or ask a question, please email me at jay@testinar.com.

Jay Daie

Your Math Coach

MASTER MATH. ACE YOUR TESTS.

This Grade 6 Math Practice Tests book is designed to help students build confidence, strengthen math skills, and excel on comprehensive assessments.

With 8 full-length printed tests and 2 online tests, this resource provides realistic practice, a variety of question types, and detailed answer explanations to help students achieve their best.

Perfect for classroom use, homework, test preparation, and extra practice at home.

8
PRINTED
TESTS

+

2
ONLINE
TESTS

PERFECT FOR

- ✓ Classroom Practice
- ✓ Homework & Review
- ✓ Independent Learning
- ✓ Test Preparation
- ✓ Skill Reinforcement
- ✓ Building Confidence



**PRACTICE TODAY.
SUCCEED TOMORROW.**

WHAT STUDENTS WILL GAIN



Stronger Math Skills

Build a solid foundation through targeted practice and review.



Better Problem Solving

Develop logical thinking and effective solution strategies.



Understand Key Concepts

Reinforce important math ideas aligned with standards.



Test Confidence

Get familiar with test formats and improve accuracy.



Achieve Success

Build confidence and perform your best on test day.

TOPICS COVERED

- ✓ Ratios & Rates
- ✓ Percents
- ✓ The Number System
- ✓ Statistics & Probability
- ✓ Expressions & Equations
- ✓ Data Analysis
- ✓ Geometry
- ✓ Measurement & Conversions
- ✓ Fractions & Decimals
- ✓ And More!



2 ONLINE TESTS

Extra online practice to reinforce learning and build confidence.

MORE PRACTICE. GREATER RESULTS.

Give your child the tools needed to develop strong math skills, confidence, and a positive attitude toward learning.



8 FULL-LENGTH
PRACTICE TESTS



2 ONLINE
PRACTICE TESTS



DETAILED ANSWER
EXPLANATIONS