

8

Alabama

ACAP

GRADE 7

MATH

PRACTICE TESTS



Standards Aligned
Problem Solving

For Comprehensive
Assessment Programs



**8 PRINTED
TESTS**



**2 ONLINE
TESTS**



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



BUILD CONFIDENCE



STRENGTHEN SKILLS



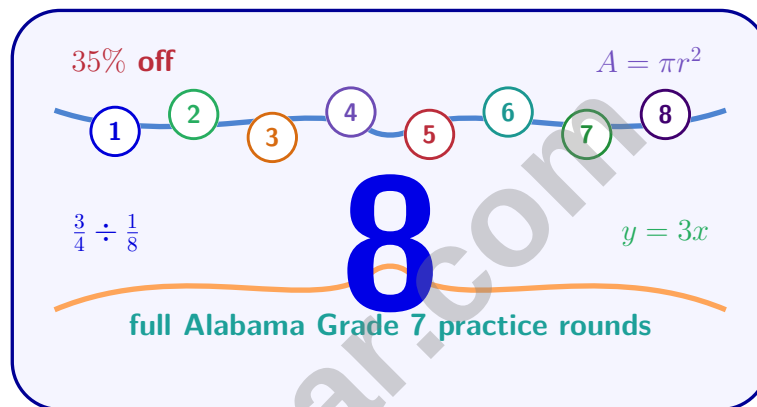
THINK SMARTER



BE TEST-READY

8 Alabama ACAP Grade 7 Math Practice Tests

Standards-Aligned Alabama Practice for Proportional Reasoning, Expressions, Geometry, Statistics, and Probability



Eight complete 40-question Grade 7 ACAP practice rounds with proportional relationships, percents, rational numbers, expressions, equations, geometry, statistics, probability, answer keys, and clear explanations for every item.

Jay Daie and Reza Nazari



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Welcome, Alabama Grade 7 Problem Solver!

Eight focused rounds for sharper ACAP math thinking

This book gives you eight full Grade 7 ACAP math practice tests. Each round is built to help you notice structure, compare quantities, use proportional reasoning, handle rational numbers, and explain your thinking with care.

Your Alabama Practice Promise

I will read every question carefully, choose a strategy that fits, write enough work to prove my answer, and use corrections as training for the next test.

Read

Model

Verify

How to Use This Book

An eight-session plan for confident Grade 7 review

1. **Warm up with the review pages.** Notice the big ideas before starting the tests.
2. **Complete one test at a time.** Treat each 40-question round like a real practice session.
3. **Show your reasoning.** Jot a proportion, equation, diagram, number line, or quick estimate when it helps.
4. **Correct actively.** Rework missed items before reading the explanation.
5. **Choose the next target.** After each test, name one skill and one habit to improve.

Alabama review rhythm: Work a test, score it, study your misses, then come back ready for the next round with one clear goal.



What Is Inside?

Eight ACAP tests, 320 questions, and a complete review path

Part	What You Will Practice
Tests 1–3	Proportional relationships, unit rates, percents, rational-number operations, and careful reading.
Tests 4–6	Expressions, equations, inequalities, scale drawings, geometry, and multi-step problem solving.
Tests 7–8	Statistics, probability, mixed review, stamina, and choosing efficient strategies.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Grade 7 success means recognizing which idea is being tested even when the next question changes format.

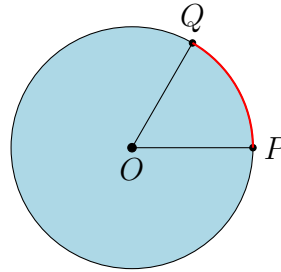


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- 1) In the circle below, which shaded region represents a sector?

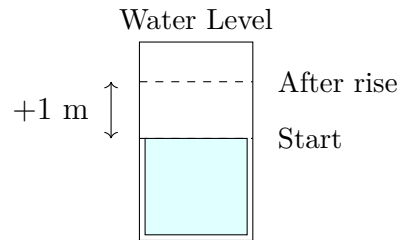


The red shaded region is:

- | | |
|--------------------------------------|--------------------------------------|
| ☐ A. A chord | ☐ C. An arc |
| ☐ B. A sector | ☐ D. A radius |
- 2) Marcus's score was -15 points. He earned 8 points for a correct answer, then lost 3 points. What is his new score?
- | | |
|--|--|
| ☐ A. -26 points | ☐ C. -10 points |
| ☐ B. 10 points | ☐ D. -20 points |
- 3) Which correctly identifies the repeating block in $\frac{1}{7}$?
- | | |
|---|---|
| ☐ A. $0.\overline{14}$ | ☐ C. $0.1\overline{428}$ |
| ☐ B. $0.1428\overline{57}$ | ☐ D. $0.\overline{7}$ |



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4)

A water reservoir is at level -3 m (below ground level). After heavy rain, it rises 1 m. What is the new water level?

☐ A. -4 m

☐ C. 2 m

☐ B. -2 m

☐ D. 4 m
5) Simplify: $t^4 \cdot t^6$
☐ A. t^2
☐ C. t^{24}
☐ B. t^{10}
☐ D. $2t^{10}$

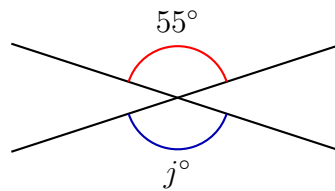
6) A student is writing an equation for a word problem. The problem states: "A book club charges a \$10 membership and \$3 per book borrowed." The student writes $3 + 10b = \text{total}$. What is the error?

☐ A. The constant 10 should be multiplied by b .

☐ C. The variable b should be a different letter.

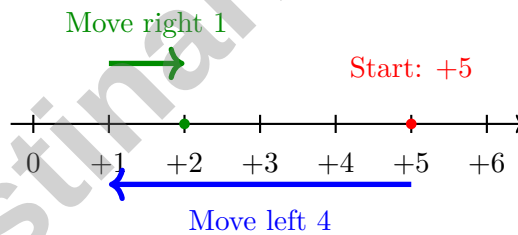
☐ B. The coefficient 3 should be the constant term.

☐ D. There is no error; the equation is correct.
7) Solve for x : $-2(3x + 1) = 10$
☐ A. $x = -2$
☐ C. $x = 1$
☐ B. $x = -1$
☐ D. $x = 2$

8)

Two intersecting lines form vertical angles. One angle is marked as 55° . What is the measure of angle j vertically opposite to it?

☐ A. 35° ☐ C. 125° ☐ B. 55° ☐ D. 235° 9) What is $\frac{3}{4} \div \frac{1}{2}$?☐ A. $\frac{3}{8}$ ☐ C. $\frac{3}{2}$ ☐ B. $\frac{2}{3}$ ☐ D. 2

10)

A number line shows a starting position of +5. A sequence of moves: left 4 units, then right 1 unit. What is the final position?

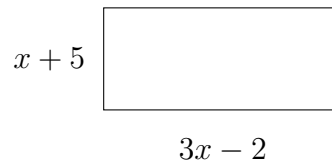
☐ A. +2☐ C. -2☐ B. +10☐ D. +1

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- 1) A circle has diameter 20 ft. What is its circumference to the nearest tenth? Use $\pi \approx 3.14$.

☐ A. 31.4 ft ☐ C. 125.6 ft
☐ B. 62.8 ft ☐ D. 314 ft

- 2) A rectangle's sides are $(x + 5)$ and $(3x - 2)$. What is the perimeter?



☐ A. $8x + 6$ ☐ C. $8x + 3$
☐ B. $4x + 3$ ☐ D. $8x - 6$

- 3) Solve: $-2x - 7 = 1$

$$\begin{array}{rcl}
 -2x - 7 & = & 1 \\
 \downarrow & & \boxed{\text{Add 7}} \\
 -2x & = & 8 \\
 \downarrow & & \boxed{\text{Divide by } -2} \\
 x & = & -4
 \end{array}$$

☐ A. $x = -4$ ☐ C. $x = 2$
☐ B. $x = -2$ ☐ D. $x = 4$

- 4) A student claims that $x + x + x + 5 = 3x + 5$ and $x(3 + 5) = 3x + 5$. Which statement is true?

☐ A. Both claims are correct ☐ C. Only the second claim is correct
☐ B. Only the first claim is correct ☐ D. Neither claim is correct



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5) What is $-\frac{5}{8} \times \frac{4}{3}$?

☐ A. $-\frac{5}{6}$

☐ B. $\frac{5}{6}$

☐ C. $-\frac{9}{11}$

☐ D. $\frac{20}{24}$

6) A container holds 20 buttons: 7 white, 8 black, and 5 brown. A button is selected randomly. What is the probability of selecting a white or brown button?

☐ A. $\frac{7}{20}$

☐ B. $\frac{5}{20}$

☐ C. $\frac{12}{20}$

☐ D. $\frac{1}{5}$

7) A classroom door lock requires entering a code with one digit (0–9) followed by one letter (A–Z). How many possible codes exist?

☐ A. 36

☐ B. 260

☐ C. 1000

☐ D. 2600

8) A school has 800 students. The principal wants to estimate the average number of hours students spend watching videos online per week. She randomly selects 60 students and finds the mean is 8.5 hours per week. Based on the sample, what is the estimated average number of hours all 800 students spend watching videos online per week?



1) A mortgage broker charges a 1% origination fee on a loan of \$300,000. What is the origination fee?

☐ A. \$1,000

☐ C. \$30,000

☐ B. \$300,000

☐ D. \$3,000

2) A bag contains 3 red marbles, 5 blue marbles, and 2 green marbles. Which probability is correct?

☐ A. $P(\text{blue}) = \frac{2}{10}$

☐ C. $P(\text{green}) = \frac{1}{2}$

☐ B. $P(\text{red}) = \frac{3}{10}$

☐ D. $P(\text{not red}) = \frac{6}{10}$

3) A student created a stem-and-leaf plot of plant heights (cm):

Stem	Leaves
8	2, 5, 9
9	1, 4, 6, 8
10	0, 3, 5, 7

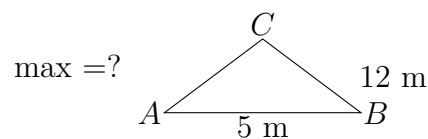
A plant with height 94 cm was accidentally recorded as 49 cm. After correction, what is the new maximum?

☐ A. 94

☐ C. 98

☐ B. 107

☐ D. 105



4)

Greta wants to draw a triangle with sides 5 m and 12 m. If the third side is a whole number of meters, what is the maximum possible length?

☐ A. 15 m

☐ C. 17 m

☐ B. 16 m

☐ D. 18 m



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5) A survey shows there is a 20% chance that a student brings lunch to school. What is this probability as a simplified fraction?

- ☐ A. $\frac{20}{100}$
☐ B. $\frac{1}{5}$

- ☐ C. $\frac{1}{20}$
☐ D. $\frac{20}{80}$

6) Over how many years will \$1500 at 5.5% simple interest earn \$412.50 in interest?

- ☐ A. 2 years
☐ B. 3 years

- ☐ C. 4 years
☐ D. 5 years

7) Simplify: $\frac{2}{3}m + \frac{1}{6}m$

- ☐ A. $\frac{3}{9}m$
☐ B. $\frac{5}{6}m$

- ☐ C. $\frac{1}{2}m$
☐ D. $\frac{3}{6}m$

8) A farmer has a field with area $24ab + 36b$ square meters. Which factorization represents the dimensions?

- ☐ A. $12b(2a + 3)$
☐ B. $6b(4a + 6)$

- ☐ C. $24(ab + 1.5b)$
☐ D. $4(6ab + 9b)$

9) A rectangular prism has length 8 m, width 5 m, and height 2 m. Find the surface area.

- ☐ A. 80 m^2
☐ B. 112 m^2

- ☐ C. 132 m^2
☐ D. 176 m^2



Alabama ACAP Grade 7 Practice Test Answer Keys**How to use this section with a Grade 7 student:**

1. check the answer first and circle any item that needs another look
2. retry the problem with fresh work before reading the explanation
3. write one short lesson learned from each missed or guessed item

A strong review routine turns every correction into a sharper plan for the next Alabama ACAP practice test.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice B is correct.** (7.G.4-7.G.6) The shaded region bounded by two radii (OP and OQ) and the arc PQ is a sector.
- 2) **Choice C is correct.** (7.NS.1-7.NS.3) $-15 + 8 - 3 = -7 - 3 = -10$ points.
- 3) **Choice B is correct.** (7.NS.2d) Divide $1 \div 7 = 0.142857142857\dots$ The block 142857 repeats.
- 4) **Choice B is correct.** (7.NS.1-7.NS.3) New level: $-3 + 1 = -2$ meters.
- 5) **Choice B is correct.** (7.EE.1-7.EE.2) Product rule: $t^4 \cdot t^6 = t^{4+6} = t^{10}$.
- 6) **Choice A is correct.** (7.EE.4a) The student reversed the roles of the coefficient and constant. The per-book charge \$3 multiplies the number of books b .
- 7) **Choice A is correct.** (7.EE.4a) Distribute: $-6x - 2 = 10$. Add 2: $-6x = 12$. Divide by -6 : $x = -2$.
- 8) **Choice B is correct.** (7.G.1-7.G.5) Vertical angles are congruent. The opposite angle is also 55° .
- 9) **Choice C is correct.** (7.NS.1-7.NS.3) Multiply by the reciprocal: $\frac{3}{4} \div \frac{1}{2} = \frac{3}{4} \times \frac{2}{1} = \frac{6}{4} = \frac{3}{2}$.
- 10) **Choice A is correct.** (7.NS.1-7.NS.3) Final position = $5 - 4 + 1 = 2$.
- 11) **Choice A is correct.** (7.EE.1-7.EE.2) Distribute the negative: $14k - 6 - 5k - 2 = (14k - 5k) + (-6 - 2) = 9k - 8$.
- 12) **Choice B is correct.** (7.EE.3-7.EE.4) Set up: $35 + 4p = 51 \Rightarrow 4p = 16 \Rightarrow p = 4$.
- 13) **Choice C is correct.** (7.EE.3-7.EE.4) Subtract 3: $\frac{1}{2}x = 5$. Multiply by 2: $x = 10$.
- 14) **Choice C is correct.** (7.SP.5-7.SP.8) W has 3 sections and X has 4 sections, so $P(W \text{ or } X) = \frac{3+4}{10} = \frac{7}{10}$.
- 15) **Choice A is correct.** (7.EE.1-7.EE.2) Distribute -3 : $-3x - 6 - 2x$. Combine x terms: $-3x - 2x - 6 = -5x - 6$.
- 16) **Choice A is correct.** (7.NS.2) The associative property allows regrouping factors without changing the product. A shows this: $(-6) \times 4 = (-3) \times 8 = -24$. B is commutative; C is commutative; D is distributive.
- 17) **The correct answer is 12.** (7.NS.1-7.NS.3) Both -12 and 12 are the same distance from zero, which is 12 units. They are opposites.
- 18) **Choice D is correct.** (7.RP.3) Facility fee = $0.07 \times 85 = \$5.95$. Total = $85 + 5.95 = \$90.95$.
- 19) **Choice C is correct.** (7.SP.1-7.SP.4) Single-digit stems needed: 2 (for 28) through 9 (for 94). That's stems 2, 3, 4, 5, 6, 7, 8, 9 = 8 stems.
- 20) **Choice C is correct.** (7.G.4-7.G.6) Decompose into two shapes: Rectangle area = $8 \times 5 = 40 \text{ ft}^2$; square area = $3 \times 3 = 9 \text{ ft}^2$. Add the areas: $40 + 9 = 49 \text{ ft}^2$.
- 21) **The correct answer is A,B.** (7.RP.3) Statements A and B are the two correct answers. C is a false constraint on rates. D, while often true, is not universally definitive. E directly contradicts the nature of compound interest.
- 22) **Choice D is correct.** (7.RP.1-7.RP.3) Distance = speed $\times$ time = $15 \times 2.5 = 37.5$ miles.
- 23) **Choice B is correct.** (7.G.4-7.G.6) Volume of a rectangular prism is length $\times$ width $\times$ height, so $12 \times 5 \times 3 = 180 \text{ cm}^3$.
- 24) **Choice B is correct.** (7.G.1-7.G.5) Diagonal of a square with side s is $s\sqrt{2} = 6\sqrt{2} \text{ cm}$.
- 25) **The correct answer is 13.** (7.NS.1-7.NS.3) Since the area is 169, the side length is $\sqrt{169} = 13$ units.
- 26) **Choice A is correct.** (7.G.1-7.G.5) This is the converse of the Pythagorean theorem. When the square of the longest side equals the sum of squares of the other two sides, the angle opposite the longest side is a right angle.
- 27) **Choice D is correct.** (7.SP.1-7.SP.4) The dot plot shows 6 defects out of 20 items. Proportion: $\frac{6}{20} = \frac{x}{200} \Rightarrow \frac{3}{10} = \frac{x}{200} \Rightarrow x = 60$.
- 28) **Choice D is correct.** (7.RP.1-7.RP.3) The constant k in $C = kn$ represents the cost per student. In the first, $k = 15$ (dollars per student); in the second, $k = 20$ (dollars per student). Different constants mean different unit prices.
- 29) **The correct answer is 1.56×10^{-4} .** (7.NS.1-7.NS.3) Move the decimal 4 places to the right to get the coefficient 1.56. The exponent is -4 .
- 30) **Choice D is correct.** (7.RP.1-7.RP.3) From the line, $\frac{3}{5} \text{ kg in } \frac{1}{4} \text{ hr}$ gives $\frac{3/5}{1/4} = \frac{3}{5} \times 4 = \frac{12}{5} = 2.4 \text{ kg/hr}$.
- 31) **Choice D is correct.** (7.RP.1-7.RP.3) From $y = kx$: $6 = k(2)$, so $k = \frac{6}{2} = 3$.



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Hi, Confident Learner!

◇ This wide-ranging book gave you eight serious Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. Grade 7 math can feel big because it brings together rational numbers, expressions, equations, geometry, probability, and data. ◇

★ **Remember this:** But big topics become manageable when you practice one skill at a time. That is what you have been doing with every test in this book. ★

Confidence Builders

- **Know the Goal:** Identify what the question asks.
- **Use Vocabulary:** Math words point to math actions.
- **Show Work:** Give yourself something to check.
- **Celebrate Effort:** Practice is proof that you are moving.

Grade 7 test-day tip: When reviewing, do not only mark wrong answers. Write one sentence about what you learned from each one.

If you want to share something or ask a question, please email me at jay@testinar.com.

Jay Daie

Your Confidence Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **8** full-length Math practice tests and **2** online tests to help Grade 7 students build confidence, strengthen skills, and excel on standardized assessments.

Each practice test is carefully crafted to reflect the latest standards and includes a variety of question types, realistic test conditions, and detailed answer explanations.

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



THIS BOOK INCLUDES:

8 Full-Length Printed Tests

2 Online Practice Tests

 Detailed Answer Explanations



MORE PRACTICE. GREATER RESULTS.

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

WHAT YOU'LL 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 with clear explanations and meaningful practice.



Test Confidence

Familiarize with test formats and improve accuracy and speed.



Achieve Success

Build confidence and perform your best on test day.

TOPICS COVERED

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



2 ONLINE TESTS

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



2 EXTRA ONLINE TEST ACCESS CODE IS INSIDE THE BOOK!

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