

4

COMPLETE

Indiana ILEARN

Grade **MATH**

PRACTICE TESTS

5

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



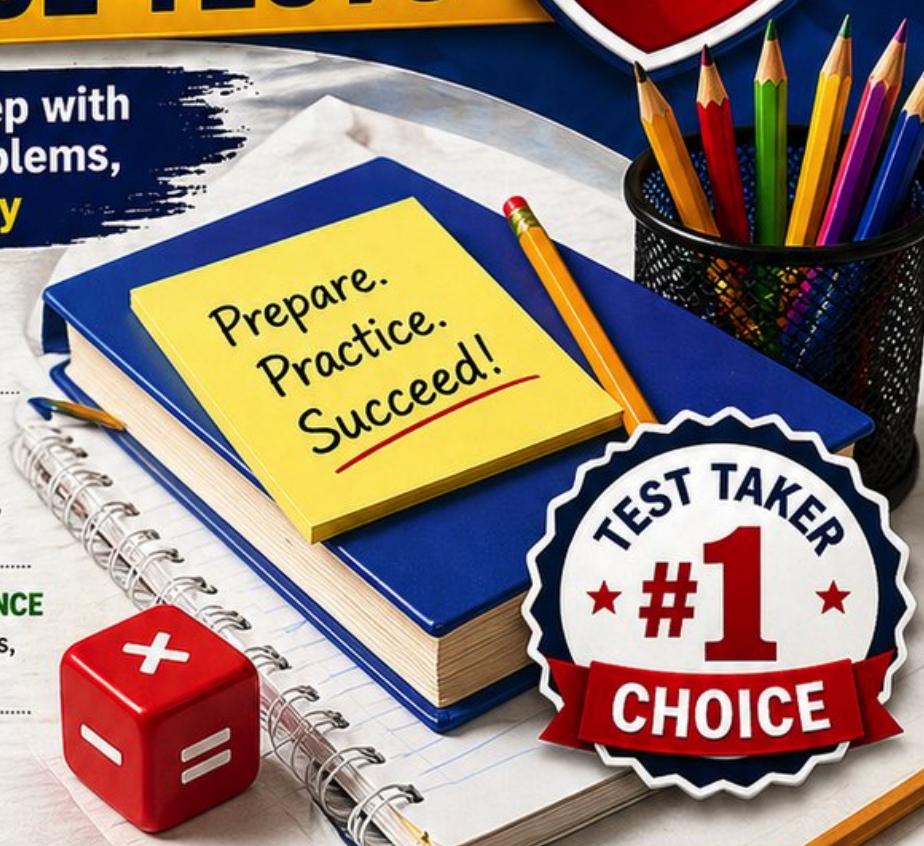
- ✓ **COVERS ALL ESSENTIAL TOPICS**
Numbers & Operations, Fractions, Decimals, Geometry, Measurement, Data & Probability, and more



- ✓ **STRENGTHEN SKILLS & CONFIDENCE**
Mixed review, challenging questions, and strategic practice



- ✓ **FULL ANSWER KEY INCLUDED**
Detailed explanations for every question



TEST TAKER
★ **#1** ★
CHOICE



**BUILD STRONG
MATH SKILLS
& TEST READINESS**



**IMPROVE ACCURACY,
SPEED, AND
PROBLEM SOLVING**



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



**ALIGNED TO
INDIANA
STATE STANDARDS
(ILEARN)**

4 Indiana ILEARN Grade 5 Math Practice Tests

A four-test mission for curious, careful Grade 5 thinkers



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

Jay Daie and Reza Nazari



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Indiana, The Four-Test Quest Starts Here

Four full tests, four lessons, one stronger mathematician

To Every Math Brain in Indiana

This book gives you four chances to read closely, solve carefully, and level up your math thinking. Math is like a long race lap: each careful step keeps you in the right lane and ready for the next turn.

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.

Watch

Watch what the question really wants from you.

Try

Try a strategy that fits the size of the numbers.

Polish

Polish your steps, units, and the final answer.

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

Use This Book Like a Mission Coach

A four-step routine that turns practice into real improvement

Step 1: Open

Open the warm-up review and use it.

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

Step 2: Test

Take the test with steady focus.

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

Step 3: Reflect

Notice what was sharp and what was shaky.

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

Step 4: Sharpen

Practice the shaky skills before the next round.

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



Scan me

A Four-Week Indiana Mission Map

Week	Mission Focus
Week 1	Take Test 1 like a warm-up lap. Notice your line, your pace, your turns.
Week 2	Take Test 2 and tighten word problems and step-showing.
Week 3	Take Test 3 and polish fractions, decimals, and measurement.
Week 4	Take Test 4 and finish strong: steady pace, careful checking, calm wheel.

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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)

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Metric

1 meter (m) = 100 centimeters (cm)

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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

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TIME

1 minute (min) = 60 seconds (sec) 1 week = 7 days

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1 day = 24 hours (hr) 1 year = 52 weeks



1) Which polygon has 8 sides and 8 vertices?

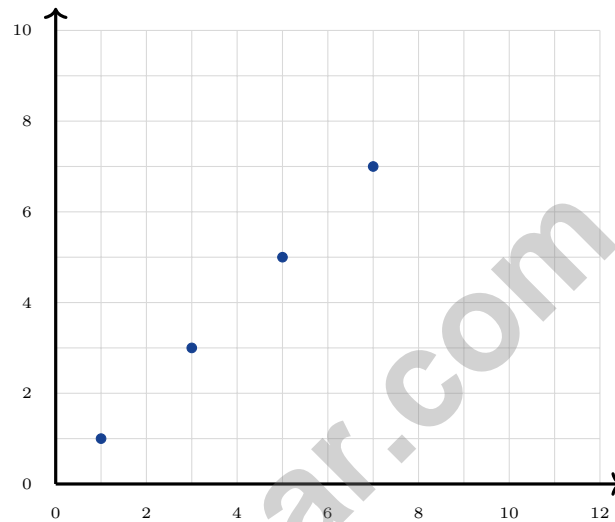
A. Pentagon

B. Hexagon

C. Octagon

D. Nonagon

2) Which ordered pair belongs in the pattern below?



A. (8, 9)

B. (9, 8)

C. (6, 7)

D. (9, 9)

3) A store sells apples at \$2 each and oranges at \$1 each. Which expression models: buying 6 apples and 9 oranges and getting a \$3 discount?

A. $6 \times 2 + 9 \times 1 - 3$

B. $(6 + 9) \times 2 - 3$

C. $6 \times 2 + 9 + 3$

D. $6 \times (2 + 9) \times 1 - 3$

4) Pattern: 100, 90, 80, 70, ... What is the 8th term?

A. 10

B. 20

C. 30

D. 40



5) What is the missing numerator? $\frac{?}{8} = \frac{3}{4}$

A. 4

C. 6

B. 5

D. 7

6) Write 0.8 as a fraction.

A. $\frac{8}{100}$

C. $\frac{80}{10}$

B. $\frac{8}{1000}$

D. $\frac{8}{10}$

7) Simplify then multiply: $\frac{8}{12} \times \frac{3}{4}$. What is the result?

A. $\frac{24}{36}$

C. $\frac{1}{3}$

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

D. $\frac{5}{6}$

8) How many pounds are in 48 ounces? (1 pound = 16 ounces)

A. 2 pounds

C. 3 pounds

B. 4 pounds

D. 5 pounds

9) A triangle has side lengths 5 cm, 5 cm, and 5 cm. Classify the triangle by its sides.

Record your answer in the space provided.

10) What is 112×7 ?

A. 780

C. 788

B. 792

D. 784



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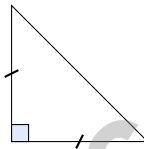
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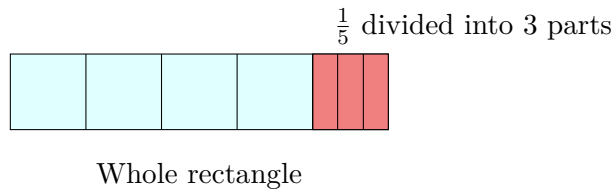
- 1) A rectangular container has dimensions 15 cm, 10 cm, and 8 cm. A smaller container has dimensions 12 cm, 8 cm, and 5 cm. What is the difference in their volumes?

Container	Length	Width	Height	Volume
Large	15	10	8	1200
Small	12	8	5	480

- A. 480 cubic centimeters C. 720 cubic centimeters
 B. 600 cubic centimeters D. 900 cubic centimeters
- 2) Which name describes a triangle with two equal sides and one right angle?



- A. Isosceles acute C. Scalene obtuse
 B. Right isosceles D. Equilateral
- 3) A pitcher holds 1.5 liters of water. How many milliliters is needed to fill it completely?
- A. 150 mL C. 15,000 mL
 B. 150,000 mL D. 1,500 mL
- 4) The diagram shows a rectangle divided into equal parts. The shaded region is $\frac{1}{5}$ of the rectangle. It is split equally into 3 smaller parts. What fraction of the whole rectangle is each small part?



- A. $\frac{1}{15}$ C. $\frac{3}{5}$
 B. $\frac{1}{8}$ D. $\frac{1}{5}$



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1) Multiply: $\frac{2}{3} \times \frac{3}{4}$

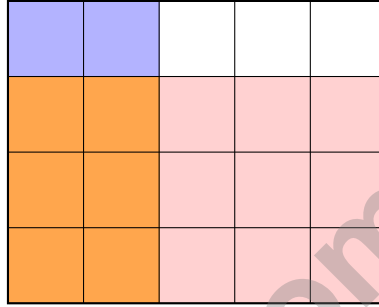
A. $\frac{5}{7}$

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

C. $\frac{6}{7}$

D. $\frac{8}{12}$

2) Below is an area model for $\frac{2}{5} \times \frac{3}{4}$. Which statement is true?

 A. The overlap covers 6 out of 20 squares. B. The product is $\frac{5}{9}$. C. The overlap covers 6 out of 12 squares. D. The product is $\frac{2}{4}$.

3) A class has 30 students. $\frac{2}{5}$ of them ride the bus. How many ride the bus?

Record your answer in the space provided.

4) A track is $\frac{1}{4}$ kilometer long. A student runs the track 8 times. How far does the student run?

 A. 2 km B. $\frac{1}{32}$ km C. $\frac{8}{1}$ km D. 1 km

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- 1) The model shows $\frac{1}{4}$ of a whole split into 2 equal parts. What fraction of the whole is each small part?

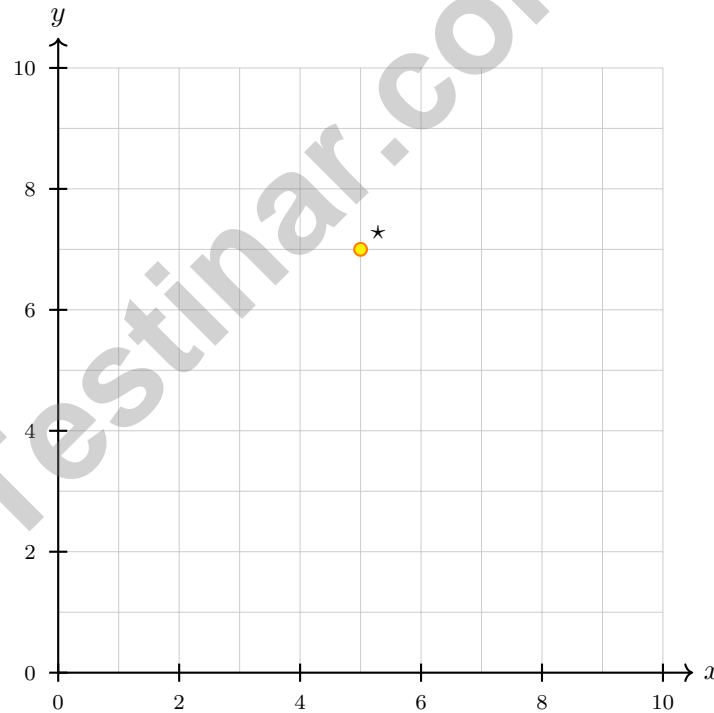
$\frac{1}{4}$ split into 2



1 whole split into 4 equal parts

- | | |
|---|---|
| <input type="checkbox"/> A. $\frac{1}{4}$ | <input type="checkbox"/> C. $\frac{1}{8}$ |
| <input type="checkbox"/> B. $\frac{1}{2}$ | <input type="checkbox"/> D. $\frac{1}{6}$ |

- 2) Which ordered pair best describes the location of the star on this grid?



- | | |
|------------------------------------|------------------------------------|
| <input type="checkbox"/> A. (7, 5) | <input type="checkbox"/> C. (5, 5) |
| <input type="checkbox"/> B. (5, 7) | <input type="checkbox"/> D. (7, 7) |



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 C is correct.** (5.CA.1) An octagon has 8 sides and 8 vertices. (A pentagon has 5, a hexagon has 6, a nonagon has 9.)
- 2) **Choice D is correct.** (5.CA.11) The two coordinates are equal at each point. The points increase by 2 in both coordinates: (1,1), (3,3), (5,5), (7,7), (9,9).
- 3) **Choice A is correct.** (5.CA.11) The apples cost 6×2 , and the oranges cost 9×1 . A \$3 discount lowers the total, so subtract 3 at the end.
- 4) **Choice C is correct.** (5.CA.11) Subtract 10 each time: 100, 90, 80, 70, 60, 50, 40, 30.
- 5) **Choice C is correct.** (5.CA.4) The denominator 4 becomes 8 (multiply by 2). Multiply numerator by 2: $3 \times 2 = 6$.
- 6) **Choice D is correct.** (5.NS.1) 0.8 has one decimal place, which represents tenths. So $0.8 = \frac{8}{10}$.
- 7) **Choice B is correct.** (5.CA.7) Simplify $\frac{8}{12} = \frac{2}{3}$. Then $\frac{2}{3} \times \frac{3}{4} = \frac{6}{12} = \frac{1}{2}$.
- 8) **Choice C is correct.** (5.M.1) Since 16 ounces = 1 pound, divide 48 by 16: $48 \div 16 = 3$ pounds.
- 9) **The correct answer is equilateral.** (5.G.1) The side lengths are 5 cm, 5 cm, and 5 cm, so all 3 sides are equal. The triangle is equilateral.
- 10) **Choice D is correct.** (5.CA.3) Multiply: $112 \times 7 = (100 \times 7) + (10 \times 7) + (2 \times 7) = 700 + 70 + 14 = 784$.
- 11) **Choice A is correct.** (5.NS.1) The tenths place is 4. Since 4 is less than 5, round down. 23.45 rounded to the nearest whole number is 23.
- 12) **The correct answer is $\frac{1}{20}$.** (5.CA.6) $\frac{1}{5} \times \frac{1}{4} = \frac{1}{20}$.
- 13) **Choice A is correct.** (5.M.5) The parts are separate sections of the same solid, so add their volumes: $75 + 55 = 130$ cubic inches.
- 14) **Choice C is correct.** (5.CA.1) A shape with four right angles and two pairs of parallel sides is a rectangle. Since not all sides are equal, it is not a square.
- 15) **Choice A is correct.** (5.NS.3) Write each value in standard form: 2,000,000, 2,200,000, and 2,500,000. Then order them from least to greatest.
- 16) **The correct answer is 48.** (5.M.4) There are 8 cubes in each row and 3 rows per layer, so each layer has 24 cubes. Two layers make $24 \times 2 = 48$ cubes.
- 17) **Choice A is correct.** (5.CA.7) $\frac{2}{5} \times \frac{5}{6} = \frac{10}{30}$, which simplifies to $\frac{1}{3}$ pound.
- 18) **Choice C is correct.** (5.CA.7) $1\frac{1}{2} = \frac{3}{2} > 1$, so the product is greater than 8.
- 19) **Choice D is correct.** (5.CA.8) Each liter fills 2 half-liter bottles. So $3 \div \frac{1}{2} = 3 \times 2 = 6$ bottles.
- 20) **Choice A is correct.** (5.CA.5) $3 \times \frac{5}{6} = \frac{15}{6} = \frac{5}{2} = 2\frac{1}{2}$ (simplified by dividing by 3).
- 21) **Choice A is correct.** (5.CA.11) Starting from the origin, move 3 units right (x-coordinate is 3) and 1 unit up (y-coordinate is 1), landing at (3, 1).
- 22) **Choices A, B are correct.** (5.M.2) C is addition; D equals $\frac{3}{4}$, not $\frac{3}{8}$.
- 23) **Choice B is correct.** (5.CA.10) Subtract each column: $7 - 2 = 5$, $4 - 3 = 1$, $5 - 3 = 2$. Result: 5.12.
- 24) **Choice D is correct.** (5.M.4) I: $2 \times 3 \times 10 = 60$. II: $4 \times 3 \times 5 = 60$. III: $5 \times 4 \times 3 = 60$. IV: $2 \times 6 \times 5 = 60$. All prisms have volume 60 cubic units.
- 25) **The correct answer is 12.** (5.NS.3) Dividing by 100 removes two zeros: $1,200 \rightarrow 12$.
- 26) **Choice A is correct.** (5.CA.8) Use total amount divided by the size of one piece. The equation is $6 \div \frac{1}{2} = n$.
- 27) **Choice B is correct.** (5.CA.8) Each whole contains 4 pieces of size $\frac{1}{4}$. With 4 wholes, there are $4 \times 4 = 16$ pieces.
- 28) **Choice A is correct.** (5.CA.3) $1 - \frac{1}{8} - \frac{1}{4} = \frac{8}{8} - \frac{1}{8} - \frac{2}{8} = \frac{5}{8}$.
- 29) **Choice C is correct.** (5.CA.3) Add: $2\frac{3}{4} + 3\frac{1}{4} = 5\frac{4}{4} = 6$ mi.
- 30) **Choice C is correct.** (5.CA.3) LCM(5,3,15) = 15. $\frac{1}{5} = \frac{3}{15}$, $\frac{1}{3} = \frac{5}{15}$, $\frac{1}{15} = \frac{1}{15}$. Sum = $\frac{3}{15} + \frac{5}{15} + \frac{1}{15} = \frac{9}{15} = \frac{3}{5}$ of the wall.
- 31) **Choice B is correct.** (5.M.1) Inside the parentheses, multiply first: $3 \times 3 = 9$. Then $9 + 6 = 15$, $15 \times 2 = 30$, and $30 - 8 = 22$.



Captain's Log—Voyage Complete

First Mate, Well Done!

◇ You sailed through 4 practice tests with steady hands and a sharp eye. The waters got rough sometimes, but you kept your course. That's what good sailors do. Now the harbor (test day) is in sight, and you are ready to dock with confidence. ◇

★ **Captain's wisdom:** a good sailor doesn't fight the wind—they read it and adjust. On a test, the same thing is true. When a problem feels tricky, don't panic. Read it again. Try a new strategy. Adjust the sails of your thinking. ★

Captain's Skills Inventory

- **Steady Steering:** EXCELLENT! You stay on course even when problems get tough.
- **Wind Reading:** STRONG! You can spot what a problem is really asking.
- **Crew Spirit:** HIGH! You believe in your own ability.
- **Harbor Approach:** READY! You know how to finish a test calmly.

Final captain's note: the best voyages combine planning with courage. You have both. Trust the chart you built through these 4 tests. Trust your hands on the wheel. Then sail confidently into test day.

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

Your Math Captain (Smooth Sailing Ahead)

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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Step-by-step explanations for every question to help students learn and improve.



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
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