

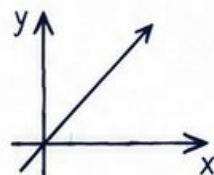
4

Arizona
AASAGRADE
7
MATH

PRACTICE TESTS

Standards Aligned
Problem Solving
For Comprehensive
Assessment Programs

$$y = mx + b$$



$$\frac{2x}{3} + \frac{x}{6} = 2$$



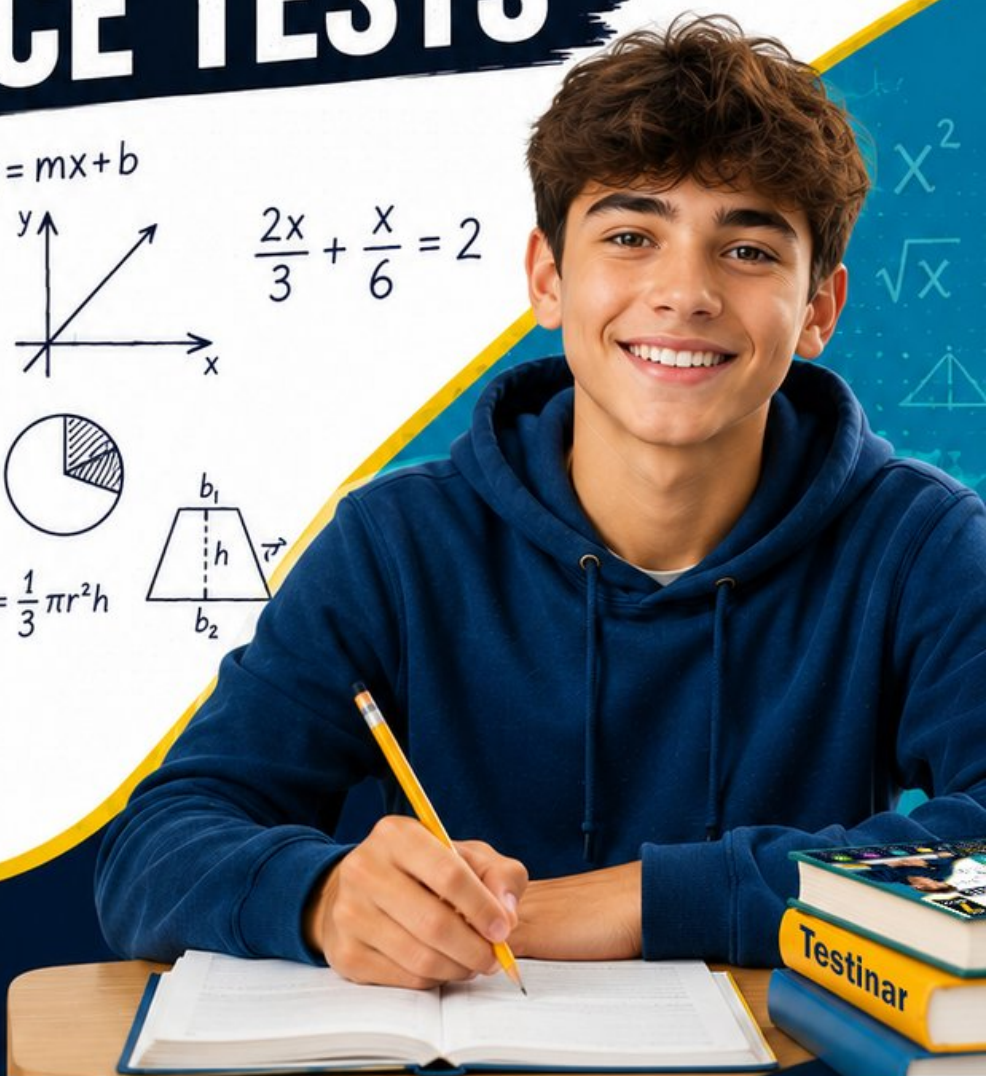
$$V = \frac{1}{3} \pi r^2 h$$



4 PRINTED TESTS



2 ONLINE TESTS

USE THESE TWO
ADDITIONAL ONLINE
PRACTICE TESTSFOR EXTRA REVIEW AFTER
THE PRINTED TESTS
IN THIS BOOK.Build
ConfidenceStrengthen
Math SkillsDetailed Answers
& ExplanationsImprove Test
Performance

4 Arizona AASA Grade 7 Math Practice Tests

Arizona Skills Review with Answer Keys and Guided Solutions



Four 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!

Four focused rounds for sharper AASA math thinking

This book gives you four 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 four-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?

Four AASA tests, 160 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.
Tests 3–4	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 weather report analyzed 365 days of data. It rained on 78 days. What is the experimental probability that it will rain on any given day, based on this data?

☐ A. 0.17 ☐ C. 0.31
☐ B. 0.21 ☐ D. 0.78

- 2) Maya's monthly income is \$2 500. She wants to save 25% of her income each month. How much should she save?

- 3) The lateral surface area of a cylinder is 157 cm^2 . If the height is 10 cm, what is the radius? Use $\pi \approx 3.14$.

☐ A. 2.5 cm ☐ C. 7.5 cm
☐ B. 5 cm ☐ D. 10 cm

- 4) A sports league compares two seasons' scoring:

Season	Q1	Q3	Median
Season 1	60	85	72
Season 2	65	88	76

Which season shows overall improvement?

☐ A. Season 1 (lower scores are better for defense) ☐ C. Both seasons are identical
☐ B. Season 2 (higher median, Q1, and Q3) ☐ D. Cannot determine without the means



- 5) A line graph shows the growth of a plant over 8 weeks (height in cm): Week 1: 5, Week 2: 7, Week 3: 9, Week 4: 11, Week 5: 12, Week 6: 13, Week 7: 14, Week 8: 14.5. Based on this trend, which prediction is most reasonable for Week 9?
- ☐ A. 15 cm ☐ C. 10 cm
☐ B. 14 cm ☐ D. 20 cm
- 6) A bag contains 4 red, 5 blue, and 6 green marbles. What is the theoretical probability of drawing a blue marble at random?
- ☐ A. $\frac{1}{5}$ ☐ C. $\frac{4}{15}$
☐ B. $\frac{1}{3}$ ☐ D. $\frac{2}{5}$
- 7) A bike shop offers frames in 2 sizes (Small, Large) and 4 colors (Black, White, Red, Green). A customer mistakenly counts the colors first as 4, then multiplies by only 1 size instead of 2. What error did the customer make, and what is the correct answer?
- ☐ A. The error is using addition; correct: 8 ☐ C. The error is confusing size and color; correct: 6
☐ B. The error is forgetting one size; correct: 8 ☐ D. The error is not using the counting principle; correct: 4
- 8) A histogram shows the price ranges for two car models. Model S: prices concentrated around \$25,000. Model T: prices spread from \$18,000 to \$32,000 with peak at \$24,000. Which model is easier to budget for?
- ☐ A. Model S (consistent pricing around \$25,000) ☐ C. Both models have identical pricing
☐ B. Model T (wider range means more options) ☐ D. Model T (cheaper at lower end)



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9) A student claims: “Since I got a 6 on the first die roll, the next roll CANNOT be another 6 because that’s too unlikely.” This reasoning contains which error?

- ☐ A. Misunderstanding mutually exclusive events
- ☐ B. Confusing probability with certainty
- ☐ C. Believing past outcomes influence independent future events
- ☐ D. Incorrectly simplifying fractions

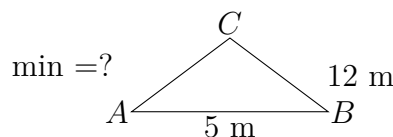
10) The stem-and-leaf plot shows quiz scores from two classes:

	Class A	Stem	Class B
Back-to-back Stem-and-Leaf Plot	9, 5, 1	7	2, 4, 8
	8, 6	8	1, 3, 5, 7
		9	0, 2, 6

Which class has the higher median?

- ☐ A. Class A
- ☐ B. Class B
- ☐ C. Both have equal medians
- ☐ D. Cannot be determined
- 11) A rectangular prism has a square base with side length 7 cm and a height of 11 cm. What is the volume?

- ☐ A. 49 cm^3
- ☐ B. 77 cm^3
- ☐ C. 539 cm^3
- ☐ D. $1,078 \text{ cm}^3$

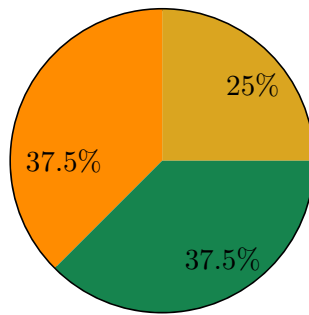


12)

What is the minimum possible length (in whole meters) for the third side of a triangle with sides 5 m and 12 m?

- ☐ A. 6 m
- ☐ B. 7 m
- ☐ C. 8 m
- ☐ D. 9 m





1)

The circle graph shows student class enrollment distribution. Gold is Algebra (25%), orange is Geometry (37.5%), and coral is Statistics (37.5%). If 800 students are surveyed, how many are in Geometry?

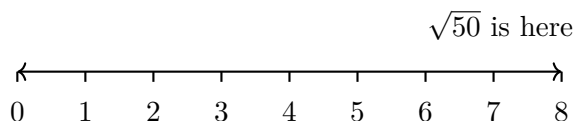
☐ A. 200☐ C. 300☐ B. 250☐ D. 400

2) A stock investment grows from \$5,000 to \$5,500 in one year. What is the percentage growth?

3) Account balance was $-\$45$ (overdrawn). After a deposit of \$100, what is the new balance?



- 4) Between which two consecutive integers does $\sqrt{50}$ lie?



- ☐ A. between 3 and 4 ☐ C. between 6 and 7
☐ B. between 5 and 6 ☐ D. between 7 and 8
- 5) Which of the following shows that $0.9p = p - 0.1p$?
- ☐ A. Factoring: $p - 0.1p = p(1 - 0.1) = 0.9p$ ☐ C. Combining fractions: $0.9 + 0.1 = 1$
☐ B. Distribution: $0.1(p - p) = 0$ ☐ D. All operations are equivalent
- 6) Which statement is true?
- ☐ A. $(-6) \times 3 > 0$ ☐ C. $5 \times (-2) = (-2) \times 5$
☐ B. $(-4) \times (-4) < 0$ ☐ D. $(-1) \times 7 < (-1) \times 6$
- 7) A sedan travels 210 miles on 10 gallons of gas. An SUV travels 180 miles on 12 gallons of gas. Which vehicle has the better fuel efficiency (miles per gallon)?
- ☐ A. Cannot be determined ☐ C. They are equal
☐ B. The SUV (15 mpg vs. 21 mpg) ☐ D. The sedan (21 mpg vs. 15 mpg)
- 8) Simplify: $4p + 6q + 2p - q$
- ☐ A. $6p + 5q$ ☐ C. $4p + 6q$
☐ B. $6p + 7q$ ☐ D. $12pq$



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- 1) A line plot shows the number of rainy days per month for 12 months. There are 2 months with 8 rainy days, 4 months with 10 rainy days, 3 months with 12 rainy days, 2 months with 14 rainy days, and 1 month with 16 rainy days. What is the median number of rainy days?
- ☐ A. 8 days ☐ C. 11 days
☐ B. 10 days ☐ D. 12 days
- 2) Two histograms show daily temperature (in degrees Fahrenheit) over a month for City A and City B. City A's temperatures cluster at 70–75 degrees (range 5 degrees). City B's temperatures span 50–90 degrees (range 40 degrees). Where do the distributions overlap?
- ☐ A. City A has more variable temperatures ☐ C. Distributions overlap at 70–75 degrees; City A is more consistent
☐ B. City B is always hotter than City A ☐ D. City B never reaches City A's temperature
- 3) A playground is shaped like a large rectangle with three smaller rectangles removed. The large rectangle is $20\text{ m} \times 15\text{ m}$. The three removed rectangles are each $3\text{ m} \times 2\text{ m}$. What is the remaining area?
- ☐ A. 282 m^2 ☐ C. 318 m^2
☐ B. 300 m^2 ☐ D. 336 m^2
- 4) A rectangular prism has a volume of 360 in^3 . If the length is 10 inches and the width is 6 inches, what is the height?
- ☐ A. 3 in ☐ C. 9 in
☐ B. 6 in ☐ D. 12 in

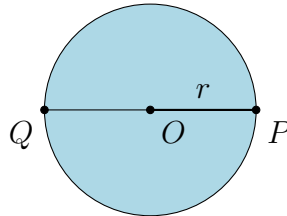


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- 5) Two sides of a triangle measure 7 cm and 10 cm. The angle between them is 60° . How many distinct triangles can be drawn?

☐ A. 0 ☐ C. 2
☐ B. 1 ☐ D. Infinitely many

- 6) The diagram below shows a circle with center O .



Which line segment is the radius of the circle?

- ☐ A. OP ☐ C. PQ
☐ B. OQ ☐ D. QP
- 7) An emergency fund is money set aside for unexpected expenses. Financial advisors recommend saving 3 to 6 months of living expenses. If your monthly expenses are \$2 000, what is the lower end of the recommended emergency fund?
- ☐ A. \$3 000 ☐ C. \$8 000
☐ B. \$12 000 ☐ D. \$6 000
- 8) If the area of a rectangle is $18x + 27$ square units and the width is 9 units, what is the length?
- ☐ A. $2x + 3$ ☐ C. $18x$
☐ B. $2x + 27$ ☐ D. $18x + 27$



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 B is correct.** (7.SP.6) Relative frequency of rainy days: $\frac{78}{365} \approx 0.214 \approx 0.21$. This experimental probability predicts future rain likelihood.
- 2) **The correct answer is \$625.** (7.RP.3) Savings: $0.25 \times 2500 = \$625$ per month.
- 3) **Choice A is correct.** (7.G.4-7.G.6) $157 = 2(3.14)(r)(10) \Rightarrow 157 = 62.8r \Rightarrow r = 2.5$ cm.
- 4) **Choice B is correct.** (7.SP.1-7.SP.4) Season 2 has higher Q1 (65 vs. 60), median (76 vs. 72), and Q3 (88 vs. 85). The entire distribution shifted higher, with consistent spacing (IQR 23 for both), indicating uniform improvement.
- 5) **Choice A is correct.** (7.SP.1-7.SP.4) The plant grows about 2 cm/week initially, then slows to 0.5 cm/week. Continuing the slowing trend suggests growth of 0.5 cm more, giving $14.5 + 0.5 = 15$ cm.
- 6) **Choice B is correct.** (7.SP.5-7.SP.8) Total = $4 + 5 + 6 = 15$. $P(\text{blue}) = \frac{5}{15} = \frac{1}{3}$.
- 7) **Choice B is correct.** (7.SP.5-7.SP.8) Sizes: 2; colors: 4. Correct total: $2 \times 4 = 8$. The customer forgot to count one size, dividing by 2 instead.
- 8) **Choice A is correct.** (7.SP.3) Budgeting requires predictability. Model S's tight clustering at \$25,000 makes budgeting straightforward. Model T's spread (\$18,000–\$32,000) means prices are less predictable, complicating budget planning.
- 9) **Choice C is correct.** (7.SP.5-7.SP.8) The student thinks the first roll affects the second, but die rolls are independent. Each roll has $P(6) = \frac{1}{6}$ regardless of previous results.
- 10) **Choice B is correct.** (7.SP.1-7.SP.4) Class A: 71, 75, 79, 86, 88 (median 79). Class B: 72, 74, 78, 81, 83, 85, 87, 90, 92, 96 (median between 83 and 85 = 84).
- 11) **Choice C is correct.** (7.G.4-7.G.6) Base area = $7^2 = 49$ cm². Volume = $49 \times 11 = 539$ cm³.
- 12) **Choice C is correct.** (7.G.1-7.G.5) The third side c must satisfy $|12 - 5| < c$, so $c > 7$. The smallest whole number greater than 7 is 8.
- 13) **The correct answer is -12.** (7.NS.2) $-9 \times \frac{4}{3} = \frac{-36}{3} = -12$.
- 14) **Choice A is correct.** (7.G.4-7.G.6) The radius is half the diameter: $14 \div 2 = 7$ cm.
- 15) **Choice C is correct.** (7.G.1-7.G.5) With one side and one angle, we have insufficient information. Adding a second side gives SAS; adding a second angle gives ASA. Either approach uniquely determines the triangle.
- 16) **Choice B is correct.** (7.SP.5-7.SP.8) By definition, an impossible event has probability 0 and a certain event has probability 1.
- 17) **Choice C is correct.** (7.SP.1-7.SP.4) Morning: $\frac{45}{60} = 0.75$ or 75%. Afternoon: $\frac{54}{72} = 0.75$ or 75%. Both show equal proportions.
- 18) **The correct answer is 13.** (7.NS.1-7.NS.3) Since the area is 169, the side length is $\sqrt{169} = 13$ units.
- 19) **The correct answer is B,C.** (7.RP.1-7.RP.3) Option B: cost = $1.50 \times$ pounds (proportional, of form $y = kx$). Option C: distance = speed $\times$ time (proportional). Option A is a general trend but not a strict proportional relationship. Option D: height does not scale proportionally with age (growth rates vary).
- 20) **Choice D is correct.** (7.RP.3) First scenario: $I = 2000 \times 0.04 \times 2 = \160 . Second: $I = 1000 \times 0.06 \times 2 = \120 . First produces \$160, which is \$40 more than the second.
- 21) **Choice B is correct.** (7.NS.1-7.NS.3) $-50 - 20 = -70$. The debt increases by 20 dollars, resulting in a larger debt.
- 22) **Choice D is correct.** (7.RP.3) Widget: discount = $(20 - 16)/20 = 4/20 = 0.20 = 20\%$. Gadget: discount = $(30 - 24)/30 = 6/30 = 0.20 = 20\%$. Both are 20% off.
- 23) **Choice C is correct.** (7.SP.1-7.SP.4) 30% of 168 = $0.30 \times 168 = 50.4$ hours.
- 24) **Choice D is correct.** (7.RP.3) Discount: $\frac{15}{100} \times 120 = 18$. Sale price: $120 - 18 = \$102$.
- 25) **Choice D is correct.** (7.RP.1-7.RP.3) Cost per pencil = $\frac{1/2}{8} = \frac{1}{2} \times \frac{1}{8} = \frac{1}{16} = 0.0625$ dollars.
- 26) **Choice D is correct.** (7.RP.1-7.RP.3) All y/x ratios equal 5 gallons per minute, confirming a proportional relationship.
- 27) **Choice D is correct.** (7.RP.1-7.RP.3) Divide earnings by hours: $\frac{18}{2} = 9$, $\frac{36}{4} = 9$, $\frac{54}{6} = 9$. The constant is $k = 9$ dollars per hour.



You Are Building Test Stamina

Hi, Stamina Builder!

◇ This carefully paced book gave you four steady 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

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