

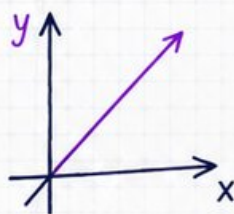
3

Arizona AASA

GRADE
7
MATH

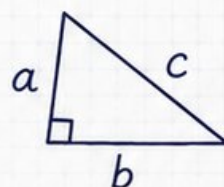
PRACTICE TESTS

- ✓ 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



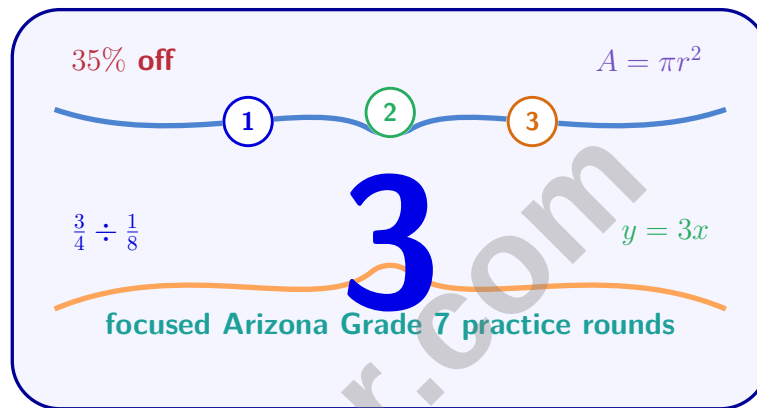
Detailed Answers
& Explanations



Improve Test
Performance

3 Arizona AASA Grade 7 Math Practice Tests

Focused AASA Math Review with Answer Keys and Explanations



Three complete 40-question Grade 7 AASA 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, Arizona Grade 7 Problem Solver!

Three focused rounds for sharper AASA math thinking

This book gives you three full Grade 7 AASA 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 Arizona 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 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.

Arizona 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 AASA 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.



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& answers

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- 1) A checking account has a monthly fee of \$10. If you maintain a minimum balance of \$1 000, the fee is waived. Carlos has \$850 in the account. How much more must he deposit to avoid the fee?

☐ A. \$100☐ C. \$200☐ B. \$250☐ D. \$150

- 2) A mountain climber is at 200 meters above sea level. She descends 350 meters. At what elevation is she now? Write your answer as an integer.

- 3) A gardener estimated needing 15 gallons of water but used 18 gallons. What is the percent error?

☐ A. 20%☐ C. 18%☐ B. 83.3%☐ D. 16.7%

- 4) A recipe uses $\frac{3}{4}$ cup flour for $\frac{1}{2}$ dozen cookies. How much flour is needed for 3 dozen cookies?



5) Expand and simplify: $4(x + 3) - 2(x - 5)$

☐ A. $2x + 22$

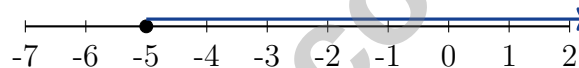
☐ C. $2x + 2$

☐ B. $6x + 2$

☐ D. $6x + 22$

6) A recipe for punch uses 2 liters of juice for every 3 liters of ginger ale. If you want to make 25 liters of punch total, how many liters of juice do you need?

7) What is the inequality shown on this number line?



☐ A. $x > -5$

☐ C. $x < -5$

☐ B. $x \leq -5$

☐ D. $x \geq -5$

8) A museum exhibit displays a model dinosaur skeleton. The actual dinosaur was 18 meters long. If the model is 1.5 meters long, what is the ratio of model length to actual length?

☐ A. 1 : 18

☐ C. 12 : 1

☐ B. 1.5 : 18 (equivalent to the above)

☐ D. 1 : 12

9) A parent wants to save money for a child's education. If \$4500 is invested at 5.5% simple interest, what is the difference in total amount between 5 years and 3 years?

☐ A. \$247.50

☐ C. \$742.50

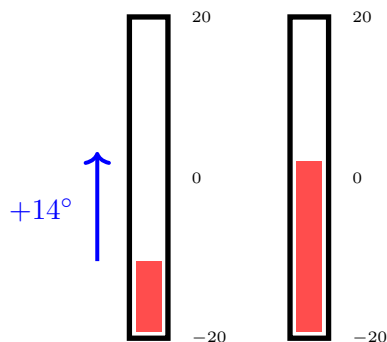
☐ B. \$990

☐ D. \$495



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- 10) A thermometer reads -5°C . The temperature rises 14°C . What is the new temperature?



Before: -5°C After: 9°C

- ☐ A. -19°C
☐ C. 9°C
- ☐ B. -9°C
☐ D. 19°C
- 11) Which group shows ALL the like terms in the expression $5a + 3b + 7a + 2c + 8b$?
- ☐ A. $3b$ and $8b$
☐ C. $5a$ and $7a$
- ☐ B. $2c$ and $5a$
☐ D. $5a$, $7a$, $3b$, and $8b$
- 12) A farmer has a field with area $24ab + 36b$ square meters. Which factorization represents the dimensions?
- ☐ A. $12b(2a + 3)$
☐ C. $24(ab + 1.5b)$
- ☐ B. $6b(4a + 6)$
☐ D. $4(6ab + 9b)$



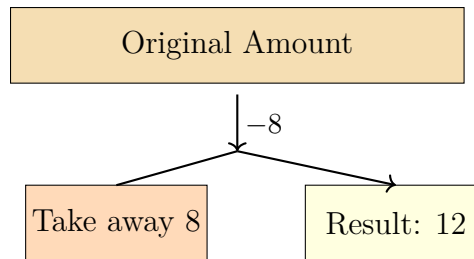
1) A price increases from \$50 to \$65. What is the percent increase?

☐ A. 20%

☐ C. 30%

☐ B. 25%

☐ D. 35%



2)

Using the model, what is the original amount?

☐ A. 4

☐ C. 20

☐ B. 12

☐ D. 24

3) A scale model of a skyscraper is built with a scale of 1 : 200. The model is 45 cm tall. Which measurement is closest to the height of the actual building in meters?

☐ A. 45 m

☐ C. 450 m

☐ B. 90 m

☐ D. 900 m

4) Two angles are supplementary. If one angle measures 65° , what is the measure of the other angle?

☐ A. 25°

☐ C. 115°

☐ B. 35°

☐ D. 295°



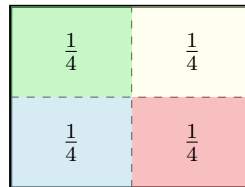
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- 5) Two similar quadrilaterals have a scale factor of $\frac{2}{5}$. If the larger quadrilateral has a perimeter of 100 cm, what is the perimeter of the smaller quadrilateral?
- ☐ A. 30 cm ☐ C. 50 cm
☐ B. 40 cm ☐ D. 80 cm
- 6) A running track's inner circle has radius 30 meters. What is its circumference? Use $\pi \approx 3.14$.
- ☐ A. 94.2 m ☐ C. 282.6 m
☐ B. 188.4 m ☐ D. 565.2 m
- 7) A water tank in the shape of a cylinder has a radius of 4 feet and a height of 10 feet. Find the volume. Use $\pi \approx 3.14$.
- ☐ A. 125.6 ft³ ☐ C. 502.4 ft³
☐ B. 251.2 ft³ ☐ D. 1004.8 ft³
- 8) A pair of shoes is on sale for \$60 after a 25% discount. What was the original price of the shoes?



- 1) A rectangular piece of fabric (25 inches $\times$ 16 inches) has two identical right triangles (5 inches $\times$ 4 inches) removed from opposite corners. What is the remaining area?

- ☐ A. 360 in²
☐ C. 400 in²
☐ B. 380 in²
☐ D. 420 in²



2)

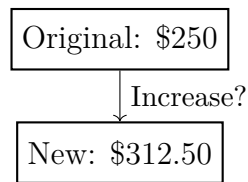
A rectangular area model shows four equal regions. Is this a uniform probability model?

- ☐ A. No, the model does not sum to 1.
 ☐ D. Yes, but only if we add more regions.
☐ B. No, regions have different areas.
☐ C. Yes, each region has probability $\frac{1}{4}$.
- 3) A salesman earned \$480 in commission by selling merchandise at a 6% commission rate. What was the total dollar amount of merchandise sold?
- ☐ A. \$7,200
 ☐ C. \$8,800
☐ B. \$9,600
 ☐ D. \$8,000
- 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



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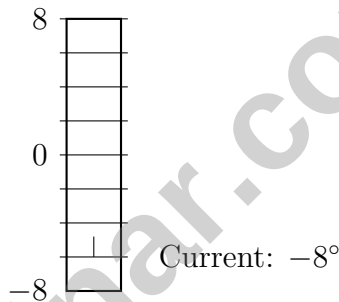
5)



A diagram shows an original price of \$250 increased to \$312.50. What is the percent increase?

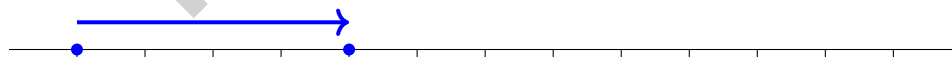
- ☐ A. 20% ☐ C. 30%
☐ B. 62.50% ☐ D. 25%

6) A thermometer shows -8 degrees. Which temperature is the opposite change?



- ☐ A. 0 degrees ☐ C. -16 degrees
☐ B. 4 degrees ☐ D. 8 degrees

7) A student computed $-7 + 4$ and got -11 . What error did the student make?



Correct: start at -7 , move 4 right to -3

- ☐ A. Added the absolute values instead of subtracting them ☐ C. Subtracted in the wrong order
☐ B. Flipped the signs ☐ D. Forgot to use a number line



Arizona AASA 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 Arizona AASA practice test.



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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice D is correct.** (7.RP.3) Needed deposit: $\$1000 - \$850 = \$150$.
- 2) **The correct answer is -150 .** (7.NS.1-7.NS.3) The elevation change is $200 - 350 = -150$. She is now 150 meters below sea level.
- 3) **Choice D is correct.** (7.RP.3) Percent error = $\frac{|15-18|}{18} \times 100\% = \frac{3}{18} \times 100\% \approx 16.7\%$.
- 4) **The correct answer is $\frac{9}{2}$.** (7.RP.1-7.RP.3) 3 dozen is 6 times $\frac{1}{2}$ dozen, so flour is $\frac{3}{4} \times 6 = \frac{18}{4} = \frac{9}{2} = 4\frac{1}{2}$ cups.
- 5) **Choice A is correct.** (7.EE.1-7.EE.2) Expand: $4x + 12 - 2x + 10 = 2x + 22$. Combine like terms.
- 6) **The correct answer is 10.** (7.RP.1-7.RP.3) Juice to ginger ale is $2 : 3$. Total ratio parts: $2 + 3 = 5$. Juice: $\frac{2}{5} \times 25 = 10$ liters.
- 7) **Choice D is correct.** (7.EE.4b) A closed circle at -5 with a right-pointing arrow indicates $x \geq -5$ (greater than or equal to -5).
- 8) **Choice D is correct.** (7.RP.1-7.RP.3) Divide: $1.5 : 18 = 1 : 12$. The model is $\frac{1}{12}$ the actual size.
- 9) **Choice D is correct.** (7.RP.3) At 5 years: $I = 4500(0.055)(5) = \$1237.50$, so $A = \$5737.50$. At 3 years: $I = 4500(0.055)(3) = \$742.50$, so $A = \$5242.50$. Difference: $5737.50 - 5242.50 = \$495$.
- 10) **Choice C is correct.** (7.NS.1b) A temperature rise of 14° from -5° is: $-5 + 14 = 9^\circ\text{C}$.
- 11) **Choice D is correct.** (7.EE.1) Like terms share the same variable. The pairs are: $(5a, 7a)$ and $(3b, 8b)$. The term $2c$ has no like terms in this expression.
- 12) **Choice A is correct.** (7.EE.1-7.EE.2) GCF of $24ab$ and $36b$ is $12b$. Factor: $24ab + 36b = 12b(2a + 3)$.
- 13) **Choice B is correct.** (7.G.4-7.G.6) $SA = 2(6 \cdot 5 + 6 \cdot 4 + 5 \cdot 4) = 2(30 + 24 + 20) = 2(74) = 148 \text{ m}^2$.
- 14) **Choice A is correct.** (7.SP.5-7.SP.8) Estimated probability for A: $\frac{15}{60} = 0.25$. Theoretical: 0.20 . Error = $|0.25 - 0.20| = 0.05$.
- 15) **Choice D is correct.** (7.RP.3) 45% of 80 is $0.45 \times 80 = 36$ students.
- 16) **Choice D is correct.** (7.RP.3) Markup = $0.75 \times 40 = \$30$. Selling price = $40 + 30 = \$70$.
- 17) **Choice C is correct.** (7.RP.3) Set up the proportion $\frac{x}{100} = \frac{16}{80}$. Cross-multiply: $x = \frac{16 \times 100}{80} = 20$.
- 18) **Choice B is correct.** (7.EE.1-7.EE.2) Substitute: $-3(5 - 2) = -3(3) = -9$.
- 19) **Choice C is correct.** (7.EE.3-7.EE.4) First, undo the subtraction by adding 1 to both sides to isolate the fraction $\frac{3x}{4}$.
- 20) **The correct answer is A,B.** (7.SP.1-7.SP.4) Smartphones (45%) is the largest, so A is correct. Tablets (20%) plus smart watches (5%) make 25%, so B is correct. Laptops (30%) is not more than 50%, and smart watches (5%) are not more than 10%.
- 21) **The correct answer is $\frac{1}{12}$.** (7.RP.1-7.RP.3) $k = \frac{3/4}{9} = \frac{3}{4} \times \frac{1}{9} = \frac{3}{36} = \frac{1}{12}$ cup per cupcake.
- 22) **Choice B is correct.** (7.EE.4b) Distribute: $2x - 6 \leq 10$. Add 6: $2x \leq 16$. Divide by 2: $x \leq 8$.
- 23) **Choice A is correct.** (7.G.1-7.G.5) Original scale 1:3 means $1 \text{ cm} = 3 \text{ m}$. New scale 1:6 means $1 \text{ cm} = 6 \text{ m}$. Real-world distance per cm doubled (3 to 6), so drawing shrinks by factor $3 \div 6 = 0.5$ (or multiply by reciprocal $6 \div 3 = 2$, then invert: $1/2$). New dimensions: $5 \div 2 = 2.5 \text{ cm}$ and $7 \div 2 = 3.5 \text{ cm}$.
- 24) **Choice B is correct.** (7.G.1-7.G.5) A plane through the apex and the base of a cone creates an axial cross-section. The two equal sides are slant heights of the cone, and the base is the diameter of the base circle, forming an isosceles triangle.
- 25) **Choice A is correct.** (7.G.1-7.G.5) Adding the translation vector: $(-1, 4) + (3, -5) = (2, -1)$.
- 26) **Choice B is correct.** (7.G.4-7.G.6) $\frac{60^\circ}{360^\circ} \times 3.14 \times 6^2 = \frac{1}{6} \times 113.04 = 18.84 \text{ in}^2$.
- 27) **Choice B is correct.** (7.SP.1-7.SP.4) A parameter describes a characteristic of an entire population. Average height of ALL students is a population parameter; the others are statistics from samples.
- 28) **Choice D is correct.** (7.RP.1-7.RP.3) Each job is proportional to hours worked with different constants: $k_1 = 12$ for Job 1 and $k_2 = 13$ for Job 2. Since $13 > 12$, Job 2 pays a higher rate per hour.
- 29) **Choice D is correct.** (7.RP.1-7.RP.3) The unit rate is the value of y when $x = 1$. Since $14 \div 2 = 7$, the constant of proportionality is 7.



Hi, Math Communicator!

◇ Grade 7 math is not only about getting a number. It is about explaining relationships and making your reasoning visible. ◇

★ **Remember this:** When you show steps, label diagrams, and write clear answers, you are joining the conversation that math is trying to have. You practiced across 3 full Grade 7 practice tests, and that repeated effort matters. ★

Communication Skills

- **Use Words:** Explain what the answer means.
- **Use Symbols:** Keep equations accurate.
- **Use Diagrams:** Show relationships visually.
- **Use Units:** Connect math to context.

Grade 7 test-day tip: For open-ended questions, answer in a complete thought: value, unit, and reason.

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

Jay Daie

Your Math Communication 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!



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