9 Alabama ACAP

GRADE 7

MATH

PRACTICE TESTS

Standards Aligned Problem Solving
For Comprehensive Assessment Programs

Program

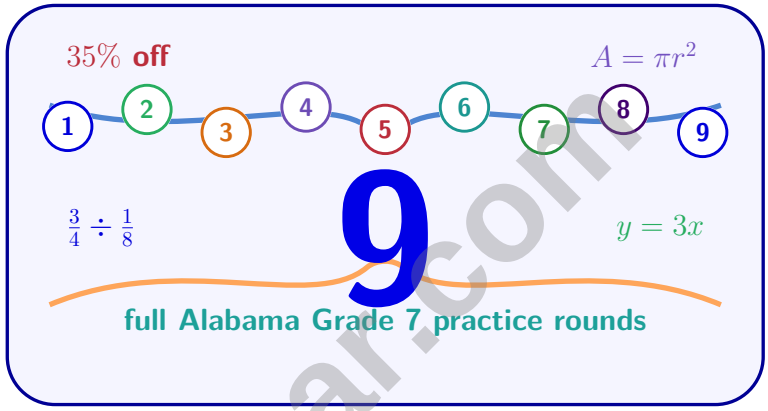
9 PRINTED TESTS + **2 ONLINE TESTS**

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

- **BUILT FOR ACAP** — Standards-Aligned
- **STRENGTHEN SKILLS**
- **SHARPEN THINKING**
- **BE TEST-READY** — Improve Performance

9 Alabama ACAP Grade 7 Math Practice Tests

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



Nine 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!

Nine focused rounds for sharper ACAP math thinking

This book gives you nine 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.

How to Use This Book

A nine-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?

Nine ACAP tests, 360 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 7–9	Statistics, probability, mixed review, stamina, and choosing efficient strategies.
Test 10	A final Alabama round to show growth across the whole book.
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.

Table of Contents

1) Which of the following best represents compound interest?

☐ A. Interest is paid only on the original principal.
☐ B. The balance decreases every year.
☐ C. Interest rates must be positive and never compound.
☐ D. Interest is earned on both principal and previously earned interest.

2) Two histograms compare the quiz scores of morning and afternoon classes. The morning class shows bars centered around 85–90, while the afternoon class shows bars centered around 75–80. What does this suggest?

☐ A. Morning students scored higher on average
☐ B. Afternoon students are smarter
☐ C. Both classes performed equally well
☐ D. Quiz difficulty was higher for morning students

3) A bag of 20 tokens contains 8 red, 7 blue, and 5 green. Two tokens are drawn WITH replacement. Which statement correctly describes this scenario?

☐ A. The events are dependent because we remove tokens
☐ B. The second draw has probabilities different from the first
☐ C. The probability of each draw remains the same because of replacement
☐ D. Red is impossible on the second draw if red appeared first

4) A quality control test found that out of 750 items produced, 12 were defective. What is the experimental probability that an item is defective?

☐ A. $\frac{12}{750}$
☐ B. $\frac{3}{125}$
☐ C. 0.12
☐ D. $\frac{1}{12}$

5) A triangular prism has a right-triangular base with legs 7 cm and 4 cm, and a depth of 9 cm. What is the volume?

☐ A. 20 cm^3
☐ B. 63 cm^3
☐ C. 126 cm^3
☐ D. 252 cm^3

6) If two circles have the same radius, what can you say about their diameters?

☐ A. The diameters are different
☐ B. The diameters are the same
☐ C. One diameter is twice the other
☐ D. Cannot be determined

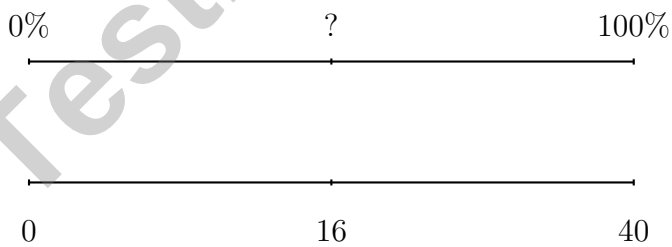
7) A geometric figure has an area of 48 square inches. If the figure is enlarged by a scale factor of 3, what is the new area?

☐ A. 144 square inches
☐ B. 16 square inches
☐ C. 51 square inches
☐ D. 432 square inches

8) Evaluate $-2 + (-5) + 3 + 8$.

☐ A. -18
☐ B. -4
☐ C. 4
☐ D. 18

9)



According to the double number line, 16 corresponds to what percent of 40?

☐ A. 30%
☐ B. 35%
☐ C. 40%
☐ D. 45%

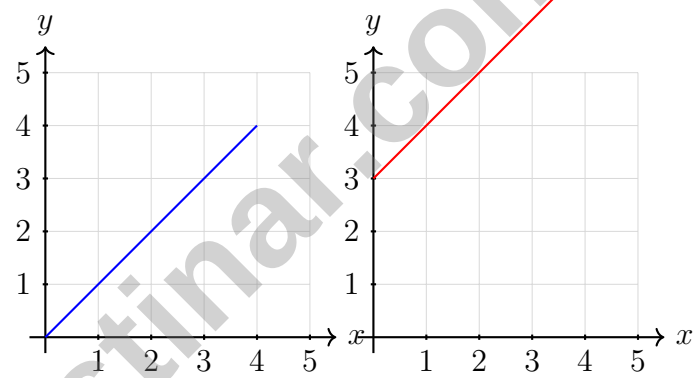
10) A retailer marks items up by 45% from their cost of \$60. What is the selling price?

☐ A. \$105
☐ B. \$270
☐ C. \$33
☐ D. \$87

11) A train travels $3\frac{1}{2}$ miles in $\frac{1}{4}$ hour. What is the train's speed in miles per hour?

☐ A. $\frac{7}{8}$ mph
☐ B. $\frac{1}{14}$ mph
☐ C. 7 mph
☐ D. 14 mph

12) Two graphs are shown. Graph 1 has a line from $(0, 0)$ to $(4, 4)$. Graph 2 has a line from $(0, 3)$ to $(4, 7)$. Which is proportional?



Graph 1 Graph 2

☐ A. Neither is proportional
☐ B. Graph 2 is proportional
☐ C. Both are proportional
☐ D. Graph 1 is proportional

13) A car travels at a constant speed of 55 miles per hour. Which equation relates distance d (miles) to time t (hours)?

☐ A. $d = t + 55$
☐ B. $d = \frac{t}{55}$
☐ C. $d = \frac{55}{t}$
☐ D. $d = 55t$

1) Solve: $7x + 3 = 31$

☐ A. $x = 2$
☐ B. $x = 4$
☐ C. $x = 5$
☐ D. $x = 9$

2) A tailor cuts 4 identical outfits using $\frac{8}{3}$ yards of fabric. How many yards of fabric per outfit?

☐ A. $\frac{1}{3}$ yard per outfit
☐ B. $\frac{3}{2}$ yards per outfit
☐ C. 2 yards per outfit
☐ D. $\frac{2}{3}$ yard per outfit

3) Which pair of points could NOT lie on a proportional graph through the origin?

☐ A. $(0, 0)$ and $(2, 10)$
☐ B. $(1, 7)$ and $(2, 14)$
☐ C. $(2, 4)$ and $(4, 8)$
☐ D. $(3, 6)$ and $(5, 11)$

4) A babysitter charges hourly. The table shows total earnings for different hours worked.

Hours	Earnings ($)
2	18
4	36
7	63

What is the hourly rate (constant of proportionality)?

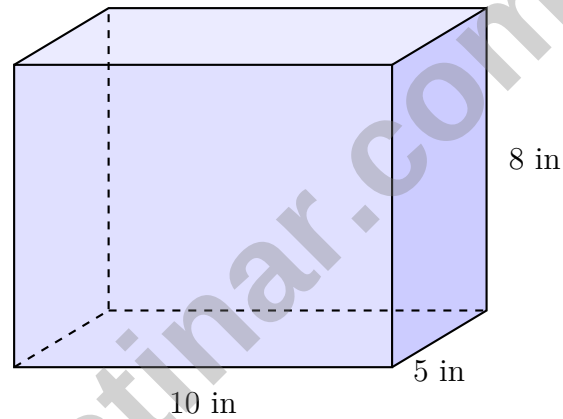
☐ A. \$12 per hour
☐ B. \$10 per hour
☐ C. \$8 per hour
☐ D. \$9 per hour

5) Evaluate $\frac{7}{8} \div \frac{7}{12}$.

6) Which expression is NOT equivalent to $8(x + 2)$?

☐ A. $8x + 16$
☐ B. $4(2x + 4)$
☐ C. $8x + 2$
☐ D. $2(4x + 8)$

7)



Which rectangular prism dimensions would give a surface area of exactly 340 square inches?

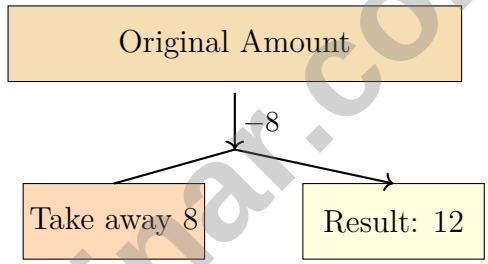
☐ A. 10 in × 8 in × 5 in
☐ B. 10 in × 9 in × 5 in
☐ C. 12 in × 8 in × 5 in
☐ D. 11 in × 8 in × 5 in

1) An L-shaped yard has a vertical rectangle (4 m × 10 m) and a horizontal rectangle (6 m × 4 m) that overlap in a 4 m × 4 m square. What is the total area?

☐ A. 48 m^2
☐ B. 64 m^2
☐ C. 80 m^2
☐ D. 104 m^2

2) A student's account balance is \$125.75. She makes purchases of \$42.50, \$18.25, and \$21.00. Then she deposits a check for \$75.50. What is her final balance?

3)

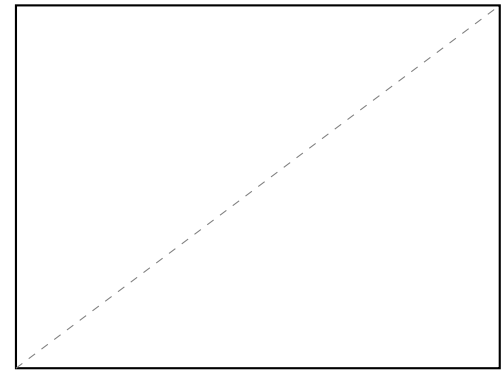


Using the model, what is the original amount?

☐ A. 4
☐ B. 12
☐ C. 20
☐ D. 24

Scale: 1 cm : 2 m

6 cm (drawing)



8 cm (drawing)

4)

Using the scale shown, what is the actual length of the diagonal side of this rectangle (approximately)?

☐ A. 10 m
☐ B. 14 m
☐ C. 20 m
☐ D. 28 m

5) A rectangle on a map is 5 cm by 8 cm. The scale is 1 cm : 10 km. If the scale changes to 1 cm : 5 km, what are the new dimensions?

☐ A. 5 cm by 8 cm
☐ B. 10 cm by 16 cm
☐ C. 2.5 cm by 4 cm
☐ D. 50 cm by 80 cm

6) If a hexagonal prism is cut by a plane perpendicular to its hexagonal bases, what shapes are possible for the cross-section?

☐ A. Only rectangles
☐ B. Only parallelograms
☐ C. Rectangles and parallelograms
☐ D. Triangles and quadrilaterals only

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.

Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

1) **Choice D is correct.** 7.RP.3 Compound interest means each period's interest calculation includes the accumulated balance, earning "interest on interest."
2) **Choice A is correct.** 7.SP.3 The histogram center (where bars cluster) indicates the typical score range. Morning (85–90) is higher than afternoon (75–80), so morning students performed better on average.
3) **Choice C is correct.** 7.SP.5-7.SP.8 With replacement, the bag is restored to its original state. Each draw has identical probabilities: $P(\text{red}) = \frac{8}{20}$, $P(\text{blue}) = \frac{7}{20}$, $P(\text{green}) = \frac{5}{20}$.
4) **Choice A is correct.** 7.SP.6 Experimental probability of defect $= \frac{12}{750}$. This simplifies to $\frac{2}{125} = 0.016$. Option A is the most direct answer from the data.
5) **Choice C is correct.** 7.G.4-7.G.6 Base area $= \frac{1}{2} \times 7 \times 4 = 14$ cm^2. Volume $= 14 \times 9 = 126$ cm^3.
6) **Choice B is correct.** 7.G.4-7.G.6 Since $d = 2r$, if the radii are equal, the diameters are also equal.
7) **Choice D is correct.** 7.RP.1-7.RP.3 Area scales by the square of the linear scale factor: $(3)^2 = 9$. New area $= 48 \times 9 = 432$ sq in.
8) **Choice C is correct.** 7.NS.1b Combine step-by-step: $-2 + (-5) = -7$, then $-7 + 3 = -4$, then $-4 + 8 = 4$. Or group: $(-2 - 5) + (3 + 8) = -7 + 11 = 4$.
9) **Choice C is correct.** 7.RP.3 $\frac{16}{40} = \frac{2}{5} = 0.40 = 40\%$.
10) **Choice D is correct.** 7.RP.3 Markup $= 0.45 \times 60 = \$27$. Selling price $= 60 + 27 = \$87$.
11) **Choice D is correct.** 7.RP.1-7.RP.3 Convert $3\frac{1}{2} = \frac{7}{2}$. Unit rate $= \frac{7/2}{1/4} = \frac{7}{2} \times 4 = 14$ mph.
12) **Choice D is correct.** 7.RP.1-7.RP.3 Graph 1 passes through origin $(0, 0)$ with slope $k = 1$. Graph 2 has y-intercept 3, so not proportional.
13) **Choice D is correct.** 7.RP.1-7.RP.3 For a proportional relationship, $d = kt$ where k is the constant of proportionality. Here $k = 55$.
14) **Choice D is correct.** 7.RP.3 $20\% \times \$500 = 0.20 \times 500 = \$100$ is correct. Options A, C, and D represent common errors (wrong percent, tax confusion, and flipping categories).
15) **The correct answer is 35 .** 7.RP.1-7.RP.3 Ratio 2 : 5: if juice = 14, then $\frac{2}{5} = \frac{14}{x}$. Cross multiply: $2x = 70$, so $x = 35$ cups water.
16) **Choice B is correct.** 7.NS.1-7.NS.3 $83{,}500 = 8.35 \times 10{,}000 = 8.35 \times 10^4$. Decimal moved 4 places left.
17) **Choice D is correct.** 7.RP.3 Using the proportion $\frac{33.33}{100} = \frac{x}{96}$, we get $x \approx 32$ points.
18) **The correct answer is 1050 .** 7.SP.1-7.SP.4 $\frac{35}{140} = \frac{x}{4200}$. Reduce: $\frac{1}{4} = \frac{x}{4200} \Rightarrow x = 1050$.
19) **Choice A is correct.** 7.NS.1-7.NS.3 First 9 minutes: $9 \div \frac{3}{4} = 12$ laps. Next 7 minutes: $7 \div \frac{7}{8} = 8$ laps. Total: $12 + 8 = 20$ laps.
20) **Choice A is correct.** 7.EE.1-7.EE.2 Distribute the negative: $6m - 2 - 4m + 8 = (6m - 4m) + (-2 + 8) = 2m + 6$.
21) **The correct answer is A,C.** 7.G.4-7.G.6 Large square: $20 \times 20 = 400$ m^2 (A). Small square: $5 \times 5 = 25$ m^2. Remaining: $400 - 25 = 375$ m^2 (C). The cutout is $\frac{25}{400} = \frac{1}{16}$ of the original area, not $\frac{1}{20}$.
22) **Choice B is correct.** 7.EE.3-7.EE.4 Substitute $x = 4$: $6(4) + 2 = 24 + 2 = 26$ ✓. Subtract 2: $6x = 24$, divide by 6: $x = 4$.
23) **Choice C is correct.** 7.G.4-7.G.6 $A = \pi r^2 = 3.14 \times 3^2 = 3.14 \times 9 = 28.26$ in^2.
24) **Choice C is correct.** 7.SP.5-7.SP.8 Sum of known probabilities: $\frac{1}{6} + \frac{1}{3} + \frac{1}{4} = \frac{2}{12} + \frac{4}{12} + \frac{3}{12} = \frac{9}{12} = \frac{3}{4}$. Then $P(W) = 1 - \frac{3}{4} = \frac{3}{12} = \frac{1}{4}$.
25) **Choice C is correct.** 7.NS.1-7.NS.3 The area of a square is s^2. If the area is 100, then $s^2 = 100$, so $s = \sqrt{100} = 10$ meters.
26) **Choice B is correct.** 7.EE.1-7.EE.2 Distribute the 4 and 3 to each term in the parentheses: $4x - 8 + 3x + 3$. Then combine like terms: $(4x + 3x) + (-8 + 3) = 7x - 5$. The simplified form shows the final equivalent expression.
27) **Choice B is correct.** 7.NS.2 Negative times negative always yields a positive product.
28) **Choice B is correct.** 7.SP.1-7.SP.4 Values ≥ 30: 30, 32, 33, 35, 37, 41, 48 from stems 3 and 4. Total: 7 values.

Hi, Confident Learner!

◇ This high-stamina book gave you nine substantial 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 **9** 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:

- **9** 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!

Don't lose it—your extra practice and success start here!

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PRACTICE REGULARLY | STAY FOCUSED | SOLVE CONFIDENTLY | SUCCEED BRIGHTLY