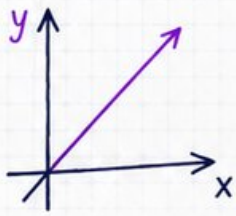
3 Alabama ACAP

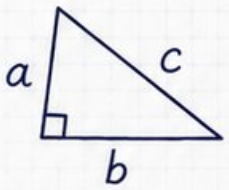
GRADE 7 MATH

PRACTICE TESTS

- Standards Aligned
- Problem Solving
- For Comprehensive Assessment Programs



$y = mx + b$



$\frac{2}{3}x - \frac{4}{5} = \frac{1}{2}$

$3(x - 2) = 2x + 5$

3 PRINTED TESTS

2 ONLINE TESTS

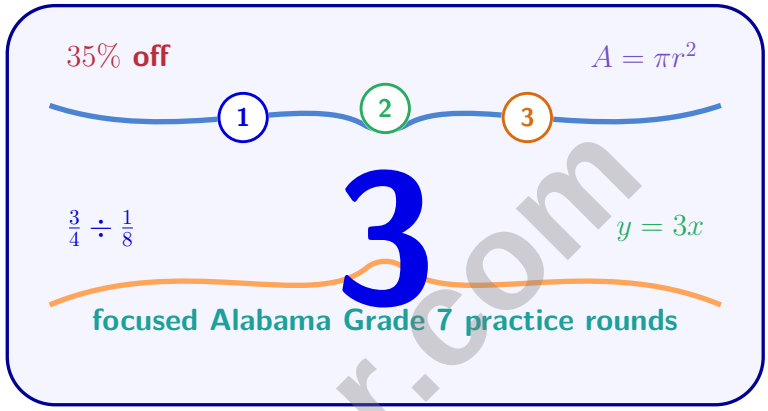
USE THESE TWO ADDITIONAL ONLINE PRACTICE TESTS

FOR EXTRA REVIEW AFTER THE PRINTED TESTS IN THIS BOOK.

- Build Confidence
- Strengthen Math Skills
- Detailed Answers & Explanations
- Improve Test Performance

3 Alabama ACAP Grade 7 Math Practice Tests

Standards-Aligned Practice with Review, Answer Keys, and Explanations



Three 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!

Three focused rounds for sharper ACAP math thinking

This book gives you three 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 three-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?

Three ACAP tests, 120 questions, and a focused review path

Part	What You Will Practice
Tests 1–2	Proportional relationships, unit rates, percents, rational-number operations, and careful reading.
Test 3	Expressions, equations, inequalities, scale drawings, geometry, data, probability, and multi-step problem solving.
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 number is equivalent to 9.08×10^5?

☐ A. 908,000
☐ B. 90,800
☐ C. 9,080,000
☐ D. 90,800,000

2) **Age Guessing Game**

Person	Guessed Age	Actual Age
Aunt	52	60

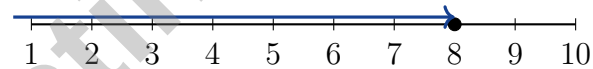
What is the percent error for guessing Aunt's age?

☐ A. 8%
☐ B. 92%
☐ C. 15.4%
☐ D. 13.3%

3) Expand and simplify: $6(2k + 1) + 3(k - 2)$

☐ A. $15k$
☐ B. $15k + 6$
☐ C. $15k + 3$
☐ D. $12k - 6$

4) At which boundary is the circle placed, and is it open or closed for the inequality $v \leq 8$?



☐ A. Open circle at 8
☐ B. Closed circle at 8
☐ C. Open circle at 7
☐ D. Closed circle at 7

5) A student borrows $2500 for a bike at 9% simple interest per year. If the loan must be repaid in 18 months, how much interest will the student pay?

☐ A. $225
☐ B. $675
☐ C. $450
☐ D. $337.50

6) Which shows $20y + 24$ factored completely?

☐ A. $4(5y + 6)$
☐ B. $2(10y + 12)$
☐ C. $8(2.5y + 3)$
☐ D. $6(3.33y + 4)$

7) A scale model of a statue uses the ratio $1 : 50$. If the model is 3 feet tall, what is the height of the actual statue?

☐ A. 50 feet
☐ B. 100 feet
☐ C. 150 feet
☐ D. 200 feet

8)

Sport	Students	Percent
Basketball	36	45%
Soccer	20	25%
Other	24	30%

The table shows sports preferences. If 45% of 80 students play basketball, how many is that?

☐ A. 30
☐ B. 45
☐ C. 40
☐ D. 36

9)

Markup Table

Cost	Selling Price
\$40	\$56
\$50	?
\$100	\$140

A store uses a consistent markup strategy. Based on the table, what should be the selling price for an item that costs \$50?

☐ A. \$65
☐ B. \$75
☐ C. \$60
☐ D. \$70

10) The temperature was $-7°C$ in the morning. It rose by $15°C$ during the day. What was the temperature after the rise?

☐ A. $-22°C$
☐ B. $-8°C$
☐ C. $8°C$
☐ D. $22°C$

11) Which expression represents "the product of 5 and a number n, decreased by 7"?

☐ A. $7 - 5n$
☐ B. $5(n - 7)$
☐ C. $5n - 7$
☐ D. $5 + n - 7$

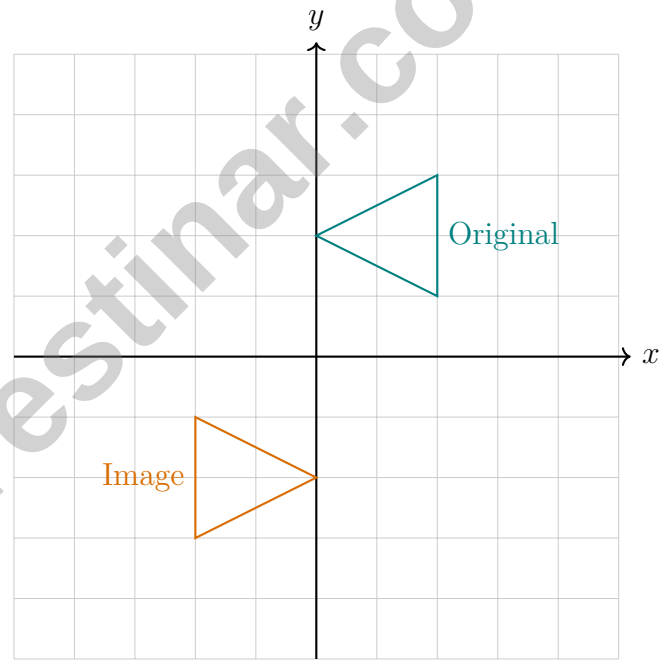
1) A right circular cone with base radius 4 cm and height 12 cm is sliced by a plane that is 8 cm from the apex and parallel to the base. What is the radius of the circular cross-section?

☐ A. $\frac{8}{3}$ cm
☐ B. $\frac{16}{3}$ cm
☐ C. $\frac{8}{12}$ cm
☐ D. 3 cm

2) Two scale drawings of the same rectangular field use different scales. Drawing A uses scale 1 cm : 2 km and shows the field as 4 cm by 6 cm. Drawing B shows the same field as 8 cm by 12 cm. What is the scale of Drawing B?

☐ A. 1 cm : 1 km
☐ B. 1 cm : 2 km
☐ C. 1 cm : 4 km
☐ D. 2 cm : 1 km

3)



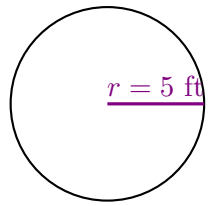
The teal triangle is transformed to the orange triangle. What is the transformation?

☐ A. Reflection over the y-axis followed by reflection over the x-axis
☐ B. Rotation of 180° about the origin
☐ C. Reflection over the line $y = -x$
☐ D. Translation by $(-2, -4)$

4) A circle has circumference $\frac{44}{7}$ cm. Using $\pi \approx \frac{22}{7}$, what is its diameter?

☐ A. 4 cm
☐ B. 3 cm
☐ C. 2 cm
☐ D. 1 cm

5)



What is the area of this circle? Use $\pi \approx 3.14$.

☐ A. 31.4 ft^2
☐ B. 62.8 ft^2
☐ C. 78.5 ft^2
☐ D. 314 ft^2

6) A cylinder has lateral surface area $= 2\pi rh = 100.48$ m^2 and radius 4 m. What is the height? Use $\pi \approx 3.14$.

☐ A. 2 m
☐ B. 4 m
☐ C. 4.5 m
☐ D. 8 m

7) A coach asks, "How typical is the temperature variation during our outdoor practices?" Which statistic best answers this?

☐ A. Median
☐ B. Mode
☐ C. MAD or IQR
☐ D. Minimum temperature

8) A histogram compares the distribution of test scores for two parallel 7th-grade math classes (Class A and Class B). Both show symmetric, bell-shaped distributions with the same mean (78) but different spreads: Class A's scores range 60–96; Class B's scores range 70–86. What does the difference in range tell you?

☐ A. Class A students are less prepared
☐ B. Class B has more consistent performance (smaller spread)
☐ C. Class B has better teaching
☐ D. The ranges prove the mean is not representative

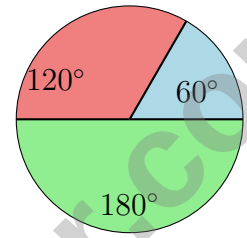
1) The table shows a proportional relationship between hours worked and earnings.

Hours	Earnings ($)
2	18
4	36
6	54

What is the constant of proportionality?

☐ A. $k = 36$
☐ B. $k = 18$
☐ C. $k = 2$
☐ D. $k = 9$

2)



This spinner has sectors of 60°, 120°, and 180°. Which probability is correct?

☐ A. $P(\text{red}) = \frac{1}{3}$
☐ B. The spinner is uniform.
☐ C. $P(\text{blue}) = \frac{1}{3}$
☐ D. $P(\text{green}) = \frac{1}{2}$

3) A freelance designer charges a base project fee of $200 plus a 10% usage fee on all client revenue from the design. If the client generates $1,500 in revenue, what is the total amount owed?

☐ A. $200
☐ B. $1,700
☐ C. $150
☐ D. $350

4)

Category	Budget Amount
Rent	$1 500
Utilities	$250
Groceries	$400
Transportation	$300
Savings	$550
Total	**$3 000**

What percent of the budget goes to savings?

☐ A. 15%
☐ C. 20%
☐ B. 25%
☐ D. 18%

5) A deposit of $1,500 earns compound interest. The table shows balances at years 0, 1, 2, and 3. What is the annual interest rate?

Year	Balance
0	$1,500
1	$1,650
2	$1,815
3	$1,996.50

☐ A. 8%
☐ C. 15%
☐ B. 12%
☐ D. 10%

6) An item originally marked at $80 is reduced to $60. What is the percent decrease?

☐ A. 20%
☐ C. 30%
☐ B. 33%
☐ D. 25%

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 A is correct.** 7.NS.1-7.NS.3 $9.08 \times 10^5 = 9.08 \times 100{,}000 = 908{,}000$.
2) **Choice D is correct.** 7.RP.3 Percent error $= \frac{|52-60|}{60} \times 100\% = \frac{8}{60} \times 100\% \approx 13.3\%$.
3) **Choice A is correct.** 7.EE.1-7.EE.2 Expand: $12k + 6 + 3k - 6 = 15k$. Combine like terms.
4) **Choice B is correct.** 7.EE.4b The symbol $\leq$ (less than or equal to) requires a closed circle at the boundary value, which is 8.
5) **Choice D is correct.** 7.RP.3 STEP 1: Convert 18 months to years: $t = 18 \div 12 = 1.5$ years. STEP 2: $I = 2500 \times 0.09 \times 1.5 = \$337.50$.
6) **Choice A is correct.** 7.EE.1-7.EE.2 GCF of 20 and 24 is 4. Factor: $20y + 24 = 4(5y + 6)$. Choice B is not completely factored.
7) **Choice C is correct.** 7.RP.1-7.RP.3 Multiply model height by scale factor: $3 \times 50 = 150$ feet.
8) **Choice D is correct.** 7.RP.3 45% of 80 is $0.45 \times 80 = 36$ students.
9) **Choice D is correct.** 7.RP.3 From row 1: markup is $56 - 40 = \$16$ on cost of \$40, a 40% markup. For cost \$50: markup $= 0.40 \times 50 = \$20$, so selling price $= 50 + 20 = \$70$.
10) **Choice C is correct.** 7.NS.1b The temperature change is modeled by $-7 + 15 = 8$. A rise of 15° means we add 15 to the initial temperature of -7°.
11) **Choice C is correct.** 7.EE.1-7.EE.2 Product of 5 and n is $5n$. Decreased by 7 means subtract 7: $5n - 7$.
12) **Choice D is correct.** 7.EE.1 $3x^2$ has exponent 2, while $3x$ has exponent 1. They are not like terms.
13) **Choice A is correct.** 7.EE.4b Total spending (book + pen) must not exceed \$50, so $12 + p \leq 50$.
14) **Choice A is correct.** 7.G.4-7.G.6 From the net, dimensions are 6 m × 4 m × 5 m. $SA = 2(6 \cdot 4 + 6 \cdot 5 + 4 \cdot 5) = 2(24 + 30 + 20) = 2(74) = 148$ m^2.
15) **Choice C is correct.** 7.SP.5-7.SP.8 Relative frequency $= \frac{37}{100} = 0.37$. (Theoretical is $\frac{3}{8} = 0.375$, so this is very close.)
16) **Choice A is correct.** 7.NS.1-7.NS.3 Rate: $\frac{3}{4} \div 6 = \frac{3}{4} \times \frac{1}{6} = \frac{3}{24} = \frac{1}{8}$ pool per hour.
17) **Choice A is correct.** 7.EE.4a Bar model shows base \$80 plus additional uniforms at \$15 each. Equation: $15u + 80 = 230$.
18) **Choice A is correct.** 7.EE.4a The distributive property gives $3 \cdot x - 3 \cdot 5 = 24$, so $3x - 15 = 24$.
19) **Choice D is correct.** 7.G.1-7.G.5 Angles on a straight line sum to 180°: $34 + k = 180^\circ$, so $k = 146^\circ$.
20) **Choice B is correct.** 7.G.1-7.G.5 Scale factor $= \frac{6}{5} = 1.2$. Verify height: $3 \times 1.2 = 3.6$ ✓
21) **The correct answer is −17 .** 7.NS.1-7.NS.3 After descending: $0 - 25 = -25$. After ascending 8 meters: $-25 - (-8) = -25 + 8 = -17$. She is 17 meters below sea level.
22) **The correct answer is C,D.** 7.SP.1-7.SP.4 The total amounts are not given, so A and B cannot be determined from the percentages alone. Region Y has 50% indoor and 50% outdoor use, so C is correct. Region Y's outdoor percentage (50%) is higher than Region X's outdoor percentage (40%), so D is correct.
23) **Choice B is correct.** 7.SP.1-7.SP.4 Phone directories only include people with listed landline numbers, which excludes people with unlisted numbers and younger voters who use only cell phones. This coverage bias makes the sample unrepresentative of all voters in the area.
24) **Choice C is correct.** 7.SP.5-7.SP.8 Prime numbers from 1 to 20: $2, 3, 5, 7, 11, 13, 17, 19$ (8 numbers). $P(\text{prime}) = \frac{8}{20} = \frac{2}{5}$.
25) **Choice D is correct.** 7.RP.1-7.RP.3 $y = \frac{3}{5}(25) = \frac{75}{5} = 15$.
26) **The correct answer is 10/3 mph .** 7.RP.1-7.RP.3 Unit rate $= \frac{5/6}{1/4} = \frac{5}{6} \times 4 = \frac{20}{6} = \frac{10}{3} = 3\frac{1}{3}$ mph.
27) **Choice D is correct.** 7.RP.1-7.RP.3 For $y = 5x$, substituting $x = 3$ gives $y = 5 \times 3 = 15$. So $(3, 15)$ lies on the line. The student made an error in their calculation or reasoning.
28) **Choice D is correct.** 7.RP.3 To find 38% of 210, set percent over 100 equal to part over whole: $\frac{38}{100} = \frac{x}{210}$. Cross-multiply: $x \approx 80$.
29) **Choice C is correct.** 7.RP.3 Available $= \$3{,}600 - \$1{,}200 - \$400 - \$300 - \$200 = \$1{,}500$.

Hi, Stamina Builder!

◇ This short, concentrated book gave you three focused Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. Completing practice tests builds more than math knowledge. It builds the focus needed to think clearly for a long stretch. ◇

⋆ **Remember this:** That stamina matters. On real test day, calm pacing can be just as important as remembering a formula. ⋆

Stamina Skills

- **Breathe:** Reset before a difficult page.
- **Pace:** Do not spend too long in one place.
- **Return:** Come back to skipped questions with fresh eyes.
- **Finish Strong:** Use the last minutes to check.

Grade 7 test-day tip: Practice a simple reset: pause, breathe, reread, then choose your next step.

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

Jay Daie

Your Test-Stamina Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **3** 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:

- **3** Full-Length Printed Tests
- **2** Online Practice Tests
- Detailed Answers & 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

Build Confidence
Practice regularly to feel prepared and test-ready.

Strengthen Math Skills
Develop key math concepts and problem solving abilities.

Detailed Answers & Explanations
Learn from clear explanations and step-by-step solutions.

Improve Test Performance
Apply your knowledge and achieve your best score!

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!

VISIT TESTINAR.COM/MATH7

FOR MORE PRACTICE TESTS AND LEARNING RESOURCES.

PRACTICE REGULARLY | STAY FOCUSED | SOLVE CONFIDENTLY | SUCCEED BRIGHTLY