

5

FULL-LENGTH

Kansas

KAP

GRADE 5 MATH

★ PRACTICE TESTS ★



**5 FULL-LENGTH
PRACTICE TESTS**



**COMPLETE
STANDARDS
REVIEW**



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

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



$$12 \times 3 = 36$$



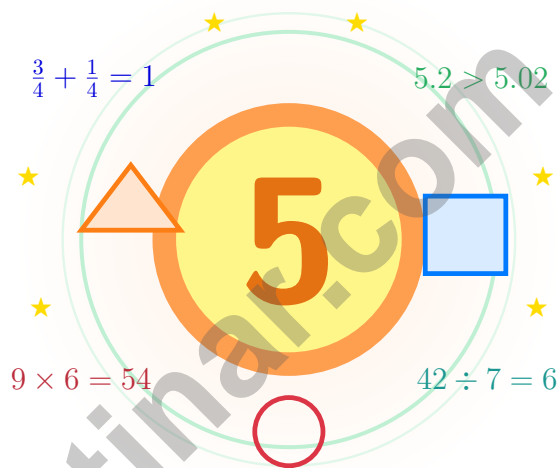
$$\frac{7}{10} = 0.7$$



BUILT FOR SUCCESS. DESIGNED TO HELP EVERY STUDENT.

5 Kansas KAP Grade 5 Math Practice Tests

Five chances to read carefully, solve smartly, and grow stronger



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

Jay Daie and Reza Nazari



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Step into the Quest, Kansas

Five chances to read carefully, solve smartly, and grow stronger

To Kansas Students Who Love a Puzzle

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. Strong math thinking opens like a sunflower – slow at sunrise, steady all day, and turning to follow the light.

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.

Watch

Watch what the question really wants from you.

Try

Try a strategy that matches the size of the numbers.

Polish

Polish your steps, units, and final answer.

A strong quest habit for Kansas: 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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How This Book Wants to Help

A simple routine that turns five tests into real growth

Step 1: Plan

Plan a quiet hour for one full test.
Wake up important ideas before you begin so your brain is ready to use them.

Step 2: Practice

Take the test with calm focus.
Find a quiet space, work carefully, and let accuracy matter more than speed.

Step 3: Inspect

Inspect every answer like a careful builder.
Circle missed questions and look for patterns. Which skill or habit needs another try?

Step 4: Adjust

Adjust what needs adjusting for the next test.
Read the explanation, repair the work, and carry that lesson into the next test.

A Five-Week Kansas Quest Map

Week	Mission Focus
Week 1	Take Test 1 and watch your math sunflower turn toward the next clear step.
Week 2	Take Test 2 and notice one habit that grew taller.
Week 3	Take Test 3 and lift fractions, decimals, and conversions.
Week 4	Take Test 4 and slow down on multi-step problems.
Week 5	Take Test 5 with calm, confident, sunlit focus.



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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)

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CAPACITY

Customary

1 cup (c) = 8 fluid ounces (fl oz)

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WEIGHT AND MASS

Customary

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TIME

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

1 hour (hr) = 60 minutes (min) 1 year = 12 months

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



1) Subtract: $\frac{5}{9} - \frac{1}{6}$

A. $\frac{4}{3}$

B. $\frac{4}{15}$

C. $\frac{10}{15}$

D. $\frac{7}{18}$

2) A shipping container has volume 800 cubic meters. Its base is 20 m by 8 m. What is the height of the container?

A. 4 m

B. 5 m

C. 6 m

D. 8 m

3) A teacher has 3,600 sheets of paper. She gives 100 sheets to each student. How many students are there?

A. 3.6

B. 36

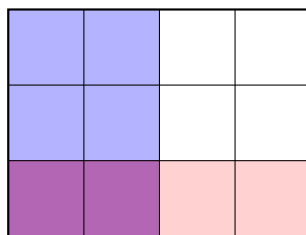
C. 360

D. 36,000

4) A rectangular aquarium is 12 inches long, 6 inches wide, and 8 inches tall. Find its volume and explain your work.

Record your answer in the space provided.

5) Which calculation is shown in the area model below?



A. $\frac{1}{2} \times \frac{2}{3}$

B. $\frac{2}{4} \times \frac{1}{3}$

C. $\frac{1}{4} \times \frac{1}{3}$

D. $\frac{2}{3} \times \frac{3}{4}$



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1) If $15.42 - ? = 8.67$, what is the missing value?

A. 7.15

C. 6.75

B. 6.85

D. 7.25

2) Multiply: $\frac{4}{5} \times \frac{1}{3}$

A. $\frac{4}{8}$

C. $\frac{4}{15}$

B. $\frac{5}{8}$

D. $\frac{1}{15}$

3) What is $2.4 \div 3$?

A. 0.8

C. 7.2

B. 0.9

D. 8.0

4) The expression $3 \times (5 + 2)$ is best described as:

A. 3 more than $5 + 2$

C. 3 times $(5 + 2)$

B. 3 less than $5 + 2$

D. $\frac{1}{3}$ of $5 + 2$

5) A child grows from 100 cm to 115 cm. What is the growth in meters?

A. 0.15 meters

C. 1.15 meters

B. 0.25 meters

D. 1.5 meters

6) A student is making a line plot for these pencil lengths, in inches:

$4\frac{1}{4}$, $4\frac{1}{2}$, $4\frac{1}{2}$, $4\frac{3}{4}$, $4\frac{3}{4}$, $4\frac{3}{4}$, 5, 5

How many X's should be placed above $4\frac{1}{2}$ inches?

A. 1

C. 3

B. 4

D. 2



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- 1) In an error, a student plots points from Rules A and B but accidentally swaps the coordinates. Rule A: 2, 4, 6, 8. Rule B: 1, 2, 3, 4. The student writes (1, 2), (2, 4), (3, 6), (4, 8). What is the first correct pair?

- A. (2, 1) C. (4, 8)
 B. (1, 2) D. (8, 4)

- 2) Write a fraction equivalent to $\frac{2}{5}$ with a denominator of 20.

Record your answer in the space provided.

- 3) What is 112×7 ?

- A. 780 C. 788
 B. 792 D. 784



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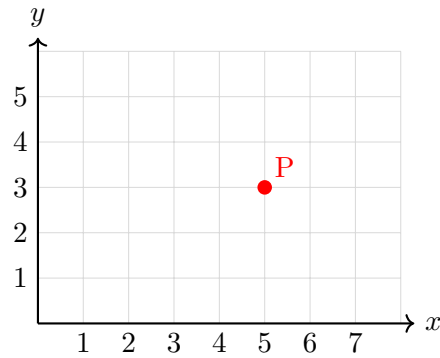
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1) From the coordinate grid, which ordered pair is shown?



- A. (3, 5) C. (5, 5)
- B. (5, 3) D. (3, 3)
- 2) A movie is 2.45 hours long. The middle scene lasts 1.25 hours. How long is the rest of the movie?
- A. 0.50 hours C. 0.20 hours
- B. 1.20 hours D. 1.30 hours
- 3) Which statement correctly describes a triangle?
- A. An equilateral triangle has one angle of 90 degrees C. An isosceles triangle has no equal sides
- B. An obtuse triangle has no angle greater than 90 degrees D. A scalene triangle has all sides different



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 D is correct.** **(5.NF.2)** LCD = 18. $\frac{5}{9} = \frac{10}{18}$; $\frac{1}{6} = \frac{3}{18}$. $\frac{10}{18} - \frac{3}{18} = \frac{7}{18}$.
- 2) **Choice B is correct.** **(5.MD.5)** The base area is $20 \times 8 = 160$ square meters. Since $800 \div 160 = 5$, the height is 5 m.
- 3) **Choice B is correct.** **(5.NBT.2)** Total sheets divided by sheets per student: $3,600 \div 100 = 36$ students.
- 4) **The correct answer is 576 in³.** **(5.MD.5)** Use length times width times height: $12 \times 6 \times 8 = 576$. The aquarium's volume is 576 cubic inches.
- 5) **Choice B is correct.** **(5.NF.4b)** The blue region is 2 out of 4 columns. The red region is 1 out of 3 rows. The overlap shows $\frac{2}{4} \times \frac{1}{3} = \frac{2}{12}$.
- 6) **Choice A is correct.** **(5.G.4)** The definition of a trapezoid is a quadrilateral with exactly one pair of parallel sides. All other options are not always true.
- 7) **Choice C is correct.** **(5.NF.2)** $\frac{5}{6} = \frac{5 \times 4}{6 \times 4} = \frac{20}{24}$ and $\frac{3}{8} = \frac{3 \times 3}{8 \times 3} = \frac{9}{24}$.
- 8) **Choice A is correct.** **(5.MD.2)** Items at \$3: 2, Items at \$6: 3. Total: $2 + 3 = 5$ items cost less than \$9.
- 9) **Choice A is correct.** **(5.G.2)** All four sides are equal: $5 - 1 = 4$ units. All four angles are right angles. This is a square.
- 10) **Choice B is correct.** **(5.G.1)** On the y-axis, the x-coordinate is 0. The y-axis is a boundary of the first-quadrant grid, not inside the first quadrant.
- 11) **Choice A is correct.** **(5.NBT.2)** Each power of 10 adds one more zero: 10, 100, 1000, 10000.
- 12) **The correct answer is 4.** **(5.OA.1)** $9 + 3 = 12$; $12 \times 2 = 24$; $24 - 4 = 20$; $20 \div 5 = 4$.
- 13) **Choice D is correct.** **(5.MD.5c)** Find each part first: Prism A is $7 \times 4 \times 4 = 112$ cubic meters, and Prism B is $6 \times 2 \times 4 = 48$ cubic meters. Because the parts do not overlap, add them: $112 + 48 = 160$ cubic meters.
- 14) **Choice B is correct.** **(5.MD.3b)** The base has $12 \times 8 = 96$ square feet. Since the volume is 480 cubic feet, divide $480 \div 96 = 5$. The height is 5 feet.
- 15) **Choice B is correct.** **(5.MD.5a)** The room is exactly filled, so compare volumes. Room volume: $18 \times 12 \times 10 = 2160$ cubic feet. Number of boxes: $2160 \div 360 = 6$ boxes.
- 16) **The correct answer is $\frac{1}{15}$.** **(5.NF.7c)** 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.
- 17) **Choice D is correct.** **(5.NF.7c)** The unit fraction is the amount being shared, so divide $\frac{1}{5}$ by 2. The equation is $\frac{1}{5} \div 2 = n$.
- 18) **Choice D is correct.** **(5.NBT.7)** Line up decimal points and subtract place by place. $15.50 - 7.25 = 8.25$ meters. This confirms the answer.
- 19) **Choice B is correct.** **(5.NF.2)** $3\frac{9}{10} \approx 4$. So $6 - 3\frac{9}{10} \approx 6 - 4 = 2$.
- 20) **Choice B is correct.** **(5.MD.1)** Since 1 pound = 16 ounces, divide 16 by 8: $16 \div 8 = 2$ packages.
- 21) **Choices A, B are correct.** **(5.MD.2)** Add the four lengths to get 4 inches in all. The value 1 inch appears twice, more than any other value; C and D do not match the line plot.
- 22) **Choice C is correct.** **(5.NF.2)** $\frac{4}{9} + \frac{2}{9} = \frac{6}{9} = \frac{2}{3}$ of the shelf.
- 23) **Choice D is correct.** **(5.NBT.5)** Round 23 to 20 and 18 to 20. Then $20 \times 20 = 400$.
- 24) **Choice A is correct.** **(5.NF.5a)** $6 \times \frac{1}{3} = 2$ m². Scaling by $\frac{1}{3}$ makes the area one-third its original size.
- 25) **Choice B is correct.** **(5.NF.4)** $9 \times \frac{1}{3} = \frac{9}{3} = 3$.
- 26) **Choice B is correct.** **(5.NBT.2)** $78 \times 10 = 780$ dollars. Append one zero to 78.
- 27) **Choice D is correct.** **(5.G.4)** A rectangle is a quadrilateral, and its opposite sides are parallel.
- 28) **Choice C is correct.** **(5.NF.1)** Add whole parts: $3 + 1 = 4$. Add fractions: $\frac{1}{4} + \frac{3}{4} = 1$. Total: $4 + 1 = 5$.
- 29) **Choice A is correct.** **(5.NF.7c)** $\frac{1}{10} \div 2 = \frac{1}{10} \times \frac{1}{2} = \frac{1}{20}$.
- 30) **Choice C is correct.** **(5.NBT.2)** There are three factors of 100. Each one contributes two zeros, so the product has six zeros: 1,000,000.



Hello, Mathematical Artist!

★ Magnificent gallery! You've created five complete collections of mathematical artwork, carefully crafting solutions with precision and creativity like a master artist! Each problem was a blank canvas waiting for your artistic mathematical expression. You've filled your gallery with beautiful work that demonstrates both technical skill and creative insight! ★

◇ **Here's what accomplished artists know:** creating masterpieces requires vision, technique, and practice. Artists sketch ideas, experiment with methods, and refine their work through multiple iterations. You've practiced that artistic process through these five tests! Your mathematical artistry has matured, and your techniques have become refined and confident! ◇

Artist's Portfolio Review

1. **Creative Vision:** You see multiple approaches to mathematical challenges!
2. **Technical Skill:** Your execution of procedures is precise and clean!
3. **Artistic Expression:** Your solutions show both logic and elegance!
4. **Exhibition Ready:** Your portfolio is complete and impressive!

Remember this artistic wisdom: great artists develop their unique style through practice. Your mathematical style your way of approaching problems, organizing work, and verifying answers has become distinctly yours. On test day, express your mathematical artistry confidently. The world is ready to admire your work!

Want to display a particularly beautiful solution or discuss mathematical aesthetics? Send your artwork to reza@testinar.com. I celebrate mathematical creativity!

Reza Nazari & Jay Daie

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5 FULL-LENGTH TESTS. STRONG SKILLS. BRIGHTER RESULTS.



Build confidence and master math with **5 full-length** practice tests designed to reflect the real test experience. This book provides the practice, review, and support students need to succeed in Grade 5 and beyond!

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