

10 Alabama ACAP

GRADE
7
MATH

PRACTICE TESTS

Standards Aligned Problem
Solving For Comprehensive
Assessment Programs



10 PRINTED TESTS

Realistic practice to build
confidence and mastery



2 ONLINE TESTS

Extra practice for
continued success



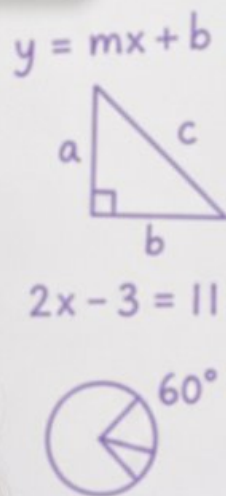
DETAILED ANSWER EXPLANATIONS

Learn with step-by-step
solutions



FOCUSED & EFFECTIVE

Target key math skills
with purposeful practice



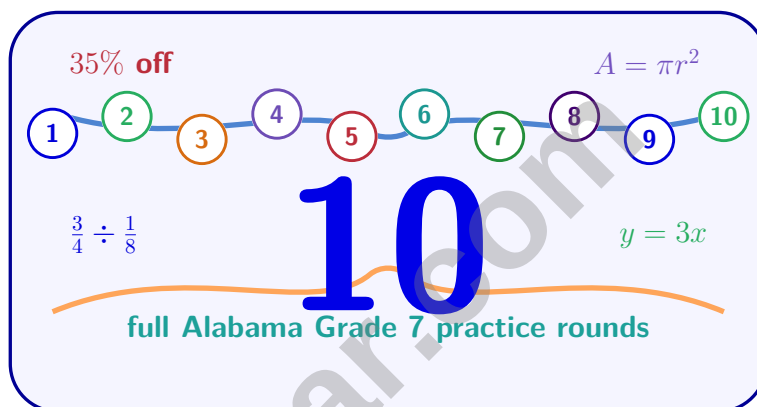
10 PRINTED TESTS
+2 ONLINE TESTS

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

PRACTICE ★ REVIEW ★ SUCCEED

10 Alabama ACAP Grade 7 Math Practice Tests

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



Ten 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!

Ten focused rounds for sharper ACAP math thinking

This book gives you ten 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 ten-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?

Ten ACAP tests, 400 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.



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& answers

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- 1) An account shows a balance of $-\$360$ (a debt). The debt is split equally among 4 people. What is each person's share?
- ☐ A. Each person owes \$90
- ☐ B. Each person receives \$90
- ☐ C. $(-360) \div 4 = -90$, so each person's debt is \$90
- ☐ D. Cannot divide debt
- 2) Solve for x : $3(x - 2) = x + 2$
- ☐ A. $x = 2$
- ☐ B. $x = 3$
- ☐ C. $x = 4$
- ☐ D. $x = 5$
- 3) A garden with initial area of 120 sq ft gains $\frac{1}{3}$ of its original area. What is the new area?
- ☐ A. 160 sq ft
- ☐ B. 40 sq ft
- ☐ C. 80 sq ft
- ☐ D. 200 sq ft
- 4) Two gyms track daily member visits. Gym X: visits = 45, 45, 46, 45, 44 (mean 45). Gym Y: visits = 30, 50, 40, 50, 35 (mean 41). Which gym has a lower MAD?
- ☐ A. Gym X (more consistent attendance)
- ☐ B. Gym Y (higher peak days)
- ☐ C. Both have equal MAD
- ☐ D. Cannot determine MAD from the means
- 5) A dot plot shows the number of text messages sent by students in one day. Which statement is BEST supported by the mode of the data?
- ☐ A. The average student sends many messages
- ☐ B. The most common number of messages sent is the mode
- ☐ C. Half the students send more than the mode
- ☐ D. The mode shows how spread out the data is



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6) A jar holds 3 yellow, 4 purple, and 8 orange tokens. If a token is drawn at random, what is the theoretical probability it is purple?

☐ A. $\frac{4}{15}$
☐ B. $\frac{4}{12}$

☐ C. $\frac{1}{4}$
☐ D. $\frac{4}{8}$

7) A spinner with 6 equal sections and a die are both used in an experiment. What is the total number of outcomes?

☐ A. 6
☐ B. 12

☐ C. 18
☐ D. 36

8) Two cards are drawn from a standard 52-card deck WITH replacement. What is the probability of drawing a heart on the first draw AND a spade on the second draw?

☐ A. $\frac{1}{16}$
☐ B. $\frac{1}{13}$

☐ C. $\frac{1}{4}$
☐ D. $\frac{1}{8}$

9) A spinner with 4 equal sections was spun 360 times. The results are displayed in a frequency table:

Section	Red	Blue	Green	Yellow
Frequency	95	88	92	85

How does the experimental probability of landing on red compare to the theoretical probability of $\frac{1}{4}$?

☐ A. Experimental is higher
☐ B. Experimental is lower

☐ C. Both are exactly equal
☐ D. Cannot compare without more data



- 10) A survey predicted 450 people would attend a concert. If the actual attendance was 500, what is the percent error?
- ☐ A. 11.1% ☐ C. 10%
- ☐ B. 50% ☐ D. 9%
- 11) Expand: $(2y - 4) \cdot 3$
- ☐ A. $2y - 12$ ☐ C. $6y - 4$
- ☐ B. $6y - 12$ ☐ D. $5y - 4$
- 12) Which equation is equivalent to finding the distance between -12 and 3 on a number line?
- ☐ A. $|-12 - 3|$ ☐ C. $3 - 12$
- ☐ B. $-12 - 3$ ☐ D. $|-12 - (-3)|$
- 13) A student makes an error when finding a scale. The actual length is 120 feet and the model is 6 inches. The student writes the scale as $6 : 120$. What is the correct scale?
- ☐ A. $1 : 20$ ☐ C. $240 : 1$
- ☐ B. $6 : 120$ (the student is correct) ☐ D. $1 : 240$
- 14) A plant grew 12 cm. This is 15% of its total final height. What was the total height?
- ☐ A. 60 cm ☐ C. 80 cm
- ☐ B. 72 cm ☐ D. 90 cm
- 15) A sweater is priced at \$80. A customer uses a coupon for 15% off. What is the sale price?
- ☐ A. \$65 ☐ C. \$64
- ☐ B. \$76 ☐ D. \$68



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1) What is $-\frac{1}{2} \times 10$?

☐ A. -20

☐ C. 5

☐ B. -5

☐ D. 20

2) When constructing a stem-and-leaf plot, why are the leaves typically arranged in order?

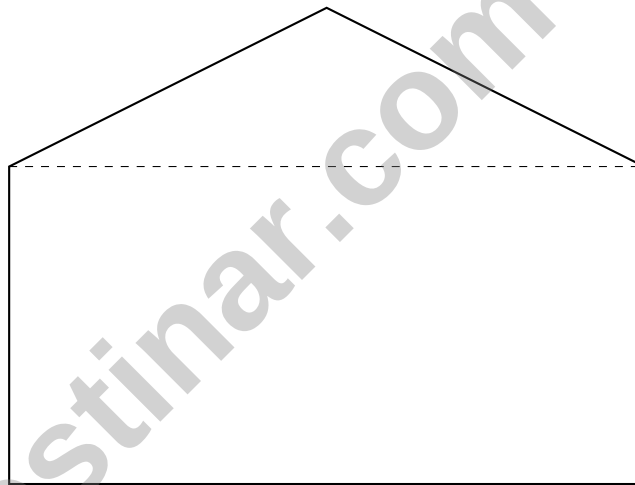
☐ A. To make the plot visually appealing

☐ C. Because it is required by

☐ B. To make it easier to identify median, quartiles, and other statistics

mathematical law

☐ D. To save space in the plot



3)

A pentagon-shaped region can be decomposed into a trapezoid (parallel sides 12 units and 12 units, height 6 units) and a triangle (base 6 units, height 3 units). What is the total area?

☐ A. 50 sq units

☐ C. 72 sq units

☐ B. 63 sq units

☐ D. 81 sq units



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- 4) A trapezoidal prism has a trapezoidal base with parallel sides 4 cm and 6 cm and a height of 3 cm (height of the trapezoid). The depth of the prism is 10 cm. What is the volume? (Area of trapezoid = $\frac{1}{2}(b_1 + b_2) \times h$)

☐ A. 60 cm³ ☐ C. 150 cm³
☐ B. 75 cm³ ☐ D. 300 cm³

- 5) Expand: $\frac{2}{3}(6a + 9)$

☐ A. $4a + 6$ ☐ C. $2a + 3$
☐ B. $6a + 9$ ☐ D. $4a + 3$

- 6) Simplify: $6x^2 + 2x^2 - 3x$

☐ A. $8x^2 - 3x$ ☐ C. $8x^2 - 3x^2$
☐ B. $5x^2$ ☐ D. $5x^3$

- 7) A rectangular patio has area $36m + 54$ square feet. If the width is 18 feet, what is the length?

☐ A. $2m + 3$ ☐ C. $3m + 3$
☐ B. $2m + 54$ ☐ D. $36m$

- 8) A rectangular prism has dimensions 9 in $\times$ 3 in $\times$ 6 in. What is the surface area?

☐ A. 54 in² ☐ C. 198 in²
☐ B. 108 in² ☐ D. 324 in²

- 9) A sector measuring 162° represents what percent of the circle?

☐ A. 25% ☐ C. 45%
☐ B. 40% ☐ D. 50%



- 1) A spinner with 4 equal sections (Red, Blue, Green, Yellow) is spun twice to simulate a compound event. If “success” is defined as “the first spin is Red and the second spin is Blue,” how many outcomes in the sample space represent a success?

☐ A. 1☐ C. 4☐ B. 2☐ D. 8

- 2) If $\frac{7}{x} = \frac{35}{100}$, what is x ?

- 3) A circle graph shows the distribution of pets owned by households in a neighborhood. Dogs account for 40% of the 80 households surveyed. How many households own dogs?

☐ A. 20☐ C. 48☐ B. 32☐ D. 64

- 4) A student claims 0.34×10^5 is in proper scientific notation. Is this correct?

☐ A. Yes, it is correct.☐ D. No; both the coefficient and exponent are wrong.☐ B. No; the coefficient is too small.☐ C. No; the exponent is wrong.

- 5) A random sample of 160 cars showed 56 had a sunroof. The county has 8000 registered cars. About how many have a sunroof?



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6) Simplify: $(h^2)^3 \cdot h^4$

☐ A. h^9

☐ C. h^{24}

☐ B. h^{10}

☐ D. h^8

7) Naomi buys 3 books at \$8 each and a \$5 bookmark. Let t be her total cost. Which equation models this situation?

☐ A. $t = 3 + 8 + 5$

☐ C. $t = 3(8) + 5$

☐ B. $t = 3(8 + 5)$

☐ D. $t = 3 + 8 \times 5$

8) Which solution strategy is correct for $4x + 6 = 30$?

☐ A. Subtract 6, then divide by 4

☐ C. Multiply by 4, then add 6

☐ B. Divide by 4, then subtract 6

☐ D. Add 6, then divide by 4

9) Solve for x : $7(x + 1) = 49$

☐ A. $x = 5$

☐ C. $x = 7$

☐ B. $x = 6$

☐ D. $x = 8$

10) A savings account has a balance of $-\$15$ (overdraft). After depositing \$50, what is the new balance? Write and solve an equation.

☐ A. \$25

☐ C. \$50

☐ B. \$35

☐ D. \$65

11) If a scale is 2 cm : 1 km, and you measure 5 cm on the map, what is the actual distance?

☐ A. 1.5 km

☐ C. 2.5 km

☐ B. 2 km

☐ D. 5 km



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.NS.1-7.NS.3) $(-360) \div 4 = -90$ indicates each person's debt (or share) is \$90 (or $-\$90$ in ledger terms).
- 2) **Choice C is correct.** (7.EE.4a) Distribute: $3x - 6 = x + 2$. Subtract x : $2x - 6 = 2$. Add 6: $2x = 8$. Divide by 2: $x = 4$.
- 3) **Choice A is correct.** (7.NS.1-7.NS.3) New area = $120 + \frac{1}{3} \times 120 = 120 + 40 = 160$ sq ft.
- 4) **Choice A is correct.** (7.SP.1-7.SP.4) Gym X: deviations = 0, 0, 1, 0, 1 (MAD ≈ 0.4). Gym Y: deviations = 11, 9, 1, 9, 6 (MAD ≈ 7.2). Gym X's tight cluster (44–46) vs. Gym Y's spread (30–50) shows Gym X is more consistent.
- 5) **Choice B is correct.** (7.SP.1-7.SP.4) The mode is the value that appears most frequently in a data set. It directly tells us which outcome is most common.
- 6) **Choice A is correct.** (7.SP.5-7.SP.8) Total tokens = $3 + 4 + 8 = 15$. $P(\text{purple}) = \frac{4}{15}$.
- 7) **Choice D is correct.** (7.SP.5-7.SP.8) Spinner: 6 outcomes; die: 6 outcomes. Total: $6 \times 6 = 36$ outcomes.
- 8) **Choice A is correct.** (7.SP.5-7.SP.8) With replacement: $P(\text{heart}) \cdot P(\text{spade}) = \frac{1}{4} \cdot \frac{1}{4} = \frac{1}{16}$.
- 9) **Choice A is correct.** (7.SP.6) Experimental probability of red (relative frequency): $\frac{95}{360} \approx 0.264$. Theoretical (equal sections): $\frac{1}{4} = 0.25$. Random variation caused experimental to exceed theoretical.
- 10) **Choice C is correct.** (7.RP.3) Percent error = $\frac{|450-500|}{500} \times 100\% = \frac{50}{500} \times 100\% = 10\%$.
- 11) **Choice B is correct.** (7.EE.1-7.EE.2) Distribute 3: $(2y) \cdot 3 + (-4) \cdot 3 = 6y - 12$. The sign of the term remains with it when distributed.
- 12) **Choice A is correct.** (7.NS.1-7.NS.3) Distance is found using absolute value: $|-12 - 3| = |-15| = 15$ or equivalently $|3 - (-12)| = 15$. Only choice A gives the correct distance.
- 13) **Choice D is correct.** (7.RP.1-7.RP.3) Convert to common units: 120 feet = 1440 inches. Scale = $6 : 1440 = 1 : 240$. Student forgot unit conversion.
- 14) **Choice C is correct.** (7.RP.3) If $12 = 0.15 \times h$, then $h = \frac{12}{0.15} = 80$ cm.
- 15) **Choice D is correct.** (7.RP.3) Discount = $0.15 \times 80 = \$12$. Sale price = $80 - 12 = \$68$.
- 16) **Choice D is correct.** (7.RP.3) Interest earned: $2400 - 2000 = \$400$. $400 = 2000 \times r \times 4 \Rightarrow 400 = 8000r \Rightarrow r = 0.05 = 5\%$.
- 17) **Choice D is correct.** (7.NS.1b) The correct computation is $-10 + 6 + (-3) = -4 + (-3) = -7$. The student's error: they computed $-10 + (-6) + (-3) = -19$, treating the $+6$ as -6 . This shows they misread or misinterpreted the positive six, effectively skipping the correct middle step and replacing it with its opposite sign.
- 18) **Choice C is correct.** (7.EE.1) Option C has no like terms remaining. All other options have like terms that can still be combined.
- 19) **The correct answer is 384.** (7.G.4-7.G.6) Base area = $\frac{1}{2}(5 + 11) \times 6 = \frac{1}{2} \times 16 \times 6 = 48 \text{ in}^2$. Volume = $48 \times 8 = 384 \text{ in}^3$.
- 20) **The correct answer is A,D.** (7.G.1-7.G.5) (A) $(1, 0) \xrightarrow{90^\circ \text{CCW}} (0, 1) \xrightarrow{\text{reflect } x\text{-axis}} (0, -1)$. ✓ (B) $(2, 3) \xrightarrow{90^\circ \text{CCW}} (-3, 2) \xrightarrow{\text{reflect } x\text{-axis}} (-3, -2)$ —mathematically correct but not asked. (C) The composite is NOT equivalent to 90° clockwise (that would be $(y, -x)$, giving $(0, -1)$ for $(1, 0)$, which matches by coincidence, but try $(2, 3) \rightarrow (3, -2)$ for 90° CW). (D) Both operations preserve distance from origin.
- 21) **Choice C is correct.** (7.EE.1-7.EE.2) Check A: $-3(x + 3) = -3x - 9$. Correct. Check B: $2(-y + 4) = -2y + 8$. Correct. Check D: $-4(m + 5) = -4m - 20$. Correct. Check C: $-5(a + 3) = -5a - 15 \neq -5a + 15$. Incorrect. The correct factorization is $-5(a - 3) = -5a + 15$.
- 22) **Choice B is correct.** (7.SP.1-7.SP.4) $252^\circ \div 360^\circ \times 100 = 70\%$.
- 23) **Choice A is correct.** (7.EE.4b) When dividing by a negative number, always flip the inequality sign. Here: $-5x \geq 20 \Rightarrow x \leq -4$.
- 24) **Choice C is correct.** (7.RP.1-7.RP.3) Proportional relationships have the form $y = kx$ (passing through the origin). Option C has a $+2$ term, so it does not pass through $(0, 0)$ and is not proportional.
- 25) **Choice C is correct.** (7.RP.3) Wants span from \$400 to \$1000, which is $\$600$ of $\$2000 = 0.30 = 30\%$.
- 26) **The correct answer is 157.** (7.G.4-7.G.6) $V = \pi r^2 h \approx 3.14 \times (2.5)^2 \times 8 = 3.14 \times 6.25 \times 8 = 157 \text{ m}^3$.



Hi, Math Hero!

◇ This full-length book gave you ten complete Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. You showed up for Grade 7 practice again and again. That is what real growth looks like: steady effort, honest review, and a willingness to try. ◇

★ **Remember this:** A math hero is not someone who never misses a question. A math hero learns from the miss and comes back stronger. ★

Hero Habits

- **Courage:** You try problems that are not automatic.
- **Honesty:** You review what needs work.
- **Patience:** You let skills grow over time.
- **Pride:** You recognize the effort you gave.

Grade 7 test-day tip: Save one solved problem you are proud of. Looking back at progress helps motivation stay strong.

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

Jay Daie

Your Math Hero Guide

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes 10 full-length Math practice tests and 2 extra 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:

10 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
- ✓ Fractions & Decimals
- ✓ Percents
- ✓ Statistics & Probability
- ✓ Data Analysis
- ✓ Measurement & Conversions
- ✓ And More!



2 EXTRA 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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BRIGHTLY

PRACTICE ★ REVIEW ★ SUCCEED