

7 Alabama ACAP

Grade 7 Math Practice Tests



7 PRINTED TESTS + 2 ONLINE TESTS



**Standards Aligned Problem Solving
For Comprehensive Assessment Programs**



7 Alabama ACAP Grade 7 Math Practice Tests

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



Seven 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.

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Welcome, Alabama Grade 7 Problem Solver!

Seven focused rounds for sharper ACAP math thinking

This book gives you seven 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

A seven-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?

Seven ACAP tests, 280 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.
Test 7	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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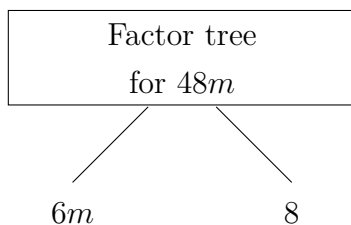
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- 1) A triangular prism has a right triangular base with legs 6 m and 8 m (hypotenuse 10 m by Pythagorean theorem). The prism height is 9 m. What is the surface area?
- ☐ A. 48 m^2 ☐ C. 264 m^2
☐ B. 144 m^2 ☐ D. 288 m^2
- 2) What is -8×2 ?
- ☐ A. -16 ☐ C. 6
☐ B. -6 ☐ D. 16
- 3) A restaurant charges a 2.5% service fee in addition to the bill. If a diner's meal costs \$80, what is the service fee?
- ☐ A. \$20.00 ☐ C. \$8.00
☐ B. \$2.50 ☐ D. \$2.00
- 4) Marcus invests \$500 at 5% annual compound interest. What is the balance after 3 years?
- ☐ A. \$575 ☐ C. \$579.13
☐ B. \$578.81 ☐ D. \$625
- 5) Which statement best describes the SSA (Side–Side–Angle) condition for constructing triangles?
- ☐ A. SSA always produces exactly one triangle ☐ C. SSA never produces a valid triangle
☐ B. SSA may produce zero, one, or two triangles ☐ D. SSA produces exactly two triangles



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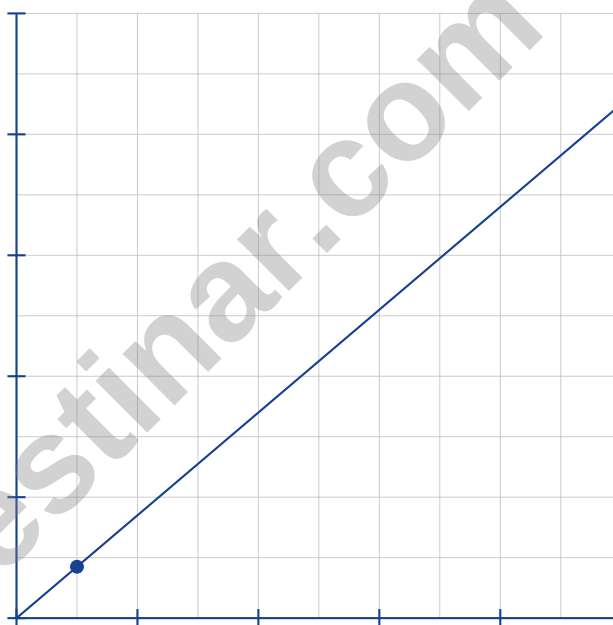


6)

If a factor tree shows that $48m = 6m \times 8$, then what is the GCF of $48m$ and 24 ?

☐ A. 6☐ C. 24☐ B. 8☐ D. 12

Total cost (\$)



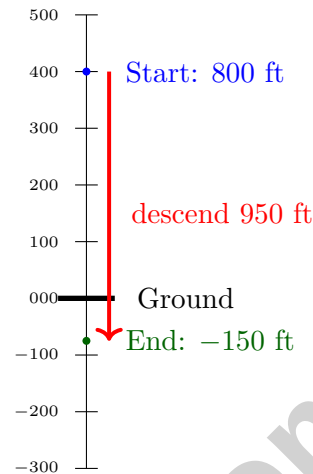
Number of items

7)

From this proportional relationship graph, identify the unit-rate point and find the cost per item.



- 8) A helicopter is hovering at 800 feet above ground. It descends 950 feet. Is it now above or below ground, and by how much?



- ☐ A. 150 feet above ground
- ☐ B. 1750 feet above ground
- ☐ C. 150 feet below ground
- ☐ D. 1750 feet below ground
- 9) A store offers a 32% discount on a pair of jeans originally priced at \$75. What is the sale price?

- 10) Evaluate $-2x + 5$ when $x = -3$.

- ☐ A. 11
- ☐ B. -1
- ☐ C. 1
- ☐ D. -6



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1) Which terms are like terms?

☐ A. $4x$ and $4y$

☐ C. $7m$ and $2m$

☐ B. $3x^2$ and $3x$

☐ D. $5xy$ and $5x$

2) A student factored $14a + 21b$ as $7(2a + 3b)$. Another factored it as $7(2a) + 7(3b)$. Are these equivalent?

☐ A. Yes, and both are fully factored

☐ C. No; you cannot distribute a 7 twice

☐ B. No; the second form is not fully factored

☐ D. Yes, but only the first is fully factored

3) A trapezoid-like composite shape is formed by a 6 m by 4 m rectangle with a triangle (6 m base, 3 m height) on top. What is the combined area?

☐ A. 18 m^2

☐ C. 30 m^2

☐ B. 27 m^2

☐ D. 33 m^2

4) A rectangular prism has length 8 cm, width 6 cm, and height 10 cm. Convert its volume to liters if $1 \text{ liter} = 1,000 \text{ cm}^3$.

☐ A. 0.48 L

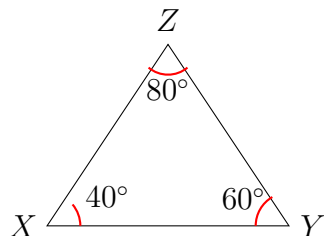
☐ C. 48 L

☐ B. 480 L

☐ D. 4.8 L



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5)

In triangle XYZ , the angles are marked. How many distinct triangles can be drawn with these angles?

☐ A. Exactly 0

☐ C. Infinitely many

☐ B. Exactly 1

☐ D. Exactly 2

6) In a circle with radius r , a chord has length r . What can you conclude about this chord?

☐ A. It must be a diameter

☐ C. It equals the radius

☐ B. It is shorter than the diameter

☐ D. It is impossible

7) A store sells two brands of cereal. Brand X costs \$4.00 for 16 oz. Brand Y costs \$3.60 for 12 oz. Which brand has the lower unit cost per ounce?

☐ A. Brand X at \$0.30 per oz

☐ C. Brand X at \$0.25 per oz

☐ B. Brand Y at \$0.30 per oz

☐ D. Brand Y at \$0.25 per oz

8) A gift box in the shape of a rectangular prism measures 12 in long, 8 in wide, and 5 in tall. A student needs to wrap it with paper. How many square inches of wrapping paper are needed (ignoring overlap)?

☐ A. 50 in^2
☐ C. 392 in^2
☐ B. 100 in^2
☐ D. 480 in^2


1) Which statement is true?

☐ A. $-5 + 3 = 8$

☐ C. $4 + (-9) = 5$

☐ B. $-12 + 20 = -8$

☐ D. $-5 + 3 = -2$

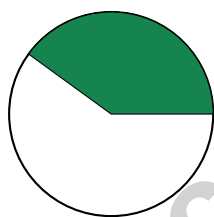
2) A recipe calls for 2 cups of flour for every 3 cups of sugar. If f is flour and s is sugar, which equation shows this proportional relationship?

☐ A. $f = \frac{3}{2}s$

☐ C. $f = 2s + 3$

☐ B. $f = s + 1$

☐ D. $f = \frac{2}{3}s$



40% of circle

3)

Convert 40% to a decimal.

☐ A. 0.04

☐ C. 4.0

☐ B. 40

☐ D. 0.4

4) A sports league starts with 40 teams. After expansion, it has 50 teams. What is the percent increase in the number of teams?

☐ A. 10%

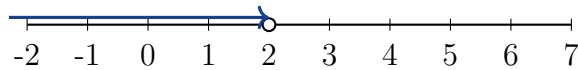
☐ C. 25%

☐ B. 20%

☐ D. 80%



5) What inequality is represented on this number line?



- ☐ A. $x > 2$ ☐ C. $x < 2$
☐ B. $x \geq 2$ ☐ D. $x \leq 2$
- 6) A spinner is spun twice, and the compound event is “the first spin is different from the second spin.” If the spinner has 3 equal sections, how many successful outcomes are there?
- ☐ A. 3 ☐ C. 9
☐ B. 6 ☐ D. 12
- 7) A map has a scale of 3 cm : 10 km. A road that is 75 km long would measure how many centimeters on the map?
- ☐ A. 22.5 cm ☐ C. 30 cm
☐ B. 25 cm ☐ D. 250 cm
- 8) A landscape drawing shows a rectangular flower bed 8 inches by 12 inches at scale 1 in : 2 ft. What are the dimensions of the actual flower bed?
- ☐ A. 2 ft by 3 ft ☐ C. 16 ft by 24 ft
☐ B. 4 ft by 6 ft ☐ D. 32 ft by 48 ft
- 9) A triangular prism with a right-triangular base (legs 3 cm and 4 cm) and height 10 cm is sliced perpendicular to its triangular bases. Which shape could NOT be a cross-section?
- ☐ A. Triangle ☐ C. Pentagon
☐ B. Rectangle ☐ D. Hexagon



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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 C is correct.** (7.G.4-7.G.6) Two triangular bases: $2 \times \frac{1}{2}(6)(8) = 48 \text{ m}^2$. Three rectangular sides: $6 \times 9 = 54$, $8 \times 9 = 72$, $10 \times 9 = 90 \text{ m}^2$. Total: $48 + 54 + 72 + 90 = 264 \text{ m}^2$.
- 2) **Choice A is correct.** (7.NS.2) Negative times positive equals negative. $-8 \times 2 = -16$.
- 3) **Choice D is correct.** (7.RP.3) Service fee = $0.025 \times 80 = \$2.00$.
- 4) **Choice C is correct.** (7.RP.3) Year 1: $500 \times 1.05 = 525$. Year 2: $525 \times 1.05 = 551.25$. Year 3: $551.25 \times 1.05 = 578.81$, rounded to 579.13.
- 5) **Choice B is correct.** (7.G.1-7.G.5) SSA is the ambiguous case. Depending on the side lengths and angle, there may be no valid triangle (Triangle Inequality violated), exactly one triangle (right angle or obtuse), or two distinct triangles (acute angle with proper side ratio).
- 6) **Choice C is correct.** (7.EE.1-7.EE.2) GCF of 48m and 24: GCF of 48 and 24 is 24. No variable is common to both. GCF is 24.
- 7) **The correct answer is 0.85.** (7.RP.1-7.RP.3) The marked point is (1, 0.85), which is the unit-rate point. This means the constant of proportionality is $k = 0.85$, so the cost is \$0.85 per item.
- 8) **Choice C is correct.** (7.NS.1b) Model descent as $800 + (-950) = -150$. The negative result means 150 feet below ground level.
- 9) **The correct answer is \$51.** (7.RP.3) Discount amount = $0.32 \times 75 = \$24$. Sale price = $75 - 24 = \$51$.
- 10) **Choice A is correct.** (7.EE.1-7.EE.2) Substitute: $-2(-3) + 5 = 6 + 5 = 11$.
- 11) **Choice A is correct.** (7.EE.1) Combine: $(7 - 2)a + (4 + 3 - 1)b = 5a + 6b$.
- 12) **Choice B is correct.** (7.EE.4b) $x \geq -1$ includes -1 (filled circle) and all values greater than -1 (arrow right).
- 13) **Choice A is correct.** (7.SP.5-7.SP.8) Theoretical: $\frac{100}{5} = 20$ for each. Deviation: $|12 - 20| = 8$, $|18 - 20| = 2$, $|22 - 20| = 2$, $|26 - 20| = 6$. Largest deviation is 8.
- 14) **Choice C is correct.** (7.NS.1-7.NS.3) Net change: $2.5 + (-1.3) = 1.2 \text{ kg net gain}$.
- 15) **Choice C is correct.** (7.NS.1-7.NS.3) Weight loss: $\frac{1}{6} \times 180 = 30 \text{ pounds}$.
- 16) **Choice C is correct.** (7.EE.1-7.EE.2) Power rule: $(w^4)^2 = w^{4 \times 2} = w^8$.
- 17) **Choice C is correct.** (7.EE.4a) Each bag costs \$3 and yeast is \$2. Equation: $3b + 2 = 17$.
- 18) **Choice C is correct.** (7.EE.4a) Distribute: $2x - 16 = 10$. Add 16: $2x = 26$. Divide by 2: $x = 13$.
- 19) **The correct answer is A,B.** (7.RP.3) Choice A: 20% of 500 = $0.20 \times 500 = 100$. ✓ Choice B: 50% of 500 = $0.50 \times 500 = 250$. ✓ Choice C: 10% of 500 = 50, not 40. ✗ Choice D: 15% of 500 = 75, not 80. ✗
- 20) **Choice B is correct.** (7.G.1-7.G.5) Scale factor for length is 2. Actual dimensions: 12 m $\times$ 8 m. Area: $12 \times 8 = 96 \text{ m}^2$.
- 21) **Choice A is correct.** (7.G.1-7.G.5) Divide actual by scale factor: 20 m $\div$ 2 m/cm = 10 cm and $30 \div 2 = 15 \text{ cm}$.
- 22) **Choice C is correct.** (7.G.1-7.G.5) A cube has all square faces. A cut parallel to any face produces a square cross-section congruent to that face.
- 23) **Choice C is correct.** (7.G.1-7.G.5) The scale factor is $15 \div 5 = 3$. The shortest side of the larger triangle is $3 \times 3 = 9$.
- 24) **Choice B is correct.** (7.G.4-7.G.6) A: $V = \pi r^2 h = 3.14 \times (1)^2 \times 12 = 3.14 \times 1 \times 12 = 37.68 \text{ units}^3$. B: $V = 3.14 \times (3)^2 \times 1.5 = 3.14 \times 9 \times 1.5 = 42.39 \text{ units}^3$. Cylinder B is greater.
- 25) **Choice C is correct.** (7.SP.1-7.SP.4) People at a gym are by definition more active than the general population, making the sample unrepresentative of all adults.
- 26) **Choice B is correct.** (7.SP.1-7.SP.4) Batch A: 47–51 (range = 4), perfectly uniform spread. Batch B: 44–56 (range = 12), highly variable. Batch A has consistent weight; Batch B is less uniform.
- 27) **Choice C is correct.** (7.SP.1-7.SP.4) 4.5 cm $\times$ 10 books/cm = 45 books.
- 28) **Choice B is correct.** (7.SP.5-7.SP.8) Favorable outcomes: 5, 6 (two outcomes). Total outcomes: 6. $P(>4) = \frac{2}{6} = \frac{1}{3}$.
- 29) **Choice B is correct.** (7.SP.5-7.SP.8) Even cards: $\{2, 4\} = 2 \text{ outcomes}$. Heads: 1 outcome. Favorable: 2H, 4H = 2 outcomes.
- 30) **Choice A is correct.** (7.NS.1-7.NS.3) (A) $\text{Neg} \div \text{neg} = \text{pos}$: $(-18) \div (-9) = 2$. (B) $\text{Neg} \div \text{pos} = \text{neg}$. (C) $\text{Pos} \div \text{neg} = \text{neg}$. (D) $\text{Neg} \div \text{pos} = \text{neg}$.



Hi, Persistent Problem Solver!

◇ Some Grade 7 questions ask you to hold several ideas in your mind at once. That can feel hard, and that is exactly why practice matters. ◇

★ **Remember this:** You showed persistence by continuing through the set. That habit is powerful because difficult problems often open after one more good attempt. You practiced across 7 full Grade 7 practice tests, and that repeated effort matters. ★

Persistence Tools

- **Try a Smaller Case:** Use an easier number to see the pattern.
- **Draw It:** Make the situation visible.
- **Restate It:** Say the question in your own words.
- **Check One Step:** Fix the first unclear place.

Grade 7 test-day tip: When stuck, do not restart everything. Find the first step you trust, then rebuild from there.

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

Jay Daie

Your Persistence Coach

Practice Today. Succeed Tomorrow!

This book includes **7** 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:

7 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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