

FULL-LENGTH

8

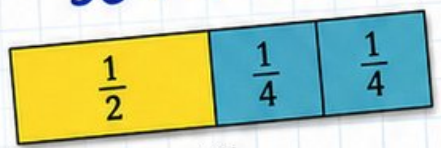
# Arkansas ATLAS

## GRADE 5

# MATH PRACTICE TESTS

Mixed Practice Questions with Answer Key  
for Students, Parents, and Teachers

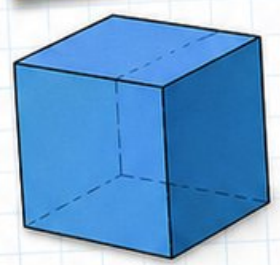
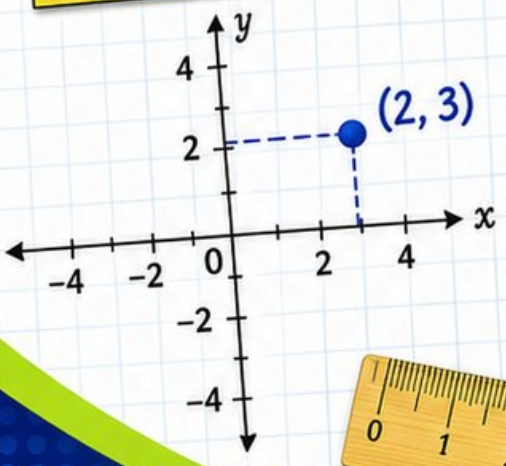
$$36 \div 4 = 9$$



$2.4 \times 7 = 16.8$

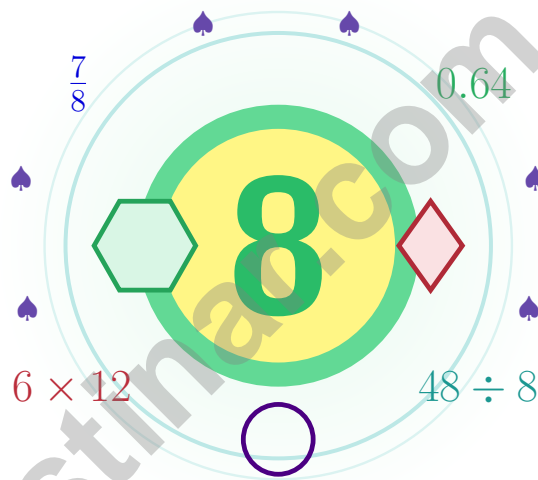
$7 \times (12 - 5) = 49$

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



# 8 Arkansas ATLAS Grade 5 Math Practice Tests

*A eight-step expedition for curious Grade 5 thinkers*



Eight full tests, a focused quick review, and helpful support that turns Grade 5 practice in The Natural State into steady, confident growth from page one to the final check.

**Jay Daie and Reza Nazari**



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# Strap In, Arkansas – Eight-Test Journey

Eight full tests and a coach's voice on every page

## Arkansas Mathematicians, Read This First

This practice book is your steady companion for eight tests, not a place to be perfect. Math is a lot like the Buffalo River – it bends, narrows, opens up, and rewards anyone who watches the current and follows the path.

Use these eight 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 across seven rounds.

### Watch

Watch what the problem actually wants from you.

### Choose

Choose the operation, model, or table that fits.

### Polish

Check labels, units, and the final word of the question.

**A strong habit for Arkansas mathematicians:** 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.

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# From Cover to Final Test

A simple routine that turns practice into progress

## Step 1: Open

**Open the warm-up review and use it.**

Spend a few minutes waking up your memory before the test begins.

## Step 2: Test

**Take the test with steady focus.**

Work in a calm spot and focus on careful thinking before speed.

## Step 3: Reflect

**Notice what was sharp and what was shaky.**

Circle missed questions and notice which topics keep showing up.

## Step 4: Sharpen

**Practice the shaky skills before the next round.**

Read the explanation, repair the work, and bring that lesson into the next test.



# Table of Contents

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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

#### Customary

1 pound (lb) = 16 ounces (oz)

#### Metric

1 kilogram (kg) = 1,000 grams (g)

1 gram (g) = 1,000 milligrams (mg)

### 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) A cargo container has internal volume based on dimensions 24 feet long, 8 feet wide, and 8 feet tall. If each identical shipment uses 64 cubic feet of space and no space is wasted, how many shipments can the container hold?
- A. 12 items                       C. 24 items  
 B. 18 items                       D. 30 items
- 2) A grain storage bin is a rectangular prism with a base of 30 m by 20 m and a height of 4 m. What is the capacity?
- A. 1800 m<sup>3</sup>                       C. 2400 m<sup>3</sup>  
 B. 2200 m<sup>3</sup>                       D. 2600 m<sup>3</sup>
- 3) Which expression is  $\frac{1}{2}$  of  $(24 + 6)$ ?
- A.  $24 + 6 + 2$                        C.  $2 \times (24 + 6)$   
 B.  $24 + 6 - 2$                        D.  $(24 + 6) \div 2$
- 4) Seeds cost \$3 per pound. You buy  $\frac{2}{3}$  pound of seeds. How much do you spend?
- A. \$1                                       C. \$2.50  
 B. \$3                                       D. \$2
- 5) Pattern A: 0, 2, 4, 6, 8. Pattern B: 0, 4, 8, 12, 16. For the nonzero matching terms, each B value is how many times the corresponding A value?

*Record your answer in the space provided.*



6) Multiply  $\frac{2}{3} \times \frac{3}{4}$ . Which choice shows the product in simplest form?

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

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

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

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

7) Which student made an error subtracting  $5\frac{1}{4} - 2\frac{3}{4}$ ?

Student	Work	Answer
A	Borrow 1: $4\frac{5}{4} - 2\frac{3}{4}$	$2\frac{2}{4} = 2\frac{1}{2}$
B	Subtract whole parts and fraction parts separately	$3\frac{2}{4}$
C	Convert: $\frac{21}{4} - \frac{11}{4}$	$\frac{10}{4} = 2\frac{1}{2}$
D	Count up from $2\frac{3}{4}$ to $5\frac{1}{4}$	$2\frac{1}{2}$

 A. Student A B. Student B C. Student C D. Student D

8) Convert: 6 gallons = ? quarts.

*Record your answer in the space provided.*



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1) Convert 2,000 centimeters to meters.

A. 2 m

C. 200 m

B. 20 m

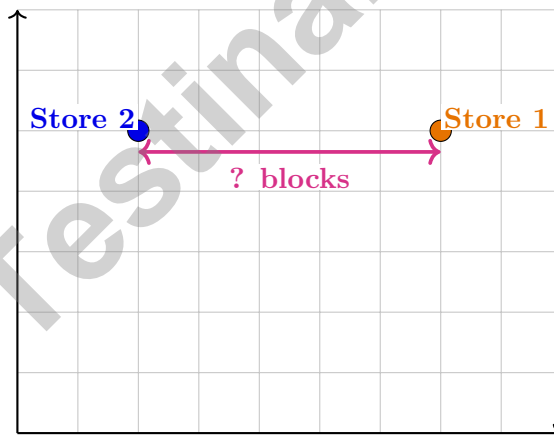
D. 2,000 m

2) A graph of a number pattern passes through (1, 5), (2, 10), (3, 15). The  $y$ -value is 5 times the  $x$ -value. What ordered pair should be plotted when  $x = 4$ ?

*Record your answer in the space provided.*

3) On a graph, two stores are plotted at (7, 5) and (2, 5). How many blocks east or west apart are the stores?

**Blocks North**



**Blocks East**

A. 3 blocks

C. 5 blocks

B. 4 blocks

D. 7 blocks



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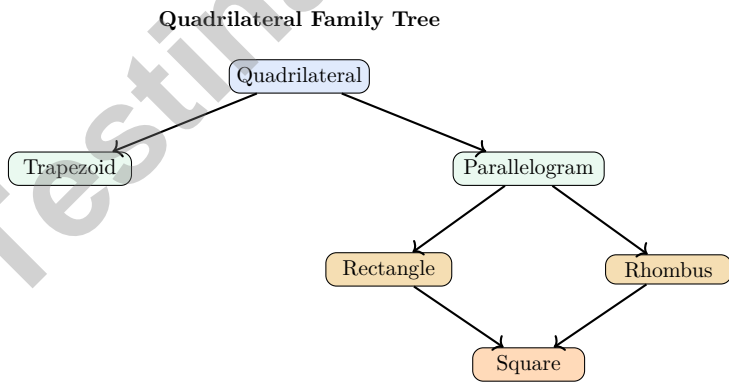
1 minute (min) = 60 seconds (sec)    1 week = 7 days

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- 1) Which expression represents  $(6 + 4)$  doubled, then subtracted from 25?
- A.  $25 - 2 \times (6 + 4)$                        C.  $(25 - 6) + 4 \times 2$   
 B.  $2 \times (25 - 6 + 4)$                        D.  $(6 + 4) \times 2 - 25$
- 2) Which estimate uses the compatible numbers 4,900 and 70 to estimate  $4,927 \div 73$ ?
- A.  $5,100 \div 75 = 68$                        C.  $4,800 \div 80 = 60$   
 B.  $5,000 \div 70 \approx 71$                        D.  $4,900 \div 70 = 70$
- 3) Which pattern rule creates the ordered pairs  $(1, 3)$ ,  $(2, 6)$ ,  $(3, 9)$ , and  $(4, 12)$ ?
- A. Add 2 to the input.                       C. Multiply the input by itself.  
 B. Multiply the input by 3.                       D. Double the input, then add 1.
- 4) Which decimal is equivalent to  $\frac{8}{10}$ ?
- A. 0.08     C. 8.0  
 B. 0.8     D. 0.008



- 5) Looking at the family tree, which statement is FALSE?
- A. Every square is a rectangle.                       C. Every rhombus is a parallelogram.  
 B. Every rectangle is a square.                       D. Every square is a parallelogram.



## 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.GM.4)** Container volume:  $24 \times 8 \times 8 = 1536$  cubic feet. Items that fit:  $1536 \div 64 = 24$  items.
- 2) **Choice C is correct.** **(5.GM.4)** Volume =  $30 \times 20 \times 4 = 600 \times 4 = 2400 \text{ m}^3$ .
- 3) **Choice D is correct.** **(5.CAR.13)** One half of an amount means split that amount into 2 equal parts. So half of  $(24 + 6)$  is  $(24 + 6) \div 2$ .
- 4) **Choice D is correct.** **(5.CAR.9)**  $\frac{2}{3} \times 3 = \frac{6}{3} = 2$  dollars.
- 5) **The correct answer is 2.** **(5.CAR.14)** Compare:  $4 = 2 \times 2$ ,  $8 = 2 \times 4$ , etc. Each B term is 2 times its A term.
- 6) **Choice D is correct.** **(5.CAR.14)** Multiply the numerators and denominators:  $\frac{2}{3} \times \frac{3}{4} = \frac{6}{12}$ . Since 6 is half of 12,  $\frac{6}{12} = \frac{1}{2}$ .
- 7) **Choice B is correct.** **(5.CAR.5)** Student B did not regroup before subtracting the fractions, so the whole-number part is too large. The correct difference is  $2\frac{2}{4} = 2\frac{1}{2}$ .
- 8) **The correct answer is 24.** **(5.GM.6)**  $6 \times 4 = 24$  quarts. Each gallon has 4 quarts, so 6 gallons has six groups of 4 quarts.
- 9) **Choice D is correct.** **(5.GM.6)** Grid shows 0.405 shaded. Tenths: 0.405 has 4, 0.504 has 5. So  $0.504 > 0.405$  because 5 tenths  $>$  4 tenths.
- 10) **Choice C is correct.** **(5.GM.2)** Sugar for cake =  $\frac{1}{2} \times \frac{3}{4} = \frac{3}{8}$  of the 5-pound bag. Since  $\frac{3}{8} \times 5 = \frac{15}{8} = 1\frac{7}{8}$ , she used  $1\frac{7}{8}$  pounds.
- 11) **Choice C is correct.** **(5.GM.4)** Find both volumes: Bin A is  $10 \times 3 \times 4 = 120$ , and Bin B is  $8 \times 4 \times 4 = 128$ . The difference is 8 cubic feet.
- 12) **Choice C is correct.** **(5.GM.1)** Figure C has two pairs of parallel sides, all right angles, and all sides equal. Those properties identify a square.
- 13) **Choice B is correct.** **(5.NPV.6)** The factors increase from  $\frac{99}{100}$  to 1 to  $1\frac{1}{100}$ , so the products increase: 99, 100, 101.
- 14) **Choice B is correct.** **(5.GM.5)** Work one prism at a time:  $6 \times 4 \times 3 = 72$ ,  $4 \times 4 \times 2 = 32$ , and  $3 \times 3 \times 3 = 27$ . Add the non-overlapping volumes:  $72 + 32 + 27 = 131$  cubic feet.
- 15) **Choice B is correct.** **(5.CAR.12)** Multiply first:  $3 \times 4 = 12$  and  $5 \times 2 = 10$ . Then finish left to right:  $12 + 10 - 6 = 16$ .
- 16) **Choice C is correct.** **(5.CAR.12)**  $16 \div \frac{1}{2} = 16 \times 2 = 32$ .
- 17) **The correct answer is about 8.** **(5.CAR.11)**  $5\frac{1}{6} \approx 5$  and  $2\frac{7}{8} \approx 3$ , so the sum is about 8. Accept equivalent estimates that are clearly close to 8.
- 18) **Choices A, B are correct.** **(5.CAR.10)** The base area is  $4 \times 3 = 12$  square units. Then  $48 \div 12 = 4$ , so the height is 4 units. C and D come from mixing up the height with the volume.
- 19) **Choice A is correct.** **(5.GM.6)** First find the total sugar:  $45 \times 4 = 180$  grams. Since 1,000 grams make 1 kilogram,  $180 \div 1,000 = 0.18$  kilograms.
- 20) **Choice C is correct.** **(5.GM.4)**  $5 \times 4 \times 3 = 60$  unit cubes. Volume is the product of length, width, and height.
- 21) **Choice C is correct.** **(5.CAR.12)** Parentheses first:  $6 + 2 = 8$ . After that, division and multiplication have the same priority, so work left to right:  $48 \div 8 = 6$ , then  $6 \times 3 = 18$ .
- 22) **Choice B is correct.** **(5.GM.1)** The tick marks on two sides show those sides are equal, making this an isosceles triangle.
- 23) **Choice C is correct.** **(5.NPV.2)** A power of 10 tells how many factors of 10 to use.  $10^2$  means  $10 \times 10 = 100$ . This confirms the answer.
- 24) **Choice B is correct.** **(5.NPV.2)** Subtract both discounts from the original price:  $35.99 - 5.00 = 30.99$ , then  $30.99 - 3.60 = 27.39$ . The final price is \$27.39.
- 25) **Choice A is correct.** **(5.CAR.5)**  $\frac{1}{3} = \frac{4}{12}$ ,  $\frac{1}{4} = \frac{3}{12}$ , and  $\frac{1}{6} = \frac{2}{12}$ . These are the correct denominator-12 forms.
- 26) **Choice C is correct.** **(5.GM.8)** Point C is at (5, 8). Moving 4 units down subtracts 4 from the  $y$ -coordinate:  $8 - 4 = 4$ . The  $x$ -coordinate stays 5. So point D is at (5, 4).
- 27) **Choice C is correct.** **(5.GM.3)** The bottom layer has 24 cubes. Since the prism is 2 cubes tall, there are 2 layers, so  $24 \times 2 = 48$ .



### A Mentor's Quiet Encouragement

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#### To My Thoughtful Student,

◇ I want to take a moment, away from the noise of practice, to tell you something true: you have done excellent work. 8 practice tests is a real commitment. Most students do not finish what they start. You did. ◇

★ **What mentors notice:** growth is quiet. It doesn't shout. But it shows up in how you tackle a problem today versus how you tackled it weeks ago. That growth is your real prize. ★

#### What I See In You

- **Determination:** DEEP. You don't quit when problems get tough.
- **Curiosity:** BRIGHT. You wonder why and how, not just "what's the answer."
- **Self-Awareness:** REAL. You know what you understand and what you're learning.
- **Kindness:** CONSISTENT. You're patient with yourself.

**Mentor's note:** on test day, treat yourself like you'd treat a friend. Be patient. Be encouraging. Be kind. The same skills that helped you finish 8 tests will carry you through the real one.

If you want to share a proud moment or ask a question, please email me at [jay@testinar.com](mailto:jay@testinar.com). I'd love to hear from you!

**Jay Daie**

Your Math Mentor (Quietly Cheering)

$45 \div 5 = ?$

# PRACTICE TODAY.

$\frac{3}{5} + \frac{1}{10} = ?$



## ACHIEVE TOMORROW!



$3^2 + 4^2 = 25$

This book includes **8** full-length **Grade 5** math practice tests to help students master essential skills, build confidence, and achieve success. Each test is carefully designed to reflect real math standards and cover a variety of question types with detailed answer explanations.

$7x - 4 = 17$

$1\frac{1}{2} + 2\frac{1}{3} = ?$

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### ACHIEVE SUCCESS

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- ✓ Fractions & Decimals
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- ✓ Geometry
- ✓ Measurement & Data
- ✓ Number Patterns
- ✓ Word Problems
- ✓ Ratio & Proportion
- ✓ Perimeter, Area & Volume
- ✓ Graphing & Data Analysis

...and More!



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