

9

Kentucky

KSA

GRADE 5 MATHEMATICS PRACTICE TESTS

Full-Length Standards-Aligned Practice
for Strong Math Performance

$$A = l \times w$$

$$x^2 + 3x - 4 = 0$$

$$y = 2x + 1$$



9

**FULL-LENGTH
PRACTICE
TESTS**



$$2,345 \times 6 = 14,070$$



$$\frac{3}{4} + \frac{1}{8} = \frac{7}{8}$$

$$7.2 \div 0.8 = 9$$



$$(12 + 8) \div 4 = 5$$



Build Confidence



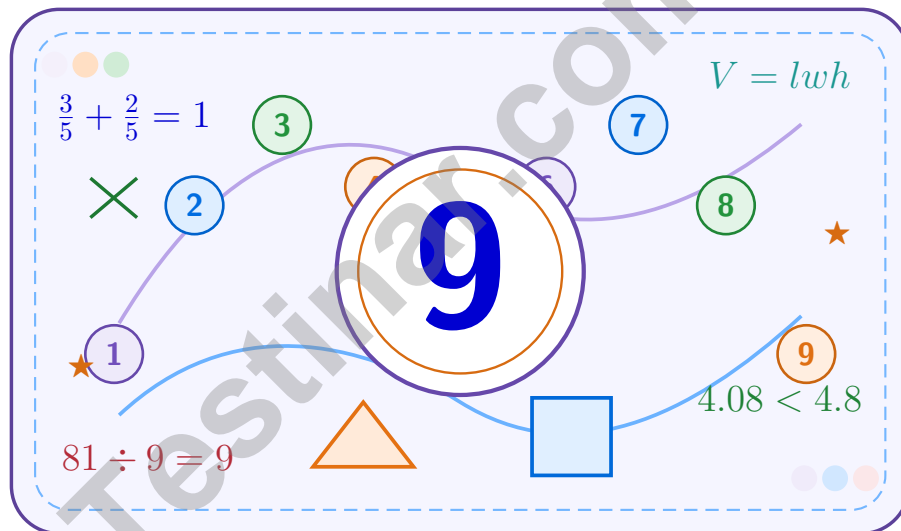
Improve Math Skills



Achieve Success

9 Kentucky KSA Grade 5 Math Practice Tests

A nine-step confidence climb with clear review, smart strategy, and practice that gets stronger every round



Nine full tests, focused skill boosters, 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 nine 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 nine tests into steady growth

A Nine-Session Climb Map

Session	Mission Focus
1	Take Test 1; review place value and operation slips.
2	Take Test 2; keep work neat and easy to read.
3	Take Test 3; give extra time to fractions and decimals.
4	Take Test 4; slow down on word problems and units.
5	Take Test 5; compare scores and habits with earlier rounds.
6	Take Test 6; notice which habits are now automatic.
7	Take Test 7; explain open-ended answers clearly.
8	Take Test 8; review topics that still need attention.
9	Take Test 9; finish with calm, careful, confident work.

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.



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 Kentucky KSA. 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.



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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)

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

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1) A class collects donations. Monday: $\frac{1}{3}$ of target, Tuesday: $\frac{1}{4}$ of target. Total collected?

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

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

C. $\frac{1}{7}$

D. $\frac{2}{7}$

2) A rounding decision tree: To round 9.473 to the nearest tenth, which digit do you look at first?

 A. The ones digit (9) B. The tenths digit (4) C. The hundredths digit (7) D. The thousandths digit (3)

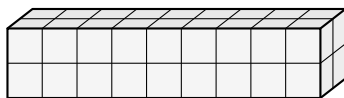
3) A line plot shows: 2 X's at $\frac{1}{4}$, 4 X's at $\frac{1}{2}$, 1 X at $\frac{3}{4}$. How many measurements total?

Record your answer in the space provided.

4) Pattern: $8 \times 5 = 40$; $80 \times 5 = 400$; $800 \times 5 = ?$

 A. 400 B. 4,000 C. 40,000 D. 40

5) How many unit cubes fit in a rectangular prism that is 9 units long, 2 units wide, and 2 units tall?

 A. 45 unit cubes B. 27 unit cubes C. 18 unit cubes D. 36 unit cubes

- 6) Find the product: $0.07 \times 1,000$.

Record your answer in the space provided.

- 7) A rectangular prism has volume 450 cm^3 and base area 50 cm^2 . What is the height?

- A. 7 cm C. 10 cm
 B. 8 cm D. 9 cm

- 8) What is $7 \div \frac{1}{2}$?

- A. 7 C. 12
 B. 10 D. 14

- 9) A currency converter shows 1 dollar = 100 cents. If you have 68 dollars, how many cents?

Dollars	68
Cents per Dollar	100
Total Cents	?

- A. 68 C. 6800
 B. 680 D. 68000

- 10) Which expression is equivalent to $\frac{2,800}{10^1}$?

- A. $2,800 \div 1$ C. $2,800 \div 100$
 B. $2,800 \div 1,000$ D. $2,800 \div 10$



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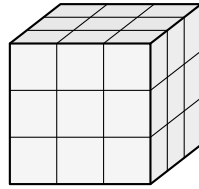
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- 1) A cubical box has edges of 3 units. How many unit cubes will it hold?



- A. 6 unit cubes C. 18 unit cubes
 B. 9 unit cubes D. 27 unit cubes
- 2) An ordered pair follows the rule “the output is half of the input.” For input 14, what is the output?
- A. 5 C. 7
 B. 6 D. 8
- 3) Area model for $\frac{1}{4}$ of a rectangle with width 4:



Total width = 4

What is $\frac{1}{4}$ of a width of 4 units?

- A. 1 C. $\frac{1}{4}$
 B. 2 D. $\frac{3}{4}$
- 4) Evaluate the expression: $\{[(8 + 2) \times 3] - 5\} \times 2$

Record your answer in the space provided.



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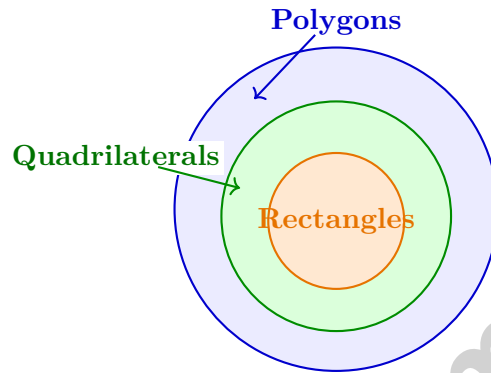
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- 1) A Venn diagram has a large circle for polygons, a smaller circle for quadrilaterals inside it, and a smaller circle for rectangles inside the quadrilaterals circle. Where should a square be placed?



- A. Inside polygons only
- B. Inside all three circles
- C. Outside all three circles
- D. Inside quadrilaterals only
- 2) A measured distance is 24 centimeters. What is this distance in millimeters?
- A. 2.4 mm
- B. 24 mm
- C. 240 mm
- D. 2,400 mm
- 3) Express 1,000,000,000 as a power of 10.

Record your answer in the space provided.



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1) A composite garden block is made from two non-overlapping rectangular prisms. Prism A is 8 centimeters long, 2 centimeters wide, and 4 centimeters tall. Prism B is 3 centimeters long, 3 centimeters wide, and 4 centimeters tall. What is the total volume?

- A. 100 cubic centimeters C. 36 cubic centimeters
 B. 64 cubic centimeters D. 116 cubic centimeters

2) A triangle has angles 50° , 60° , and 70° . Classify the triangle by its angles.

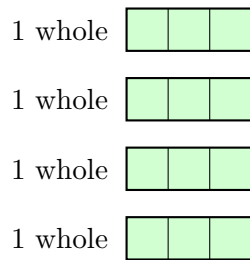
- A. Acute triangle C. Obtuse triangle
 B. Right triangle D. Scalene triangle

3) A box is filled with unit cubes. If the base is 4 unit cubes long and 3 unit cubes wide, and there are 5 layers, what is the volume?

Box
Base: 4×3 , Layers: 5

- A. 12 cubic units C. 35 cubic units
 B. 20 cubic units D. 60 cubic units

4) The model shows 4 wholes, with each whole cut into pieces of size $\frac{1}{3}$. How many pieces of size $\frac{1}{3}$ are there in all?



4 wholes, each cut into pieces of size $\frac{1}{3}$

- A. 12 C. 3
 B. 7 D. 4



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 Kentucky scores.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice A is correct.** (KY.5.NF.3) $\frac{1}{3} + \frac{1}{4}$: common denominator 12. $\frac{1}{3} = \frac{4}{12}$ and $\frac{1}{4} = \frac{3}{12}$. Total: $\frac{7}{12}$.
- 2) **Choice C is correct.** (KY.5.NF.3) To round to the nearest tenth, we look at the digit to the RIGHT of the tenths place, which is the hundredths digit (7). We use it to decide whether to round up or down.
- 3) **The correct answer is 7.** (KY.5.MD.2) Each X represents one measurement. Add the X's at each value: $2 + 4 + 1 = 7$ measurements total.
- 4) **Choice B is correct.** (KY.5.MD.2) The known product $8 \times 5 = 40$ already has one zero. The factor 800 adds two more zeros, giving 4,000.
- 5) **Choice D is correct.** (KY.5.NBT.2) Count by multiplying the dimensions. $9 \times 2 = 18$ cubes per layer, and 2 layers make 36 unit cubes.
- 6) **The correct answer is 70.** (KY.5.MD.4) Multiplying by 1,000 moves the decimal point three places right: $0.07 \rightarrow 70$.
- 7) **Choice D is correct.** (KY.5.NBT.2) Divide the volume by the base area: $450 \div 50 = 9$, so the height is 9 cm.
- 8) **Choice D is correct.** (KY.5.MD.5) $7 \div \frac{1}{2} = 7 \times 2 = 14$.
- 9) **Choice C is correct.** (KY.5.NF.7) $68 \times 100 = 6800$ cents. Append two zeros to 68.
- 10) **Choice D is correct.** (KY.5.NBT.2) $10^1 = 10$, so $\frac{2,800}{10^1} = 2,800 \div 10 = 280$.
- 11) **Choice C is correct.** (KY.5.NBT.2) Line up decimal points and subtract place by place. $8.37 - 5.84 = 2.53$ miles remaining. This confirms the answer.
- 12) **Choice C is correct.** (KY.5.NBT.4) A, B, and D all equal 10. Only C equals 9, since $\frac{9}{10} < 1$.
- 13) **Choice A is correct.** (KY.5.NF.5) Moving 3 units left subtracts 3 from the x -coordinate: $7 - 3 = 4$. Moving 5 units up adds 5 to the y -coordinate: $2 + 5 = 7$. New coordinates are (4, 7).
- 14) **Choice D is correct.** (KY.5.G.4) An equilateral triangle has three equal sides, so it also has at least two equal sides, making it isosceles. However, not all isosceles triangles are equilateral.
- 15) **Choice D is correct.** (KY.5.NF.1) $\frac{5}{16}$ is not equivalent to $\frac{1}{3}$ because $1 \times 16 \neq 3 \times 5$. The other choices simplify to $\frac{1}{3}$.
- 16) **Choice A is correct.** (KY.5.NF.1) The top and bottom sides are parallel, but the left and right sides are not parallel. So the figure has exactly one pair of parallel sides.
- 17) **Choice A is correct.** (KY.5.NF.3) Start with one unit fraction, $\frac{1}{5}$, and share it into 3 equal parts. Each part is $\frac{1}{5} \div 3 = \frac{1}{15}$ of the whole.
- 18) **Choice A is correct.** (KY.5.NF.2) Add the lengths shown: $2(\frac{1}{4}) + 3(\frac{1}{2}) + 3(\frac{3}{4}) + 1 = 5\frac{1}{4}$ yards.
- 19) **Choices A, C are correct.** (KY.5.OA.2) B and D do not group $5 + 2$ before multiplying.
- 20) **Choice B is correct.** (KY.5.OA.2) Each foot has 3 one-third-foot pieces. $9 \div \frac{1}{3} = 9 \times 3 = 27$ boards.
- 21) **Choice A is correct.** (KY.5.MD.5) Pens cost: $4 \times 2.25 = 9.00$ dollars. Pencils cost: $3 \times 1.75 = 5.25$ dollars. Total: $9.00 + 5.25 = 14.25$ dollars.
- 22) **Choice A is correct.** (KY.5.NBT.2) The correct answer is $7.5 \div 100 = 0.075$. She incorrectly moved decimal right (multiplying behavior) rather than left.
- 23) **Choice A is correct.** (KY.5.NBT.3) $\frac{5}{10} = 0.5$ (tenths place) and $\frac{2}{100} = 0.02$ (hundredths place), so $3 + 0.5 + 0.02 = 3.52$.
- 24) **Choice C is correct.** (KY.5.NBT.3) The multiplicative identity is 1: any number times 1 equals that number.
- 25) **Choice D is correct.** (KY.5.NF.4) Use total amount divided by the size of one piece. The equation is $8 \div \frac{1}{4} = n$.
- 26) **Choice D is correct.** (KY.5.G.2) Day 2: Ages 5–7 count is 6, Ages 8–10 count is 4. Ordered pair is (6, 4).
- 27) **Choice D is correct.** (KY.5.G.2) One route is 3,250 meters. Two routes are $3,250 \times 2 = 6,500$ meters.
- 28) **Choice C is correct.** (KY.5.MD.4) Volume = $25 \times 15 \times 10 = 375 \times 10 = 3750 \text{ cm}^3$.
- 29) **Choice D is correct.** (KY.5.MD.4) $V = B \times h = 15 \times 10 = 150 \text{ cm}^3$.
- 30) **Choice B is correct.** (KY.5.MD.1) 1 gallon = 4 quarts = 8 pints. So 2 gallons = $2 \times 8 = 16$ pints.
- 31) **The correct answer is about 8.** (KY.5.MD.1) $5\frac{1}{6} \approx 5$ and $2\frac{7}{8} \approx 3$, so the sum is about 8. Accept equivalent estimates that are clearly close to 8.



Authors' Notes

From a Friend Who Believes in You

Hi, Brilliant Friend!

◇ I have to tell you something important: I am proud of you. You completed 9 full practice tests. That takes time, focus, and heart. Many students never push themselves like that. You did. That tells me everything about your work ethic. ◇

★ **Here's a friendly reminder:** a test does not measure your worth. It measures one slice of your skills on one day. You are much more than a score. The work you put in to grow—that is the real win. ★

Things I Want You to Remember

- **You are capable.** Every test you finished proves it.
- **You are resilient.** You worked through hard problems.
- **You are growing.** Every mistake taught you something new.
- **You are ready.** The skills are inside you.

One last thing: when you sit down on test day, take a deep breath, smile a tiny smile, and remember that someone (me!) believes in you. You've got this.

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 Friend (Always in Your Corner)

PRACTICE MORE. ACHIEVE MORE.

Give your child the edge they need to excel in **Grade 5 Math!** This book includes **9 full-length** practice tests designed to build confidence, sharpen skills, and improve test performance.

9

**FULL-LENGTH
PRACTICE
TESTS**

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- ✓ Rigorous.
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Familiar, focused practice reduces anxiety and boosts self-belief.



Strengthen Skills

Reinforces key math concepts through high-quality, standards-aligned questions.



Improve Test Readiness

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Track Progress

Identify strengths and target areas with purposeful practice.



Achieve Success

Better preparation leads to higher scores and bright futures.

COVERS ALL ESSENTIAL TOPICS

- ✓ Whole Numbers & Operations
- ✓ Fractions & Decimals
- ✓ Algebraic Thinking
- ✓ Geometry
- ✓ Measurement & Data
- ✓ Graphing & Data Analysis
- ✓ Number Patterns
- ✓ Word Problems
- ✓ Ratio & Proportion
- ✓ Perimeter, Area & Volume
- ✓ And More!



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