

# 10 Indiana ILEARN

GRADE  
**6**  
MATH

## PRACTICE TESTS

**Standards-Aligned Review**  
**Mixed Practice & Answer Key**



### 10 PRINTED TESTS

Realistic practice to build confidence and mastery



### 2 ONLINE TESTS

Extra practice for continued success



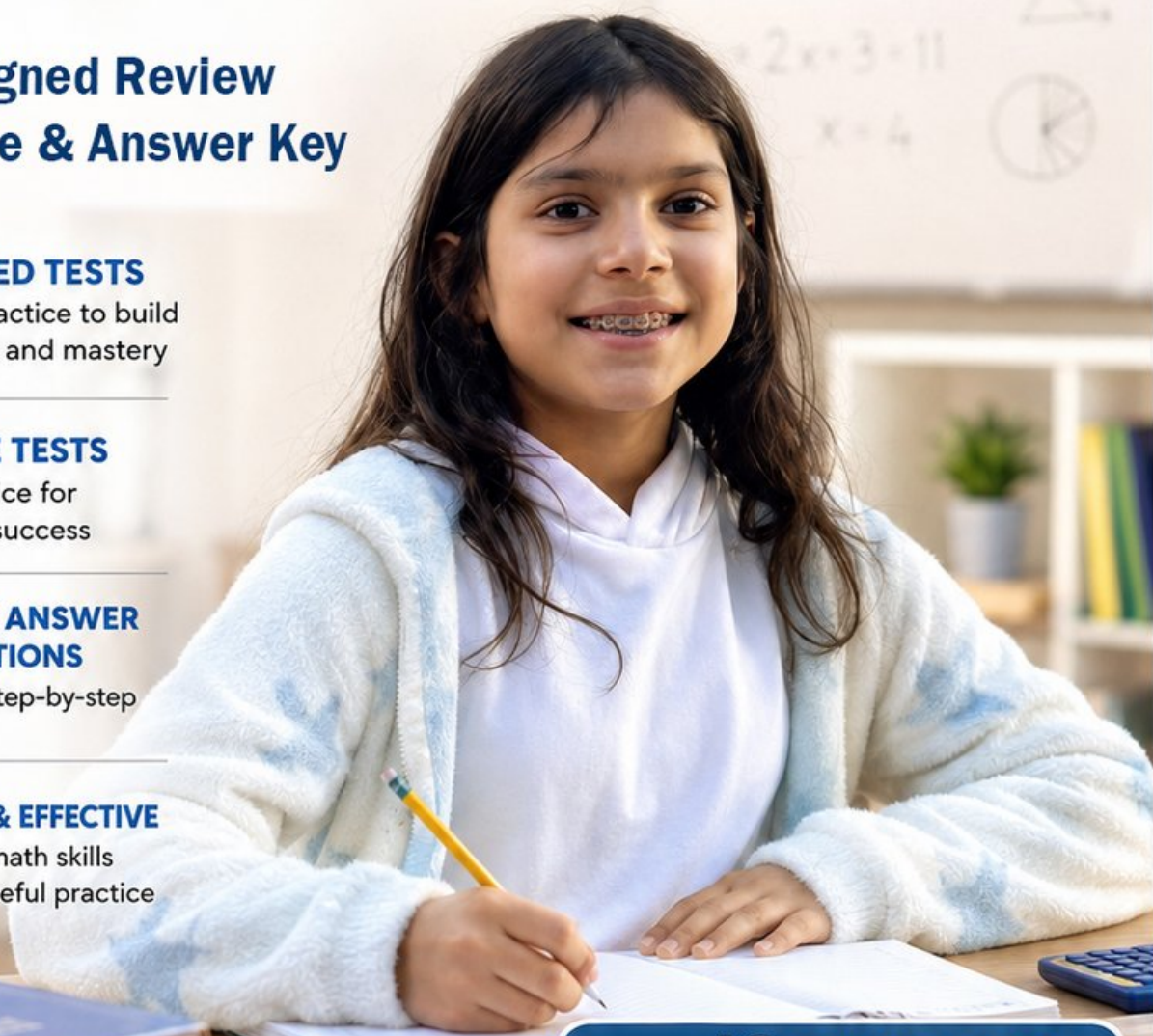
### DETAILED ANSWER EXPLANATIONS

Learn with step-by-step solutions



### FOCUSED & EFFECTIVE

Target key math skills with purposeful practice



**10** PRINTED TESTS  
**+ 2** ONLINE TESTS

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

**PRACTICE • REVIEW • SUCCEED**

# 10 Indiana ILEARN Grade 6 Math Practice Tests

*Standards-Aligned Steady Lap-By-Lap Thinking for Indiana Learning Evaluation Assessment  
Readiness Network*



Ten complete 40-question Grade 6 practice rounds for ILEARN, 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, Indiana Math Explorer!

Ten steady rounds on a Hoosier skills lap

This book gives you ten full Grade 6 practice tests for ILEARN. Each round uses farm roads, classrooms, and careful race-day pacing as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

## Your Indiana Practice Promise

Pace yourself so every question gets a fair look. I will slow down for the question, circle what matters, solve one step at a time, and use mistakes as clues for getting stronger.

Read

Plan

Check

## How to Use This Book

A ten-session routine for steady lap-by-lap thinking

1. **Preview the skills.** Read the quick review pages before the first test.
2. **Take one test at a time.** Work in a quiet place and answer all 40 questions.
3. **Mark your confidence.** Put a small star beside problems you solved with a strong plan.
4. **Check, then retry.** For missed questions, try the problem again before reading the explanation.
5. **Track your next move.** Use the growth log to name one habit and one skill for the next test.

**Indiana review rhythm:** Test one day, correct carefully the next day, then return for the next round when your corrections feel clear.



## What Is Inside?

Ten ILEARN tests, 400 questions, and a full review path

Part	What You Will Practice
Tests 1–3	Warm-up rounds for ratios, rational numbers, operations, and careful reading.
Tests 4–6	Skill-building rounds with expressions, equations, geometry, data, and problem models.
Tests 7–9	Stamina rounds for mixed review, neat work, and flexible strategy choices.
Test 10	Final Indiana round to show growth across the whole book.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Steady lap-by-lap thinking means recognizing the skill even when the next question changes topic.

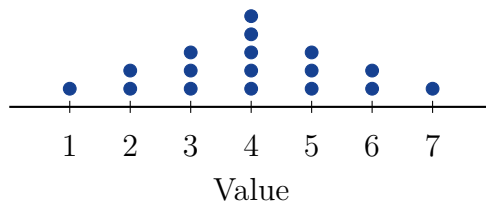


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& answers

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- 1) A dot plot represents data with a clear peak at one value, with frequencies gradually decreasing on both sides. Which term best describes this shape?



- A. Bimodal  
 B. Symmetric  
 C. Skewed left  
 D. Skewed right
- 2) A table of ordered pairs is given. Is the relationship proportional?

x	3	6	9
y	12	24	36

- A. No; the  $y$ -values are larger  
 B. Yes; the numbers follow a pattern  
 C. No;  $x$  starts at 3, not 0  
 D. Yes; the ratio  $y/x = 4$  is constant
- 3) A scale drawing uses 1 inch = 10 feet. A square room is drawn with a side length of 2 inches. What is the actual area of the room?
- A. 20 sq ft  
 B. 40 sq ft  
 C. 100 sq ft  
 D. 400 sq ft
- 4) A business had a monthly budget of \$8000. They overspent by \$1200. What is the actual spending, and what percent over budget were they?
- A. Spent \$9200; 15% over  
 B. Spent \$9200; 13% over  
 C. Spent \$6800; 15% under  
 D. Spent \$9200; 12% over



5) A recipe makes 8 servings and calls for  $\frac{1}{2}$  cup of milk. How much milk is needed per serving?

- A.  $\frac{1}{4}$  cup
- B.  $\frac{1}{16}$  cup
- C.  $\frac{1}{8}$  cup
- D.  $\frac{4}{5}$  cup

6) If the area of a circle is approximately 314 square meters and  $\pi \approx 3.14$ , find the radius.

7) A factory produces 8,712 light bulbs in 12 days at a constant rate. How many light bulbs are made per day?

- A. 726
- B. 716
- C. 720
- D. 740

8) Which graph is MOST misleading if the vertical axis does not start at zero?

- A. Bar graph
- B. Line graph
- C. Circle graph
- D. Dot plot

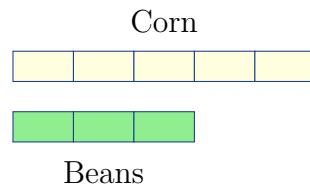
9) Which of the following ratios is in simplest form?

- A. 8 : 12
- B. 6 : 9
- C. 10 : 15
- D. 5 : 7



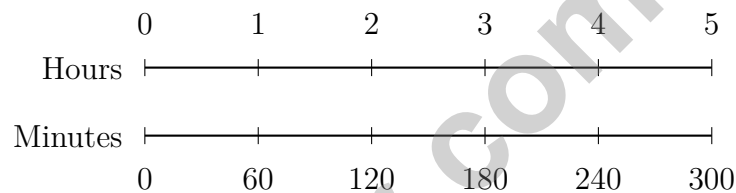
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10) A farmer plants corn and beans in a 5 : 3 ratio. The diagram shows this using tape.



If the farmer has 30 rows of corn, how many rows of beans are planted?

- A. 10 rows
- B. 15 rows
- C. 18 rows
- D. 20 rows



11)

Based on the double number line, what is the rate in minutes per hour?

- A. 30 minutes per hour
- B. 60 minutes per hour
- C. 90 minutes per hour
- D. 150 minutes per hour

12) The table below shows the relationship between apples and their cost. Which represents the unit rate?

Number of Apples	Total Cost
3	\$1.80
6	\$3.60
9	\$5.40

- A. \$0.60 per apple
- B. \$0.90 per apple
- C. \$1.80 per apple
- D. \$3.00 per apple



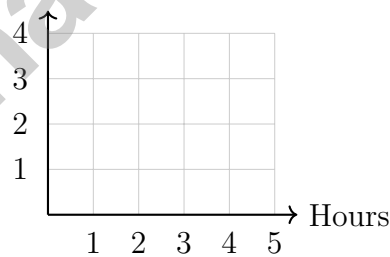


- 1) If  $-7$  and  $7$  are plotted on a number line, which option identifies all true statements about them?
- A. The same distance from zero       C. On opposite sides of zero
- B. Opposites       D. All of the above
- 2) A ratio table shows the relationship between hours and miles traveled at a constant speed. Which graph correctly represents the data from this table?

Hours	Miles
1	50
2	100
3	150

Looking at the coordinate plane below, which set of points matches this ratio?

Miles (each tick = 50 mi)



- A.  $(1, 1), (2, 2), (3, 3)$        C.  $(1, 5), (2, 7), (3, 9)$
- B.  $(1, 2), (2, 4), (3, 6)$        D.  $(1, 3), (2, 6), (3, 9)$



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& answers

3) A person reads 0.72 of a book. What percent of the book has been read?

- A. 7.2%                       C. 272%
- B. 28%                         D. 72%

4) A jacket's original price is unknown. After a 25% discount, it costs \$75. What was the original price?

- A. \$100                         C. \$56.25
- B. \$93.75                       D. \$150

5) A fruit vendor sells apples at a rate shown in the ratio table. If the vendor sells 18 pounds of apples, how much money does the vendor earn?

Apples (pounds)	Money (\$)
6	9
18	?

6) A car travels 120 miles in 2 hours. At the same rate, how far will it travel in 5 hours?

- A. 240 miles                       C. 360 miles
- B. 300 miles                         D. 420 miles



## Indiana ILEARN Practice Test Answer Keys

**How to use this section with a Grade 6 student:**

1. check the answer first
2. mark questions to try again
3. rework the problem before reading the full explanation

**A calm correction routine turns every missed item into useful practice.**

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## Practice Test Answers and Explanations

### Practice Test 1 Answers and Explanations

- 1) **Choice B is correct.** **(6.AF.1)** The data has a single peak in the center with equal frequencies decreasing on both sides, characteristic of a symmetric distribution.
- 2) **Choice D is correct.** **(6.AF.5)** Checking the ratio:  $12/3 = 4$ ,  $24/6 = 4$ ,  $36/9 = 4$ . The constant ratio indicates a proportional relationship with  $k = 4$ , even though the table doesn't show  $x = 0$ .
- 3) **Choice D is correct.** **(6.DS.2)** Actual side:  $2 \times 10 = 20$  feet. Area:  $20 \times 20 = 400$  sq ft.
- 4) **Choice A is correct.** **(6.DS.1)** Actual spending:  $\$8000 + \$1200 = \$9200$ . Percent over:  $\$1200 \div \$8000 = 0.15 = 15\%$ .
- 5) **Choice B is correct.** **(6.DS.3)**  $\frac{1}{2} \div 8 = \frac{1}{2} \times \frac{1}{8} = \frac{1}{16}$  cup per serving.
- 6) **The correct answer is 10 meters.** **(6.DS.2)** From  $A = \pi r^2$ , we get  $314 \approx 3.14 \times r^2$ , so  $r^2 \approx 100$ , thus  $r = 10$  meters.
- 7) **Choice A is correct.** **(6.NS.8)**  $8,712 \div 12 = 726$ . The factory makes 726 light bulbs each day.
- 8) **Choice A is correct.** **(6.NS.1)** Bar graphs are most affected because truncating the axis exaggerates the visual difference in heights. The rectangular areas appear disproportionately large or small. Line graphs are less affected; circle and dot plots don't use axes.
- 9) **Choice D is correct.** **(6.NS.3)** A ratio is in simplest form when the two numbers have no common factor greater than 1. The numbers 5 and 7 share no common factor except 1, so  $5 : 7$  is already simplified.
- 10) **Choice C is correct.** **(6.AF.4)** Corn is the 5-part amount. Since  $30 \div 5 = 6$ , each part is 6 rows, and beans are 3 parts:  $3 \times 6 = 18$  rows.
- 11) **Choice B is correct.** **(6.DS.1)** From the double number line, 1 hour equals 60 minutes. This is the standard conversion rate.
- 12) **Choice A is correct.** **(6.AF.1)** Take any row:  $\$1.80 \div 3 = \$0.60$  per apple. All rows confirm this unit rate.
- 13) **Choice D is correct.** **(6.AF.1)** The ratio is  $6 : 4$  or  $3 : 2$ . When cookies are 18 (multiply by 3), brownies are  $4 \times 3 = 12$ .
- 14) **Choice D is correct.** **(6.NS.7)** The unit rate is the change in goals divided by the change in hours:  $\frac{15-6}{5-2} = \frac{9}{3} = 3$  goals per hour.
- 15) **Choice B is correct.** **(6.AF.4)**  $37.5\% = \frac{37.5}{100} = 0.375$ .
- 16) **Choice C is correct.** **(6.RP.5)**  $35\%$  of  $\$60 = 0.35 \times 60 = \$21$ . Sale price is  $\$60 - \$21 = \$39$ .
- 17) **Choice B is correct.** **(6.GM.4)** Ratio  $3 : 2$  with red = 9 cans: each part is  $9 \div 3 = 3$  cans. Blue paint:  $2 \times 3 = 6$  cans.
- 18) **Choice A is correct.** **(6.GM.3)** Divide:  $240 \div 100 = 2.4$  meters.
- 19) **The correct answer is 8.** **(6.RP.5)**  $Q_1 = 4$  and  $Q_3 = 12$ , so  $IQR = 12 - 4 = 8$ .
- 20) **Choice A is correct.** **(6.GM.2)** With only  $\$300$  and needing  $\$800$ , Sophia should save more money first. Using a debit card would overdraw her account (negative balance), and using credit card debt for a purchase like this is not recommended at this grade level.
- 21) **The correct answer is Total surface area is  $340 \text{ cm}^2$  and the formula  $2(10)(8) + 2(10)(5) + 2(8)(5)$  is correct.** **(6.RP.2)** Total surface area is  $2(10)(8) + 2(10)(5) + 2(8)(5) = 160 + 100 + 80 = 340 \text{ cm}^2$ , so B and C are correct. The lateral surface area is  $180 \text{ cm}^2$ , not  $200 \text{ cm}^2$ , and the two  $10 \times 5$  faces have area  $100 \text{ cm}^2$ , not  $120 \text{ cm}^2$ .
- 22) **Choice A is correct.** **(6.DS.2)** Subtract:  $\$34.50 - \$7.25 = \$27.25$ .
- 23) **Choice C is correct.** **(6.RP.1)** This is a GCF problem. Prime factors:  $32 = 2^5$  and  $48 = 2^4 \times 3$ .  $GCF = 2^4 = 16$ . So they can make 16 gift sets with 2 mugs and 3 candles each.
- 24) **Choice A is correct.** **(6.RP.1)** Distributive property:  $4(7 + 8) = 4 \cdot 7 + 4 \cdot 8 = 28 + 32 = 60$ . Choice A shows the expanded form.
- 25) **The correct answer is 20.** **(6.GM.3)** Expected number of spins =  $0.2 \times 100 = 20$  times.
- 26) **The correct answer is  $\frac{1}{6}$ .** **(6.DS.2)** The fraction is  $60^\circ/360^\circ = 1/6$ .
- 27) **Choice A is correct.** **(6.AF.2)** Magnitude is absolute value:  $|-45| = 45$  and  $|28| = 28$ . Since  $45 > 28$ , the withdrawal has larger magnitude.
- 28) **Choice B is correct.** **(6.RP.4)** The midpoint between  $-2$  and  $2$  is found by taking the average:  $\frac{-2+2}{2} = 0$ .



## Hi, Math Champion!

◇ You trained hard! 10 full practice tests is real practice. Your math game is way better now than when you started. ◇

★ **Coach's truth:** kids who practice get better. You practiced. You got better. That's how it works!  
★

### Your Game Stats

- **Energy:** HIGH! You can finish a long test.
- **Smart Plays:** You know lots of strategies.
- **Calm Head:** You stay cool with hard problems.
- **Game-Day Ready:** You feel strong and prepared.

**Coach's tip:** the night before the test, get good sleep. Eat a good breakfast. Bring a sharp pencil. Trust your training!

If you want to share something or ask a question, please email me at [jay@testinar.com](mailto:jay@testinar.com).

**Jay Daie**

Your Math Coach

# PRACTICE MORE. ACHIEVE MORE. SUCCEED!

This **Grade 6 Math Practice Tests** book is designed to help students build strong math skills, deepen their understanding of key concepts, and gain the confidence they need to succeed on any test.

With 10 full-length printed tests and 2 online tests, students get the review, practice, and realistic test experience they need to improve accuracy, strengthen problem-solving abilities, and reach their full potential.

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

## PERFECT FOR:

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



**CONFIDENCE TODAY.  
SUCCESS 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.



### Deepen Understanding

Reinforce key math concepts 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
- ✓ The Number System
- ✓ Expressions & Equations
- ✓ Geometry
- ✓ Fractions & Decimals
- ✓ Percents
- ✓ Statistics & Probability
- ✓ Data Analysis
- ✓ Measurement & Conversions
- ✓ 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.



10 PRINTED  
PRACTICE TESTS



2 ONLINE  
PRACTICE TESTS



DETAILED ANSWER  
EXPLANATIONS