

5

FULL-LENGTH

Indiana

ILEARN

GRADE 5 MATH

★ PRACTICE TESTS ★



**5 FULL-LENGTH
PRACTICE TESTS**



**COMPLETE
STANDARDS
REVIEW**



**SKILL PRACTICE,
WORD PROBLEMS,
AND MORE!**

$$\frac{3}{4} + \frac{2}{4} = \frac{5}{4}$$



$$12 \times 3 = 36$$



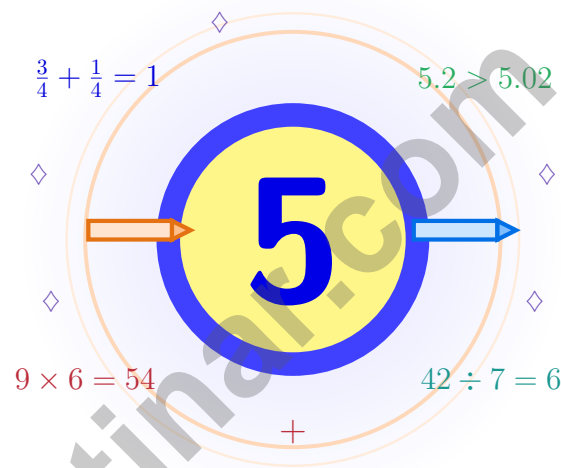
$$\frac{7}{10} = 0.7$$



BUILT FOR SUCCESS. DESIGNED TO HELP EVERY STUDENT.

5 Indiana ILEARN Grade 5 Math Practice Tests

Five full tests woven into one calm, steady quest



Five full tests, a friendly quick review, smart strategy pages, and student-tested support that turn Grade 5 practice in The Hoosier State into a steady quest of real growth.

Jay Daie and Reza Nazari



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Indiana, Your Five-Test Quest Begins

Five full tests woven into one calm, steady quest

Dear Indiana Math Quest Crew

This book is your practice zone, not a place to be perfect. Each of the five tests gives you a chance to notice clues, choose a strategy, check your thinking, and come back stronger for the next round. Math is like a long race lap: each careful step keeps you in the right lane and ready for the next turn.

Some questions will feel easy right away. Some will make you slow down, draw, estimate, or retry. That is excellent news. It means your math brain is doing real work.

Read Slow

Read every word, twice
when needed.

Choose Smart

Pick the operation,
sketch, or table that fits.

Grow

Lock the lesson in by
reflecting after each
problem.

A strong quest habit for Indiana: slow down, write neatly, estimate before you solve, and keep going even when a problem looks tricky at first. That is exactly how confident math students are built.

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Scan me

Your Five-Step Quest Plan

A simple routine that turns five tests into real growth

Step 1: Set Up

Pencil ready, distractions gone.
Wake up important ideas before you begin so your brain is ready to use them.

Step 2: Work the Test

Take a full test like the real day.
Find a quiet space, work carefully, and let accuracy matter more than speed.

Step 3: Look Back

Walk through your answers without rushing.
Circle missed questions and look for patterns. Which skill or habit needs another try?

Step 4: Climb Higher

Pick one or two skills to sharpen next.
Read the explanation, repair the work, and carry that lesson into the next test.

A Five-Week Indiana Quest Map

Week	Mission Focus
Week 1	Take Test 1 like a warm-up lap – notice your line and pace.
Week 2	Take Test 2 and compare. Find one habit that already feels stronger.
Week 3	Take Test 3 and polish fractions, decimals, and measurement work.
Week 4	Take Test 4 and slow down on multi-step problems.
Week 5	Take Test 5 with calm, careful, race-day focus.



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Area of Rectangle $A = l \times w$

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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

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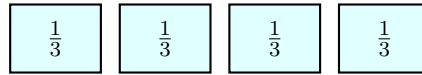
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- 1) A bar model shows 4 copies of $\frac{1}{3}$.



4 groups of $\frac{1}{3}$

What is $4 \times \frac{1}{3}$?

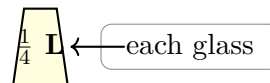
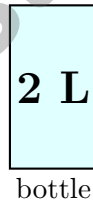
- A. $\frac{1}{12}$
 B. $\frac{4}{3}$

- C. $\frac{4}{12}$
 D. $1\frac{2}{3}$

- 2) Find: 0.05×8 .

Record your answer in the space provided.

- 3) A bottle holds 2 liters of juice. If each glass holds $\frac{1}{4}$ liter, how many glasses can be filled?



- A. 8 glasses
 B. 6 glasses

- C. 4 glasses
 D. 10 glasses



- 4) Container A holds 36 cubic inches. Container B holds 48 cubic inches. How much more does Container B hold?

Container A
36 cu. in.

Container B
48 cu. in.

- A. 12 cubic inches
 B. 24 cubic inches
 C. 84 cubic inches
 D. 112 cubic inches
- 5) Use the metric conversion chart below. Convert 7.5 meters to centimeters.

km	m	cm	mm
×1000	×100	×10	

- A. 75 cm
 B. 750 cm
 C. 7,500 cm
 D. 75,000 cm
- 6) On a graph of distance traveled, the x-axis shows hours and the y-axis shows miles. A point is plotted at (4, 20). How many miles does the point show?

Record your answer in the space provided.



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1) Complete the table:

Gallons	Quarts	Pints
1	4	8
2	8	16
?	12	24

- A. 2 gallons
- B. 3 gallons
- C. 4 gallons
- D. 6 gallons
- 2) Without computing, which is true?
- A. $999 \times 7 > 1,000 \times 7$
- B. $999 \times 7 < 1,000 \times 7$
- C. $999 \times 7 = 1,000 \times 7$
- D. Cannot tell
- 3) Choose the statement that matches the expression $5 \times 7 + 2$:
- A. 5 times the sum of 7 and 2
- B. 2 less than 5 times 7
- C. 5 times 7, then divided by 2
- D. 2 more than the product of 5 and 7
- 4) Which expression equals 5.6?
- A. 0.56×10
- B. 0.56×100
- C. 56×10
- D. 560×10
- 5) Without computing, which product is larger: $6 \times \frac{5}{4}$ or $6 \times \frac{5}{6}$?
- A. $6 \times \frac{5}{4}$ is larger
- B. $6 \times \frac{5}{6}$ is larger
- C. They are equal
- D. Cannot compare



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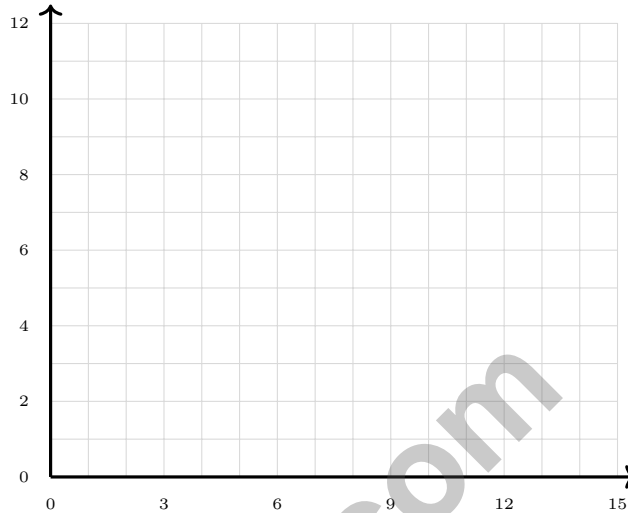
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- 1) Use Pattern A values as x -values and Pattern B values as y -values. Pattern A adds 5 starting at 0, and Pattern B adds 2 starting at 0. Which list shows the ordered pairs?



- A. (0, 0), (5, 2), (10, 4)
 - B. (0, 0), (2, 5), (4, 10)
 - C. (0, 0), (3, 5), (6, 10)
 - D. (0, 0), (5, 5), (10, 10)
- 2) A teacher drew a place-value chart for 5.693 and asked students to identify which place is 10 times the hundredths place.

Ones	Tenths	Hundredths	Thousandths
5	6	9	3

Which place satisfies this condition?

- A. Thousandths
- B. Ones
- C. Hundredths
- D. Tenths



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 B is correct.** (5.CA.5) The model shows 4 one-third pieces. That is $4 \times \frac{1}{3} = \frac{4}{3}$, which is one whole and one more third, or $1\frac{1}{3}$.
- 2) **The correct answer is 0.4.** (5.CA.9) $5 \times 8 = 40$. Two decimal places gives $0.40 = 0.4$.
- 3) **Choice A is correct.** (5.CA.8) $2 \div \frac{1}{4} = 2 \times 4 = 8$ glasses.
- 4) **Choice A is correct.** (5.M.4) Compare the two container volumes by subtracting. Container B holds $48 - 36 = 12$ cubic inches more than Container A.
- 5) **Choice B is correct.** (5.M.1) 1 meter = 100 centimeters. Multiply: $7.5 \times 100 = 750$ cm.
- 6) **The correct answer is 20 mi.** (5.CA.11) The x-coordinate is 4, so it shows 4 hours. The y-coordinate is 20, so it shows 20 miles. Accept equivalent interpretations that correctly match 4 with hours and 20 with miles.
- 7) **Choice B is correct.** (5.CA.1) The tick marks show two pairs of equal sides next to each other, which is a key property of a kite.
- 8) **Choice D is correct.** (5.M.1) Total needed: 3 liters = 3,000 mL. Chef has: 2 liters 250 mL = 2,250 mL. Remaining: $3,000 - 2,250 = 750$ mL.
- 9) **Choice D is correct.** (5.CA.3) Convert to fourths: $2\frac{1}{4} + 1\frac{2}{4} + 1\frac{1}{4} = 4\frac{4}{4} = 5$.
- 10) **Choice D is correct.** (5.CA.3) LCD = 12. $1 = \frac{12}{12}$, $\frac{1}{4} = \frac{3}{12}$, $\frac{1}{6} = \frac{2}{12}$. $\frac{12}{12} - \frac{3}{12} - \frac{2}{12} = \frac{7}{12}$.
- 11) **Choice C is correct.** (5.CA.8) The one-eighth strip is the amount being shared. So the matching equation is $\frac{1}{8} \div 2 = n$.
- 12) **Choice A is correct.** (5.NS.1) For 1.456: tenths digit is 4, hundredths is 5. Since $5 \geq 5$, round the tenths up to 5, giving 1.5. For 1.572: tenths is 5, hundredths is 7. Since $7 \geq 5$, round tenths up to 6, giving 1.6. For 1.654: tenths is 6, hundredths is 5, so it rounds to 1.7. Only A (1.456) rounds to 1.5.
- 13) **Choice C is correct.** (5.NS.3) Each factor has four zeros. Multiplying powers of 10 combines those zeros, giving a product with 8 zeros.
- 14) **Choice A is correct.** (5.CA.11) The parentheses tell us to divide 6 by 2 first. Then the result is multiplied by 4, matching choice A.
- 15) **Choice D is correct.** (5.CA.3) LCM(12,4) = 12. $\frac{1}{4} = \frac{3}{12}$. $\frac{7}{12} + \frac{3}{12} = \frac{10}{12} = \frac{5}{6}$ mile.
- 16) **Choice B is correct.** (5.CA.3) Borrow 1 from 5: $4\frac{7}{6} - 2\frac{5}{6} = 2\frac{2}{6}$.
- 17) **The correct answer is 343 cm³.** (5.M.4) A cube has the same side length in every direction. So the volume is $7 \times 7 \times 7 = 343$ cm³.
- 18) **Choice C is correct.** (5.M.5) Find each part first: Prism A is $8 \times 2 \times 3 = 48$ cubic feet, and Prism B is $3 \times 5 \times 5 = 75$ cubic feet. Because the parts do not overlap, add them: $48 + 75 = 123$ cubic feet.
- 19) **Choice A is correct.** (5.CA.1) A square is the only quadrilateral that is both a rectangle (all 90° angles) and a rhombus (all sides equal).
- 20) **Choices A, B are correct.** (5.CA.6) C gives the wrong quotient, and D uses 4 instead of the reciprocal $\frac{1}{4}$.
- 21) **Choice A is correct.** (5.NS.1) Each decimal place is 10 times the value of the next place to the right. So hundredths (0.01) is 10 times greater than thousandths (0.001).
- 22) **Choice D is correct.** (5.NS.3) Dividing by 100: $18.4 \div 100 = 0.184$ liters per bottle.
- 23) **Choice D is correct.** (5.CA.7) $24 \times \frac{1}{3} = 8$ ounces, which is less than 24. She uses $\frac{1}{3}$ of the total, a smaller amount.
- 24) **Choice B is correct.** (5.M.4) Check each product carefully. A: $4 \times 3 \times 6 = 72$. B: $6 \times 2 \times 7 = 84$. C: $5 \times 3 \times 6 = 90$. D: $4 \times 5 \times 4 = 80$. Only the second prism has volume 84 cm³.
- 25) **Choice A is correct.** (5.CA.4) Vegetables and flowers: $\frac{2}{7} + \frac{1}{3} = \frac{6}{21} + \frac{7}{21} = \frac{13}{21}$. Herbs: $1 - \frac{13}{21} = \frac{8}{21}$.
- 26) **Choice B is correct.** (5.M.1) Since 1 mile = 5,280 feet, multiply 2 by 5,280: $2 \times 5,280 = 10,560$ feet.
- 27) **Choice A is correct.** (5.M.1) Parentheses first: $8 - 3 = 5$. Then multiply and divide from left to right: $2 \times 5 = 10$ and $10 \div 5 = 2$. Finally, $10 + 2 = 12$.
- 28) **Choice D is correct.** (5.NS.1) 0.309 has 3 in tenths and 9 in thousandths. Since there are 0 hundredths, the expanded form can omit the hundredths term: $\frac{3}{10} + \frac{9}{1000} = 0.309$.



Greetings, Research Scientist!

★ Exceptional research completed! You've conducted five comprehensive mathematical experiments, collecting data, analyzing results, and drawing accurate conclusions like a professional scientist! Each test represented a controlled experiment where you tested your hypotheses, recorded observations, and refined your methodologies. Your scientific approach to problem-solving has developed remarkably! ★

◇ **Here's what accomplished scientists understand:** research requires careful observation, precise measurement, and systematic analysis. They document their procedures so they can replicate successful experiments. You've developed those same scientific practices through these five tests! You've documented (mentally) which strategies work best, and now you can replicate that success on test day!

◇

Research Laboratory Findings

- **Hypothesis Testing:** You systematically evaluate which approaches work best!
- **Data Analysis:** You examine information carefully before drawing conclusions!
- **Experimental Control:** You maintain focus and accuracy throughout testing!
- **Research Complete:** Your findings confirm readiness for test day experimentation!

Remember this scientific principle: careful scientists verify their results before publishing findings. On test day, apply that same careful verification to your work. Double-check your calculations, confirm your answers make sense, and submit your best work. You've practiced the scientific method five times trust your research skills!

Want to publish your mathematical research findings or discuss an interesting problem-solving hypothesis? Submit your papers to reza@testinar.com. The journal awaits your contributions!

Reza Nazari & Jay Daie
Your Math Teacher (Proud of You!)

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