

# 7 Arkansas ATLAS

## 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 Arkansas ATLAS Grade 6 Math Practice Tests

*Standards-Aligned River-Valley Review Habits for Arkansas Teaching & Learning Assessment System*



Seven complete 40-question Grade 6 practice rounds for ATLAS, built for river-valley review habits 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, Arkansas Math Explorer!

Eight focused rounds using river-valley review habits

This book gives you seven full Grade 6 practice tests for ATLAS. Each round uses Ozark paths, river bends, and careful number choices as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

## Your Arkansas Practice Promise

Slow the question down, organize the facts, and let each step explain the next one.

Read

Plan

Check

## How to Use This Book

A seven-session routine for river-valley review habits

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

**Arkansas review rhythm:** Take a test, mark what felt strong, and use corrections as the bridge to the next round.



## What Is Inside?

Eight ATLAS 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. River-valley review habits 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) If the distance between points  $(0, a)$  and  $(0, -5)$  is 8 units, what is  $a$ ?
- A.  $a = 3$  or  $a = -13$                        C.  $a = 2$  or  $a = -12$   
 B.  $a = -3$  or  $a = 13$                        D.  $a = 5$  or  $a = -8$
- 2) A bag contains 3 red marbles, 5 blue marbles, and 2 green marbles. If one marble is drawn at random, what is the probability that it is blue?
- A.  $\frac{1}{10}$      C.  $\frac{1}{2}$   
 B.  $\frac{1}{5}$      D.  $\frac{5}{8}$

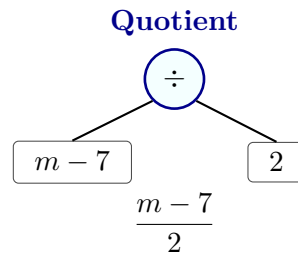
- 3) A back-to-back stem-and-leaf plot displays boys' and girls' heights (in inches). Who has the greater range of heights?

Boys	Stem	Girls
7, 4, 1	60	2, 3, 5, 8

- A. Boys; range is 6                       C. Boys; range is 7  
 B. Girls; range is 6                       D. Both have equal range
- 4) A store inventory has 900 items. The circle graph shows  $\frac{2}{9}$  are on clearance. How many items are on clearance?
- A. 180     C. 220  
 B. 200     D. 240
- 5) A survey asked people to rate satisfaction on a scale of 1–5. The results: 1 (2 people), 2 (5 people), 3 (15 people), 4 (20 people), 5 (8 people). Which display would BEST show that most people were satisfied (ratings 4–5)?
- A. Histogram grouping 1–2, 3, and 4–5     C. Circle graph showing all five ratings  
 B. Bar graph with one bar per rating     D. Dot plot with 50 dots







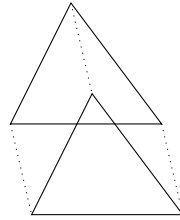
10)

This tree represents which phrase?

- A. The quotient of  $m$  and 7, divided by 2
  B. A number  $m$  divided by 2, minus 7
  C. The quotient of the difference of  $m$  and 7, and 2
  D. Twice the difference of  $m$  and 7
- 11) A company manufactures bikes. The cost is  $250 + 85n$  where  $n$  is the number of units. Identify the coefficient and constant.
- A. Coefficient: 250; Constant: 85
  B. Coefficient: 85; Constant: 250
  C. Coefficient:  $n$ ; Constant: 335
  D. Both are coefficients; no constant.
- 12) What is the value of  $\frac{3x}{2}$  when  $x = 4$ ?
- A. 5
  B. 6
  C. 8
  D. 12
- 13) A street on a map measures 6 inches. The map's scale is 1 inch = 10 miles. How many miles long is the actual street?

- 1) A triangular prism has a base with sides 6 cm, 7 cm, and 7 cm. The height of the prism is 9 cm. What is the lateral surface area?

Height = 9 cm

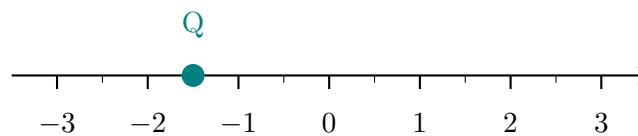


Perimeter of base = 20 cm

- A.  $108 \text{ cm}^2$ 
 C.  $180 \text{ cm}^2$   
 B.  $144 \text{ cm}^2$ 
 D.  $216 \text{ cm}^2$
- 2) Which of the following does NOT represent a proportional relationship?

x	2	4	6
y (option A)	6	12	18
y (option B)	4	7	10

- A. Option A
  C. Both A and B  
 B. Option B
  D. Both are proportional
- 3) The number line below has tick marks at halves. Which fraction is located at point Q?

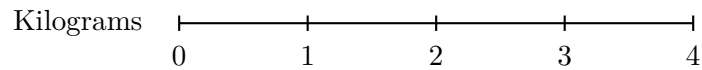
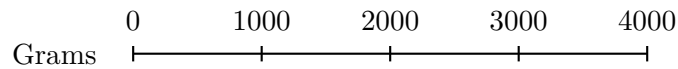


- A.  $-2$ 
 C.  $-1$   
 B.  $-\frac{1}{2}$ 
 D.  $-1\frac{1}{2}$



4) A jacket costs \$80 after a 20% discount. What was the original price?

- A. \$96                       C. \$120  
 B. \$160                      D. \$100



5)

Using the double number line, how many grams are in 2.5 kilograms?

- A. 1,000 grams                       C. 2,500 grams  
 B. 2,000 grams                      D. 3,000 grams

6) A budget surplus of \$400 is split evenly among 5 categories. How much does each category receive?

- A. \$60                                   C. \$80  
 B. \$70                                   D. \$90

7) Estimate:  $8.9 \times 6.2$ . Which is closest?

- A. 54                                       C. 45  
 B. 63                                       D. 15



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- 1) A gift box is 4 in long,  $3\frac{1}{2}$  in wide, and 2 in tall. What is its volume?
- A.  $9.5 \text{ in}^3$                        C.  $24 \text{ in}^3$   
 B.  $14 \text{ in}^3$                        D.  $28 \text{ in}^3$
- 2) In a class,  $\frac{3}{5}$  of the students are on the soccer team. What is the ratio of soccer players to non-soccer players?
- A. 5 : 3                               C. 3 : 5  
 B. 2 : 5                               D. 3 : 2
- 3) A bulk store sells potatoes. A small bag of 5 lbs costs \$3.50. A large bag of 15 lbs costs \$9.75. How much per pound do you save by buying the large bag?
- A. \$0.05 per pound               C. \$0.15 per pound  
 B. \$0.10 per pound               D. \$0.20 per pound
- 4) Ice must stay below  $32^\circ\text{F}$ . What is the greatest whole-number temperature below 32?



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- 5) Two ratio tables are shown. One table maintains an equivalent ratio throughout, but the other does not. Which statement is correct?

**Table A**

Hours	Miles
2	100
4	200

**Table B**

Hours	Miles
3	150
6	350

- A. Only Table A maintains an equivalent ratio
  C. Both tables maintain equivalent ratios  
 B. Only Table B maintains an equivalent ratio
  D. Neither table maintains an equivalent ratio
- 6) A coordinate plane shows points representing a proportional relationship between yards and meters. One point is (3, 2.74) and another is (6, 5.48). Are these points on the same proportional line? Which statement is correct?
- A. No, because the x-coordinates are different
  C. No, because both coordinates must be whole numbers  
 B. No, because the y-coordinates are different
  D. Yes, because  $\frac{2.74}{3} \approx \frac{5.48}{6} \approx 0.91$
- 7) Sarah scored 45 correct answers out of 60 questions on a math test. What percent of the questions did she answer correctly?
- A. 55%
  C. 75%  
 B. 65%
  D. 85%
- 8) A distance is 45 meters. How many kilometers is this? (Use 1 kilometer = 1000 meters.)
- A. 0.045 km
  C. 4.5 km  
 B. 0.45 km
  D. 45,000 km



**Arkansas ATLAS Practice Test Answer Keys**

**How to use this Arkansas ATLAS 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 river-valley review habits
3. rework the problem before reading the full explanation, using this reminder:  
Slow the question down, organize the facts, and let each step explain the next one.

**A calm Arkansas correction routine turns every missed item into useful practice. Take a test, mark what felt strong, and use corrections as the bridge to the next round.**



## Arkansas Practice Test Answers and Explanations

Review the seven printed ATLAS tests with steady, practical, and ready to keep improving habits.

### Practice Test 1 Answers and Explanations

- 1) **Choice A is correct.** **(6.GM.6)** Same  $x$ -coordinate (0):  $|a - (-5)| = 8$ , so  $|a + 5| = 8$ . Thus  $a + 5 = 8$  or  $a + 5 = -8$ , giving  $a = 3$  or  $a = -13$ .
- 2) **Choice C is correct.** **(6.NCC.5)** Total marbles =  $3 + 5 + 2 = 10$ . Blue marbles = 5. Probability =  $\frac{5}{10} = \frac{1}{2}$ .
- 3) **Choice D is correct.** **(6.SP.2)** Boys: 601, 604, 607; range = 6. Girls: 602, 603, 605, 608; range = 6. Both ranges equal 6.
- 4) **Choice B is correct.** **(6.NCC.5)**  $\frac{2}{9} = \frac{200}{900}$ . So  $\frac{2}{9} \times 900 = 1800 \div 9 = 200$  items.
- 5) **Choice A is correct.** **(6.SP.8)** A histogram can group related ratings (1–2 as "low," 3 as "medium," 4–5 as "high") to clearly show that 28 out of 50 people were satisfied. The other displays would show individual ratings but not emphasize the grouping.
- 6) **Choice D is correct.** **(6.PR.3)** Use the order flour:sugar:butter. Sugar is the 2-part amount, and it is 2 cups, so one ratio part is 1 cup. Flour is 3 parts, or 3 cups.
- 7) **Choice B is correct.** **(6.SP.4)** Mean =  $(2 + 4 + 6 + 8) / 4 = 5$ . Deviations:  $|2 - 5| = 3$ ,  $|4 - 5| = 1$ ,  $|6 - 5| = 1$ ,  $|8 - 5| = 3$ . MAD =  $(3 + 1 + 1 + 3) / 4 = 2$ .
- 8) **Choice C is correct.** **(6.SP.3)** Mean =  $\frac{2.5 + 3 + 2 + 4.5}{4} = \frac{12}{4} = 3$  cm.
- 9) **Choice A is correct.** **(6.PR.1)** A symmetric box plot with equal whiskers and a centered median line indicates a symmetric distribution. This does not guarantee that the mean equals the median or that there are no outliers, nor that values are equally spaced.
- 10) **Choice C is correct.** **(6.ALG.3)** The tree shows  $(m - 7)$  divided by 2 to produce  $\frac{m - 7}{2}$ , representing the quotient of a difference and 2.
- 11) **Choice B is correct.** **(6.ALG.2)** The coefficient of  $n$  is 85. The constant (the term with no variable) is 250.
- 12) **Choice B is correct.** **(6.ALG.3)** Substitute  $x = 4$ :  $\frac{3(4)}{2} = \frac{12}{2} = 6$ .
- 13) **The correct answer is 60.** **(6.PR.4)** Multiply: 6 inches  $\times$  10 miles/inch = 60 miles.
- 14) **Choice C is correct.** **(6.ALG.4)** Apply the distributive property:  $4(2x + 3) = 4 \cdot 2x + 4 \cdot 3 = 8x + 12$ .
- 15) **Choice D is correct.** **(6.NCC.3)** "At most 3 weeks" means "less than or equal to 3 weeks," so  $w \leq 3$  (includes 3 weeks).
- 16) **The correct answer is 4 sections.** **(6.NCC.7)** Use  $\frac{5}{2}$  for  $2\frac{1}{2}$  acres. Then  $\frac{5}{2} \div \frac{5}{8} = \frac{5}{2} \times \frac{8}{5} = \frac{40}{10} = 4$  sections fit evenly.
- 17) **Choice D is correct.** **(6.GM.1)**  $77 = \frac{1}{2} \times 14 \times h \Rightarrow h = 11$  ft.
- 18) **Choice D is correct.** **(6.GM.1)** Area =  $\frac{1}{2}(25 + 15) \times 8 = \frac{1}{2}(40)(8) = 160$  m<sup>2</sup>.
- 19) **Choice A is correct.** **(6.GM.5)** Three vertices form a triangle, which is a three-sided polygon.
- 20) **Choice B is correct.** **(6.GM.3)** The larger pizza has radius 7 in, so its area is about  $3.14 \times 49 = 153.86$  in<sup>2</sup>. The smaller pizza has radius 5 in, so its area is about  $3.14 \times 25 = 78.5$  in<sup>2</sup>. The difference is  $153.86 - 78.5 = 75.36$  in<sup>2</sup>.
- 21) **Choice D is correct.** **(6.PR.1)** Part-to-whole compares one part (red cars) to the total (all cars sold). Since the clue says "for every 7 cars sold, 2 are red," the 7 is the total and 2 is the red part. Thus red cars to all cars sold is 2 : 7, which is the part-to-whole ratio.
- 22) **The correct answer is Plan X shows a proportional relationship, and it is represented by  $e = 20h$ .** **(6.PR.2)** Statement A is correct: Plan X has equation  $e = 20h$ , so it is proportional. Statement C matches the equation for Plan X. Plan Y has equation  $e = 100 + 10h$ , so it is not proportional and its graph does not pass through the origin. After 10 hours, both plans pay \$200, so D is false.
- 23) **Choice B is correct.** **(6.PR.3)** Divide eggs by servings:  $3 \div 2 = \frac{3}{2}$  eggs per serving (or 1.5 eggs per serving).
- 24) **The correct answer is 6.** **(6.NCC.10)** Step 1:  $(-4) \times (-9) = 36$  (negative times negative is positive). Step 2:  $36 \div 6 = 6$ .



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## Hi, Math Champion!

◇ Look what you did! 7 full practice tests. That's hundreds of math problems. You started as a learner. You are now a math athlete. ◇

★ **Champions know:** hard work pays off. You did the hard work. Your math skills are strong because you practiced. ★

### Champion's Stats

- **Focus:** HIGH! You stay on task.
- **Speed:** STRONG! You move at the right pace.
- **Accuracy:** SHARP! You catch your own mistakes.
- **Mindset:** CHAMPION! You believe in yourself.

**Champion tip:** on test day, walk in proud. You trained for this. You are ready!

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 Coach

# 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