

# 6

Indiana  
ILEARN

## 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



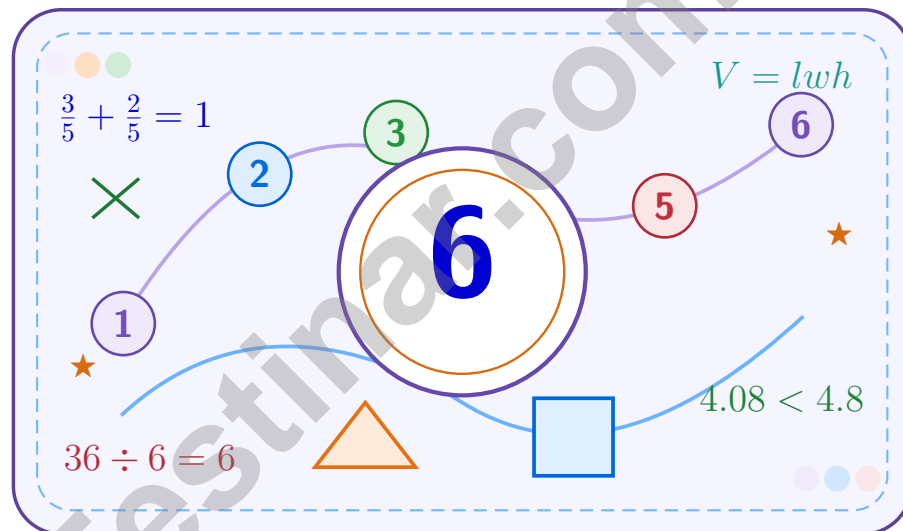
**BUILD CONFIDENCE.  
IMPROVE SCORES.**

Target weak areas and  
achieve success

★ STRONG PRACTICE. BRIGHT FUTURE. ★

# 6 Indiana ILEARN 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
<b>Week 1</b>	Take Test 1 and review any place-value or operation slips.
<b>Week 2</b>	Take Test 2 and focus on showing neat, easy-to-read work.
<b>Week 3</b>	Take Test 3 and give extra time to fractions or decimals if needed.
<b>Week 4</b>	Take Test 4 and slow down on word problems and units.
<b>Week 5</b>	Take Test 5 and compare your score and habits with earlier rounds.
<b>Week 6</b>	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 Indiana ILEARN. 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.



# Table of Contents

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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)

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### TIME

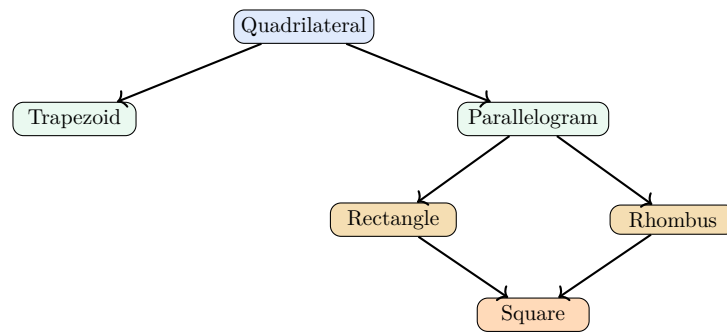
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Quadrilateral Family Tree



1)

Looking at the family tree, which statement is FALSE?

- A. Every square is a rectangle.
- B. Every rectangle is a square.
- C. Every rhombus is a parallelogram.
- D. Every square is a parallelogram.

2) Error analysis: Which student correctly computes  $4 \times \frac{2}{5}$ ?

Student	Work
A	$4 \times \frac{2}{5} = \frac{4+2}{5} = \frac{6}{5}$
B	$4 \times \frac{2}{5} = \frac{8}{5}$
C	$4 \times \frac{2}{5} = \frac{2}{20}$
D	$4 \times \frac{2}{5} = \frac{4}{2 \times 5} = \frac{4}{10}$

- A. A
- B. B
- C. C
- D. D

3) A rectangular prism has volume  $392 \text{ cm}^3$ , length 14 cm, and width 7 cm. What is the height?

- A. 4 cm
- B. 3 cm
- C. 2 cm
- D. 5 cm



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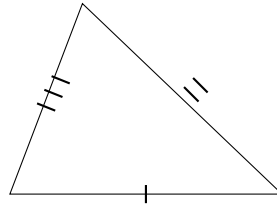
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- 1) Look at the triangle. The sides have different tick marks. What type is it?



- A. Equilateral
- B. Isosceles
- C. Scalene
- D. Right
- 2) Simplify before multiplying:  $\frac{6}{8} \times \frac{4}{9}$ . Which choice shows the product in simplest form?
- A.  $\frac{24}{72}$
- B.  $\frac{3}{4} \times \frac{4}{9} = \frac{1}{3}$
- C.  $\frac{1}{2}$
- D.  $\frac{12}{17}$
- 3) A recipe calls for  $1\frac{1}{2}$  cups of flour. If you double it, how much flour is needed?
- A. 2 cups
- B.  $2\frac{1}{2}$  cups
- C. 3 cups
- D. 1 cup
- 4) Find the sum:  $\frac{3}{8} + \frac{1}{6}$ .

*Record your answer in the space provided.*



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1) Evaluate:  $100 \div (20 - 15) + 4$

A. 24

C. 14

B. 9

D. 20

2) Maria ate  $\frac{1}{4}$  of a pizza and Juan ate  $\frac{1}{3}$  of the same pizza. What fraction of the pizza did they eat together?

A.  $\frac{7}{12}$

C.  $\frac{2}{12}$

B.  $\frac{3}{7}$

D.  $\frac{5}{12}$

3) A group of friends buys 4 sandwiches for \$6 each and 4 drinks for \$2 each. They pay with a \$50 bill. Which expression shows how much change they should receive?

A.  $50 - (4 \times 6 + 4 \times 2)$

C.  $(50 - 4) \times (6 + 2)$

B.  $50 - (4 + 6 + 4 + 2)$

D.  $4 \times (50 - 6 - 2)$

4) If you multiply 0.6 by 10, which place does the digit 6 move to?

A. Ones place

C. Hundredths place

B. Tenths place

D. Thousandths place

5) The figures below are labeled A-D. Which figure is a rectangle but not a square?



A



B



C



D

A. Figure A

C. Figure C

B. Figure B

D. Figure D



## Grade 5 Mathematics Reference Materials

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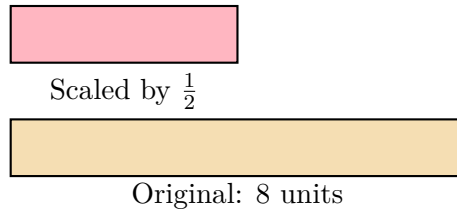
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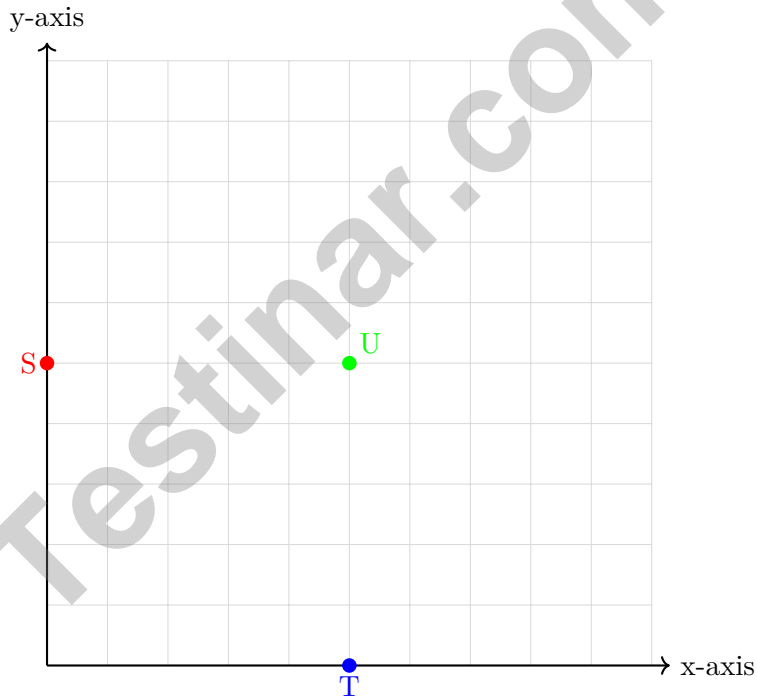


1)

If the original length is 8 units and it is scaled by  $\frac{1}{2}$ , what is the new length?

- A. 2 units
- B. 4 units
- C. 6 units
- D. 12 units

2) Which point is at (5, 5)?



- A. S
- B. T
- C. U
- D. None of them



## 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

- Choice B is correct.** **(5.CA.1)** The family tree shows squares inside rectangles, so every square is a rectangle. A rectangle does not have to have 4 equal sides, so it does not have to be a square.
- Choice B is correct.** **(5.CA.5)** Student B correctly uses the rule: multiply the whole number by the numerator.  
 $4 \times \frac{2}{5} = \frac{4 \times 2}{5} = \frac{8}{5}$ .
- Choice A is correct.** **(5.M.3)** The base area is  $14 \times 7 = 98$  square centimeters. Since  $392 \div 98 = 4$ , the height is 4 cm.
- Choice D is correct.** **(5.CA.7)**  $\frac{9}{9} = 1$ , so  $1 \times 14 = 14$ .
- Choice C is correct.** **(5.CA.6)**  $3 \div \frac{1}{4} = 3 \times 4 = 12$ .
- Choice A is correct.** **(5.CA.11)** Divide by 3 each step:  $3 \div 3 = 1$ .
- Choice A is correct.** **(5.CA.9)** Multiply as if the numbers were whole numbers:  $36 \times 24 = 864$ . The factors 3.6 and 2.4 have a total of  $1 + 1 = 2$  decimal places, so place the decimal point two places from the right:  $864 \rightarrow 8.64$ . Therefore,  $3.6 \times 2.4 = 8.64$ .
- The correct answer is  $\frac{1}{15}$ .** **(5.CA.8)** A correct model shows one whole divided into 5 equal parts, with one fifth split into 3 equal smaller parts. Each small part is  $\frac{1}{15}$  of the whole.
- Choice A is correct.** **(5.NS.1)** The tenths digit is 0. Since  $0 < 5$ , round down. The ones digit stays 5, giving 5 grams.
- Choice B is correct.** **(5.NS.1)** “Six and eight hundredths” means 6 wholes, 0 tenths, and 8 hundredths: 6.08.
- The correct answer is  $>$ .** **(5.CA.7)** A complete response should explain that  $\frac{9}{8} > 1$ , so the product is greater than  $\frac{3}{5}$ . Then compute  $\frac{9}{8} \times \frac{3}{5} = \frac{27}{40}$ .
- Choice C is correct.** **(5.M.4)** Volume =  $11 \times 9 \times 7 = 693$  cubic meters.
- Choice B is correct.** **(5.CA.8)** Each pack makes 8 eighth-pack booklets.  $10 \div \frac{1}{8} = 10 \times 8 = 80$  booklets.
- Choice A is correct.** **(5.M.4)** The base has  $10 \times 5 = 50$  unit cubes. Since  $100 \div 50 = 2$ , the prism has 2 layers.
- Choice A is correct.** **(5.NS.3)** Each power of 10 adds one more zero: 10, 100, 1000, 10000.
- Choice D is correct.** **(5.CA.3)**  $2\frac{4}{9} \approx 2$  and  $3\frac{5}{6} \approx 4$ . So  $2\frac{4}{9} + 3\frac{5}{6} \approx 2 + 4 = 6$ .
- Choice C is correct.** **(5.M.4)** Base area =  $6 \times 5 = 30 \text{ in}^2$ . Height =  $240 \div 30 = 8$  inches.
- Choice A is correct.** **(5.CA.4)**  $\frac{1}{2} + \frac{1}{3} + \frac{1}{6}$ : common denominator 6.  $\frac{3}{6} + \frac{2}{6} + \frac{1}{6} = \frac{6}{6} = 1$  cup.
- Choice A is correct.** **(5.NS.1)** 0.6 (6 tenths)  $>$  0.06 (6 hundredths). A rise of 0.6 degrees is 10 times larger.
- Choice C is correct.** **(5.M.1)** Find the whole divisor before dividing. First  $(4 + 2) = 6$ , then  $6 \times 2 = 12$ , and finally  $72 \div 12 = 6$ .
- Choices A, B are correct.** **(5.CA.11)** A point with y-coordinate 0 is on the x-axis, so (5, 0) is on the x-axis. A point with x-coordinate 0 is on the y-axis, so (0, 7) is on the y-axis.
- Choice A is correct.** **(5.CA.10)** Add:  $1 + 1.8 = 2.8$ ; then  $2.8 + 1.25 = 4.05$  (hundredths:  $0 + 5 = 5$ ; tenths:  $8 + 2 = 10$ , regroup; ones:  $2 + 1 + 1 = 4$ ).
- Choice C is correct.** **(5.NS.3)**  $6.5 \times 100 = 650$  (move decimal 2 places right). Option C is correct.
- Choice C is correct.** **(5.M.1)** 5 lengths:  $5 \times 15 = 75$  meters. 3 widths:  $3 \times 8 = 24$  meters. Total:  $75 + 24 = 99$  meters. Convert:  $99 \times 100 = 9,900$  centimeters.
- Choice A is correct.** **(5.CA.1)** Round:  $823 \approx 800$  and  $41 \approx 40$ . So  $800 \div 40 = 20$ . Actual:  $823 \div 41 = 20 \text{ R}3$ .
- Choice B is correct.** **(5.CA.11)** Moving right changes the x-coordinate while the y-coordinate stays the same. Add 3 to 2 to get (5, 4).
- The correct answer is 18.** **(5.CA.4)** Multiples of 6: 6, 12, 18, ... Multiples of 9: 9, 18, ... LCD is 18.
- Choice A is correct.** **(5.NS.3)** A is correct. B equals 0.054, C is wrong, and D equals 0.054.
- Choice C is correct.** **(5.M.5)** Work one prism at a time:  $7 \times 5 \times 4 = 140$ ,  $5 \times 5 \times 3 = 75$ , and  $4 \times 4 \times 4 = 64$ . Add the non-overlapping volumes:  $140 + 75 + 64 = 279$  cubic meters.
- Choice D is correct.** **(5.M.3)** Use the rectangular-prism volume formula:  $10 \times 3 \times 5 = 150$ . So the volume is 150 cubic meters.



## Hey there, Master Gamer!

★ Level mastery achieved! You've conquered six complete game worlds, defeating mathematical boss battles and collecting skill power-ups like a professional gamer! Each test level presented unique challenges and hidden obstacles, but you've learned the patterns, mastered the controls, and leveled up your abilities significantly. Your character stats are at maximum capacity! ★

◇ **Here's what elite gamers understand:** mastering difficult games requires repeated playthroughs, learning from defeats, and developing strategic thinking. They study level designs, practice timing, and memorize successful strategies. You've done exactly that through these six test levels! You've learned the mathematical game mechanics, and now you're ready for the championship tournament! ◇

### Character Stats Maxed Out

**Problem-Solving Power:** Leveled up to Expert tier through consistent training!

**Strategic Thinking:** Unlocked advanced tactical abilities through practice!

**Endurance Meter:** Can maintain focus through extended gaming sessions!

**Boss Battle Ready:** Prepared to defeat the final test day challenge!

**Gaming wisdom:** professional players stay calm during competitive matches because they've practiced under pressure. Test day is your championship match. When you encounter a challenging problem-boss, remember your six training sessions. You've defeated tougher enemies before. Use your best strategies, stay focused, and claim victory!

Want to share your gaming strategies or discuss a particularly clever solution combo? Send your achievements to [reza@testinar.com](mailto:reza@testinar.com). Let's celebrate your wins!

**Reza Nazari & Jay Daie**

Your Math Coaches for Strong Starts

# 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!



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