

# 7 Kentucky KSA

## Grade 6 MATH PRACTICE TESTS

7  
PRINTED  
TESTS  
+  
2  
ONLINE  
TESTS

Use these two additional online practice tests for extra review after the printed tests in this book.

Standards-Aligned *Steady Southern*  
Problem Solving for Comprehensive  
Assessment Program



7 Full-Length  
Printed Tests



Standards-Aligned  
Math Practice



Detailed Answer Keys  
and Explanations



Build Confidence.  
Achieve Success.



You've  
Got  
This!



PREPARE  
PRACTICE  
SUCCEED



PRACTICE  
WITH PURPOSE



STRENGTHEN  
MATH SKILLS



REVIEW, IMPROVE,  
AND SUCCEED

# 7 Kentucky KSA Grade 6 Math Practice Tests

*Standards-Aligned Bluegrass Practice Stamina for Kentucky Summative Assessment*



Seven complete 40-question Grade 6 practice rounds for KSA, built for bluegrass practice stamina with ratios, rational numbers, expressions, equations, geometry, statistics, answer keys, and clear explanations for every item.

**Jay Daie and Reza Nazari**



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# Welcome, Kentucky Math Explorer!

Eight focused rounds using bluegrass practice stamina

This book gives you seven full Grade 6 practice tests for KSA. Each round uses rolling hills, race-day focus, and careful step checks as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

## Your Kentucky Practice Promise

Pace the work like a long race: start carefully, keep notes neat, and finish with a check.

Read

Plan

Check

## How to Use This Book

A seven-session routine for bluegrass practice stamina

1. **Work in order.** Take one 40-question test at a time in a quiet place.
2. **Preview the skills.** Scan the quick review pages before beginning the first round.
3. **Correct actively.** Retry missed items before reading the full explanation.
4. **Mark confidence.** Put a small star beside problems where your plan felt strong.
5. **Plan the next round.** Use the growth log to choose one habit and one skill to practice.

**Kentucky review rhythm:** Run one test, study the missed turns, and use the next round to improve your pace.



## What Is Inside?

Eight KSA tests, 320 questions, and a full review path

Part	What You Will Practice
Tests 1–3	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Tests 4–6	Skill-building rounds with expressions, equations, geometry, data, and problem models.
Test 7	Final stamina round for mixed review, neat work, and flexible strategy choices.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Bluegrass practice stamina means recognizing the skill even when the next question changes topic, changes format, or asks for an explanation.

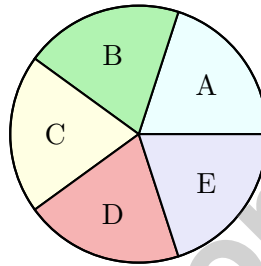


Scan me!  
For more practice  
& answers

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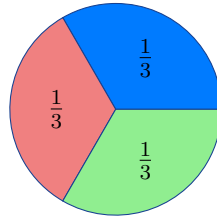
- 1) A recipe needs 3 cups of sugar for 24 cupcakes. How much sugar is needed per cupcake?
- A.  $\frac{1}{8}$  cup per cupcake
- B.  $\frac{1}{6}$  cup per cupcake
- C.  $\frac{1}{4}$  cup per cupcake
- D.  $\frac{3}{4}$  cup per cupcake



- 2) A spinner has 5 equal sections labeled A, B, C, D, and E. What is the probability of spinning A?
- A.  $\frac{1}{5}$
- B.  $\frac{2}{5}$
- C.  $\frac{1}{3}$
- D.  $\frac{1}{2}$
- 3) A student records the number of minutes spent on homework: 24, 31, 28, 35, 29, 32, 26. Arranging in a stem-and-leaf plot, the data spans:
- A. One stem (20s)
- B. Two stems (20s and 30s)
- C. Three stems
- D. Cannot determine



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4)

A school has 450 students. The circle graph shows grade distribution. If  $\frac{1}{3}$  are 6th graders, how many are 6th graders?

- A. 120                       C. 100  
 B. 180                       D. 150

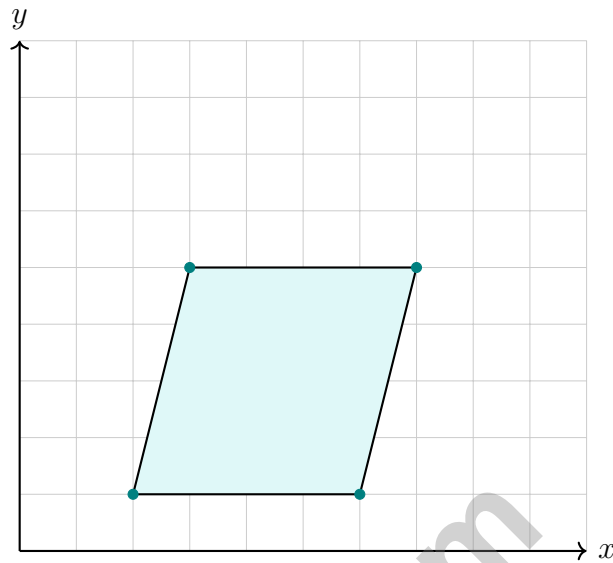
5) A circle graph divides 180 minutes of study time into four subjects: math 45 minutes, science 60 minutes, English 45 minutes, social studies 30 minutes. What angle (in degrees) should represent the social studies section?

- A. 45 degrees                       C. 90 degrees  
 B. 30 degrees                       D. 60 degrees

6) A lemonade stand sells lemonade and iced tea in a ratio of 3 : 2. If the stand sells 18 cups of lemonade, how many cups of iced tea does it sell?

- A. 6 cups                       C. 27 cups  
 B. 30 cups                       D. 12 cups





7)

What is the name of this quadrilateral?

- A. Parallelogram       C. Quadrilateral  
 B. Rectangle       D. Trapezoid

8) A right triangle has base 10 units and height 8 units. What is its area?

- A. 40 square units       C. 50 square units  
 B. 45 square units       D. 80 square units

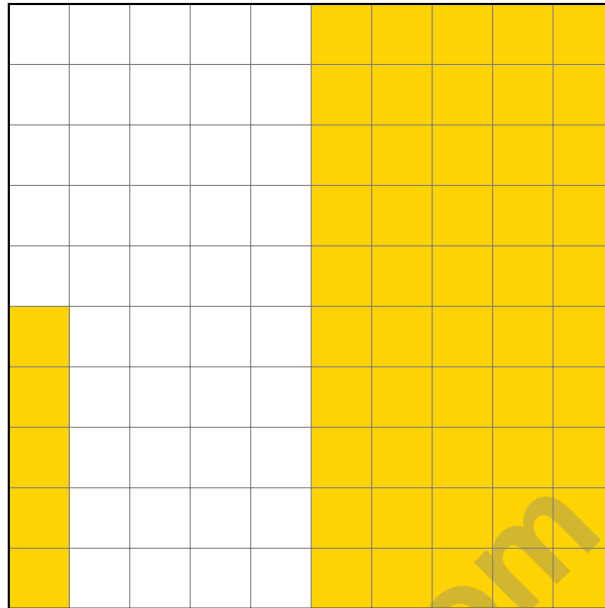
9) Data Set 1: mean=50, median=50, range=10. Data Set 2: mean=50, median=45, range=50. Which statement is true?

- A. Set 1 is symmetric; Set 2 is skewed right       C. Set 1 is symmetric; Set 2 is skewed left  
 B. Both data sets have identical distributions       D. Both are skewed right with the same spread



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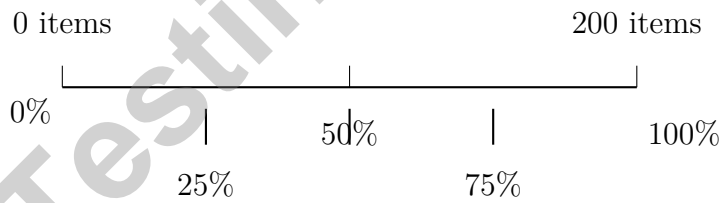




6)

What percent of the grid is shaded yellow?

- A. 35%
- C. 50%
- B. 45%
- D. 55%



7)

According to the percent number line, how many items correspond to 75%?

- A. 175
- C. 50
- B. 100
- D. 150

1) What is  $\frac{5}{8} \div \frac{5}{6}$ ?

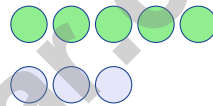
- A.  $\frac{25}{48}$   
 B. 1

- C.  $\frac{8}{6}$   
 D.  $\frac{3}{4}$

2) A dataset's box plot is perfectly symmetric (whiskers are equal length, and the median is exactly between  $Q_1$  and  $Q_3$ ). Which statement must be true?

- A. The distribution is symmetric around the median.  
 B. The data has no outliers.  
 C. The mean equals the median.  
 D. All data values are equally spaced.

3) This image shows a collection of marbles.



Green to Purple

If the pattern continues and we have 15 green marbles, how many purple marbles should there be?

- A. 5  
 B. 7  
 C. 8  
 D. 9

4) Which option correctly shows a proportional relationship starting from the origin (0, 0) with a unit rate of 3?

A. Points at (1, 3), (2, 6), (3, 9) B. Points at (1, 1), (2, 2), (3, 3) C. Points at (2, 3), (4, 6), (6, 9) D. Points at (1, 2), (2, 3), (3, 4)

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



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5) A cyclist travels 18 miles in 1.5 hours. What is the cyclist's speed in miles per hour?

- A. 10 mph                       C. 14 mph  
 B. 16 mph                       D. 12 mph

6)

Item	Boys	Girls
Votes	28	21

What is the ratio of girls' votes to boys' votes in simplest form?

- A. 28 : 21                       C. 3 : 4  
 B. 21 : 28                       D. 4 : 3

7) A grocery receipt shows:

Item	Price
Apples (5 lbs)	\$4.50
Cheese (3 lbs)	\$12.00
Bread (2 loaves)	\$5.00

Which item has the highest unit price?

- A. Apples                       C. Bread  
 B. Cheese                       D. They are all equal

8)

Inches	12	24	36
Feet	1	2	3

Using the table, which is the correct conversion for 60 inches?

- A. 4 feet                       C. 6 feet  
 B. 5 feet                       D. 7 feet



## Kentucky KSA Practice Test Answer Keys

**How to use this Kentucky KSA answer section with a Grade 6 student:**

1. check the answer first, then write one quick reason the choice is correct
2. mark questions to try again, especially the skills that feel connected to bluegrass practice stamina
3. rework the problem before reading the full explanation, using this reminder:  
Pace the work like a long race: start carefully, keep notes neat, and finish with a check.

**A calm Kentucky correction routine turns every missed item into useful practice. Run one test, study the missed turns, and use the next round to improve your pace.**



Scan me!  
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& answers

## Kentucky Practice Test Answers and Explanations

Review the seven printed KSA tests with paced, thoughtful, and ready for the next stretch habits.

### Practice Test 1 Answers and Explanations

- 1) **Choice A is correct.** **(KY.6.RP.3)** Divide sugar by cupcakes:  $3 \div 24 = \frac{3}{24} = \frac{1}{8}$  cup per cupcake.
- 2) **Choice A is correct.** **(KY.6.NS.1)** Five equal sections, one labeled A. Probability =  $\frac{1}{5}$ .
- 3) **Choice B is correct.** **(KY.6.SP.4)** Values range from 24 to 35, covering stem 2 (20s: 24, 26, 28, 29) and stem 3 (30s: 31, 32, 35).
- 4) **Choice D is correct.** **(KY.6.NS.1)**  $\frac{1}{3}$  of 450 is  $450 \div 3 = 150$  students.
- 5) **Choice D is correct.** **(KY.6.SP.4)** Social studies is 30 minutes out of 180 total. The fraction is  $\frac{30}{180} = \frac{1}{6}$ . The angle is  $\frac{1}{6} \times 360^\circ = 60^\circ$ .
- 6) **Choice D is correct.** **(KY.6.RP.1)** The 3 lemonade parts stand for 18 cups, so each part is  $18 \div 3 = 6$  cups. Iced tea is 2 parts, so  $2 \times 6 = 12$  cups.
- 7) **Choice D is correct.** **(KY.6.G.3)** The quadrilateral has one pair of parallel sides (top and bottom are parallel). This makes it a trapezoid.
- 8) **Choice A is correct.** **(KY.6.G.1)** Area of a triangle =  $\frac{1}{2} \times \text{base} \times \text{height} = \frac{1}{2} \times 10 \times 8 = 40$  square units.
- 9) **Choice A is correct.** **(KY.6.SP.2)** Set 1: mean = median means symmetric. Set 2: mean (50) > median (45) means skewed right. Set 2 also has a much larger range (50 vs. 10).
- 10) **Choice C is correct.** **(KY.6.SP.2)** Mean =  $\frac{85 + 90 + 88 + 92 + 85}{5} = \frac{440}{5} = 88$ .
- 11) **Choice D is correct.** **(KY.6.EE.1)** PEMDAS requires exponents before multiplication. The diagram shows the first step is evaluating  $4^2 = 16$ . Then multiply:  $16 \times 2 = 32$ . Finally add:  $5 + 32 = 37$ .
- 12) **The correct answer is -4.** **(KY.6.NS.8)** Reflection across the  $y$ -axis changes the sign of the  $x$ -coordinate.
- 13) **Choice C is correct.** **(KY.6.EE.3)** “ $v$  less than 8” means we subtract  $v$  from 8, giving  $8 - v$ . Order matters.
- 14) **Choice C is correct.** **(KY.6.EE.4)** Combining like terms:  $(5x + 2x) + (3 - 1) = 7x + 2$ . The coefficient of  $x$  in the simplified expression is 7.
- 15) **Choice D is correct.** **(KY.6.EE.3)** Substitute  $x = -2$ :  $(-2)^2 - 3(-2) = 4 + 6 = 10$ .
- 16) **Choice B is correct.** **(KY.6.EE.8)** “Must not exceed” means at most 50:  $w \leq 50$ .
- 17) **Choice A is correct.** **(KY.6.G.1)** Area =  $\frac{1}{2}(6 + 6) \times 2 = \frac{1}{2}(12)(2) = 12 \text{ m}^2$ .
- 18) **Choice B is correct.** **(KY.6.G.2)** First unit:  $V = 2 \times 1 \times 3 = 6 \text{ ft}^3$ . Second unit:  $V = 3 \times 2 \times 2 = 12 \text{ ft}^3$ . Ratio:  $12 \div 6 = 2$ .
- 19) **Choice A is correct.** **(KY.6.RP.1)** A smaller IQR indicates less spread and more consistency in the data. Class B’s IQR of 8 is smaller than Class A’s IQR of 12.
- 20) **Choice D is correct.** **(KY.6.RP.1)** If  $\frac{3}{5}$  of the students play soccer, then  $\frac{2}{5}$  do not play soccer. The ratio compares soccer players to non-soccer players, so the ratio is 3 : 2.
- 21) **Choice A is correct.** **(KY.6.NS.6)** From the table, the ratio is 1:4 (lemon juice:water). When  $x = 1$  (lemon juice),  $y = 4$  (water). The equation is  $y = 4x$ .
- 22) **The correct answer is 15 + 30 and 5(9) = 45.** **(KY.6.NS.4)**  $5(3 + 6) = 5 \cdot 3 + 5 \cdot 6 = 15 + 30 = 45$ . Also,  $5(3 + 6) = 5(9) = 45$ . Thus Choices A and C are correct. Choice B gives 21, Choice D gives 19, and Choice E gives 54.
- 23) **Choice A is correct.** **(KY.6.NS.1)**  $0.125 = \frac{125}{1000} = \frac{1}{8}$  (simplify) = 12.5%.
- 24) **Choice D is correct.** **(KY.6.RP.3)** 15% of \$80 =  $0.15 \times 80 = \$12$ .
- 25) **The correct answer is 4.** **(KY.6.NS.3)**  $-8 - (-12) = -8 + 12 = 4$ . Subtracting a negative integer is equivalent to adding its positive opposite.



Notes From the Math Gardener

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## Hi, Math Gardener!

◇ Look at how much you grew! 7 tests is like 7 weeks of taking care of your math garden. Every problem was a seed. Every try was water. ◇

★ **Gardeners say:** growth takes time. You can't see roots, but they are there. You can't always feel smarter, but you are. Your math garden is full! ★

### Garden Check-Up

- **Roots:** STRONG! Your basic math is solid.
- **Stems:** STURDY! You can do step-by-step problems.
- **Leaves:** GREEN! You have lots of math tools.
- **Flowers:** BRIGHT! You feel proud of your work.

**Gardener tip:** keep watering your math garden long after the test. Every habit you built will grow with you for years!

If you want to share something or ask a question, please email me at [jay@testinar.com](mailto:jay@testinar.com).

**Jay Daie**

Your Math Gardener

# MASTER TODAY. SUCCEED TOMORROW.

This Grade 6 Math Practice Tests book is designed to help students strengthen their math skills, master important concepts, and build the confidence they need to excel on comprehensive assessments.

With 7 full-length printed tests and 2 online tests, students get the review, practice, and realistic test experience they need to improve accuracy, develop problem-solving abilities, and reach their full potential.

Perfect for classroom use, homework, test preparation, and extra practice at home.



## PERFECT FOR:

- ✓ Classroom Practice
- ✓ Homework & Review
- ✓ Independent Learning
- ✓ Test Preparation
- ✓ Skill Reinforcement
- ✓ Building Confidence

★ PRACTICE TODAY.  
SUCCEED TOMORROW.

## WHAT STUDENTS WILL GAIN



### Stronger Math Skills

Build a solid foundation through targeted practice and review.



### Better Problem Solving

Develop logical thinking and effective solution strategies.



### Deeper Understanding

Reinforce key concepts aligned with standards through meaningful practice.



### Test Confidence

Become familiar with test formats and improve accuracy and speed.



### Achieve Success

Build confidence and perform your best on test day.

## TOPICS COVERED

- ✓ Ratios & Rates
- ✓ The Number System
- ✓ Expressions & Equations
- ✓ Geometry
- ✓ Fractions & Decimals
- ✓ Percents
- ✓ Statistics & Probability
- ✓ Data Analysis
- ✓ Measurement & Conversions
- ✓ And More!



### 2 ONLINE TESTS

Extra online practice to reinforce learning and build confidence.

## MORE PRACTICE. GREATER RESULTS.

Give your child the tools needed to develop strong math skills, confidence, and a positive attitude toward learning.



7 FULL-LENGTH  
PRINTED TESTS



STANDARDS-  
ALIGNED PRACTICE



DETAILED ANSWER  
KEYS & EXPLANATIONS