

9 Arizona

AASA

GRADE 7

MATH

PRACTICE TESTS

Standards Aligned Problem Solving
For Comprehensive Assessment Programs

Program



9 PRINTED TESTS



2 ONLINE TESTS



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



BUILT FOR ACAP
Standards-Aligned



**STRENGTHEN
SKILLS**



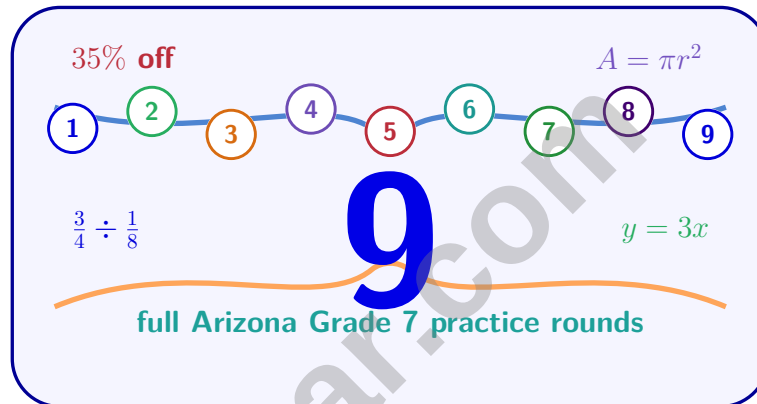
**SHARPEN
THINKING**



BE TEST-READY
Improve Performance

9 Arizona AASA Grade 7 Math Practice Tests

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



Nine 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!

Nine focused rounds for sharper AASA math thinking

This book gives you nine 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 nine-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?

Nine AASA tests, 360 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.
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.



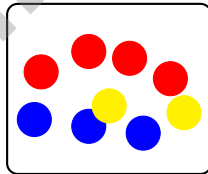
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- 1) A circle has a radius of 5 inches. What is its diameter?
- ☐ A. 2.5 inches ☐ C. 10 inches
☐ B. 5 inches ☐ D. 15 inches
- 2) A triangular prism has a triangular base with area 42 mm^2 and volume 252 mm^3 . What is the height of the prism?
- ☐ A. 12 mm ☐ C. 6 mm
☐ B. 8 mm ☐ D. 3 mm
- 3) Three side lengths 6.3 m, 8.4 m, and 10.5 m are given. How many non-congruent triangles can be formed using these exact measurements?
- ☐ A. 0 ☐ C. 3
☐ B. 1 ☐ D. Infinitely many
- 4) A bag contains 4 red marbles, 3 blue marbles, and 2 yellow marbles. What is the probability of drawing a blue marble?

Bag of marbles



- ☐ A. $\frac{3}{9}$ ☐ C. $\frac{2}{9}$
☐ B. $\frac{4}{9}$ ☐ D. $\frac{3}{4}$



5) A toy train layout uses a scale of 1 inch : 4 feet. A piece of track on the layout is 18 inches long. A student incorrectly calculates the actual length as 4.5 feet by dividing. What should the correct answer be?

- ☐ A. 4.5 feet (the student is correct) ☐ C. 14 feet
☐ B. 9 feet ☐ D. 72 feet

6) What percent of 120 is 30?

- ☐ A. 15% ☐ C. 25%
☐ B. 20% ☐ D. 30%

7) A book is on sale for 18% off its original price of \$50. How much is saved?

- ☐ A. \$7 ☐ C. \$4
☐ B. \$32 ☐ D. \$9

8) A spinner is divided into 6 equal sections. Three sections are labeled A, two are labeled B, and one is labeled C. If the spinner is spun twice, what is the probability of spinning A on the first spin and B on the second spin?

9) Students sold raffle tickets. The table shows tickets sold and money earned. Which quantity is proportional to the other?

Tickets	10	20	30
Money (\$)	25	50	75

- ☐ A. Only if they sell more than 40 tickets ☐ C. Yes; $k = 10$
☐ B. No; the amounts are too large ☐ D. Yes; $k = 2.5$



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- 10) The graph of a proportional relationship passes through (3, 6) and the origin. What is the equation?
- ☐ A. $y = 6x$ ☐ C. $y = x + 3$
☐ B. $y = 3x$ ☐ D. $y = 2x$
- 11) A student solved $\frac{p}{100} = \frac{24}{120}$ and wrote $p = 20$. Which equation should they set up instead?
- ☐ A. $\frac{24}{120} = \frac{100}{p}$ ☐ C. $\frac{120}{24} = \frac{p}{100}$
☐ B. $p = \frac{24}{120}$ ☐ D. $\frac{24}{120} = \frac{p}{100}$
- 12) A student's income and expenses for one quarter are: Income \$1,500, Expenses \$1,200. The surplus is budgeted: 60% to savings, 40% to discretionary spending. How much goes to savings?
- ☐ A. \$120 ☐ C. \$240
☐ B. \$300 ☐ D. \$180
- 13) A temperature reading shows -5°F in the morning. By afternoon, the temperature increases by 18°F . What is the afternoon temperature?
- ☐ A. -23°F ☐ C. 23°F
☐ B. 13°F ☐ D. -13°F
- 14) Simplify: $(-2b + 6) + (5b - 1)$
- ☐ A. $3b + 5$ ☐ C. $7b + 7$
☐ B. $3b - 5$ ☐ D. $-7b + 5$



1) If two similar rectangles have areas of 12 square cm and 48 square cm, what is the scale factor from the smaller to the larger rectangle?

☐ A. 2

☐ B. 4

☐ C. 2.45

☐ D. $\sqrt{12}$

2) Which equation represents a proportional relationship?

☐ A. $y = 3x + 5$

☐ B. $y = 2x + 1$

☐ C. $y = x - 2$

☐ D. $y = 7x$

3) A streaming service charges \$12 per month. Which equation represents the total cost C for m months?

☐ A. $C = m + 12$

☐ B. $C = \frac{12}{m}$

☐ C. $m = 12C$

☐ D. $C = 12m$

4) Simplify: $\frac{\frac{4}{5}}{\frac{2}{3}}$

☐ A. $\frac{10}{12}$

☐ B. $\frac{8}{15}$

☐ C. $\frac{10}{6}$

☐ D. $\frac{6}{5}$

5) A consultant charges clients a base rate of \$100 per hour plus a 10% project management fee on the total billable hours. For a 10-hour project, what is the total cost?



- 6) The cost c of buying n identical books is proportional to n . If 4 books cost \$18, what is the constant of proportionality (unit price per book)?

- ☐ A. \$2.50 ☐ C. \$14.00
☐ B. \$4.00 ☐ D. \$4.50

Combining Terms: $5a + 2b - 3a + 4b$

Like terms with a :

$$5a \text{ and } -3a \rightarrow (5 - 3)a = 2a$$

Like terms with b :

$$2b \text{ and } 4b \rightarrow (2 + 4)b = 6b$$

Answer: $2a + 6b$

7)

Using the strategy shown above, simplify $8x + 3y - 5x - 2y$.

- ☐ A. $13x + y$ ☐ C. $3x + 5y$
☐ B. $3x + y$ ☐ D. $11xy$

- 8) What is the GCF of $14p$ and 21 ?

- ☐ A. 7 ☐ C. 21
☐ B. 14 ☐ D. 42

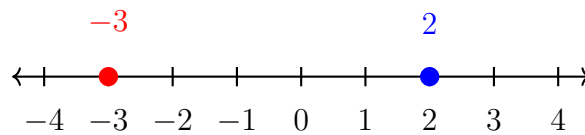
- 9) A gift box in the shape of a rectangular prism measures 12 in long, 8 in wide, and 5 in tall. A student needs to wrap it with paper. How many square inches of wrapping paper are needed (ignoring overlap)?

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



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1) Which number is further from zero on the number line?



- ☐ A. 2 is further
☐ B. -3 is further
☐ C. They are equal distance
☐ D. Cannot be determined

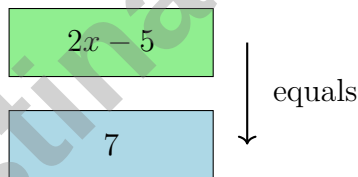
2) Simplify: $(b^3)^4$

- ☐ A. b^7
☐ B. b^{12}
☐ C. b^{81}
☐ D. b^{64}

3) Solve for x : $2(x - 8) = 10$

- ☐ A. $x = 8$
☐ B. $x = 10$
☐ C. $x = 13$
☐ D. $x = 18$

4)



Solve: $2x - 5 = 7$

- ☐ A. $x = 1$
☐ B. $x = 6$
☐ C. $x = 12$
☐ D. $x = 24$



Scale: 1 cm : 2.5 m

3.6 cm $\times$ 2.4 cm

5)

A scale drawing of a loading dock is 3.6 cm by 2.4 cm with a scale of 1 cm : 2.5 m. What is the area of the actual loading dock in square meters?

☐ A. 8.64 m²☐ C. 54 m²☐ B. 21.6 m²☐ D. 81 m²

6) A rectangular swimming pool on a scale drawing is 6 cm by 8 cm. The scale is 1 cm : 2 m. What is the area of the actual pool in square meters?

☐ A. 48 m²☐ C. 192 m²☐ B. 96 m²☐ D. 384 m²

7) A cone is cut by a vertical plane passing through its apex and intersecting the base circle. Which shape is formed?

☐ A. Right triangle☐ C. Equilateral triangle☐ B. Isosceles triangle☐ D. Scalene triangle

8) A quadrilateral $ABCD$ has vertices $A(0,0)$, $B(4,0)$, $C(4,3)$, and $D(0,3)$. If the quadrilateral is translated by $(-2,1)$, which of the following is the new location of vertex C ?

☐ A. (2, 4)☐ C. (6, 2)☐ B. (2, 2)☐ D. (4, 3)

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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 C is correct.** **(7.G.4-7.G.6)** Diameter is twice the radius: $2 \times 5 = 10$ inches.
- 2) **Choice C is correct.** **(7.G.4-7.G.6)** $h = \frac{V}{B} = \frac{252}{42} = 6$ mm.
- 3) **Choice B is correct.** **(7.G.1-7.G.5)** Three specific side lengths define exactly one unique triangle (up to congruence) by the SSS condition, provided the Triangle Inequality is satisfied. Check: $6.3 + 8.4 = 14.7 > 10.5$ ✓; all conditions hold, so exactly one triangle exists.
- 4) **Choice A is correct.** **(7.SP.5-7.SP.8)** Total marbles = $4 + 3 + 2 = 9$. Blue marbles = 3. Probability = $\frac{3}{9} = \frac{1}{3}$.
- 5) **Choice D is correct.** **(7.RP.1-7.RP.3)** Multiply: $18 \times 4 = 72$ feet. Student divided instead of multiplied (flipped the operation).
- 6) **Choice C is correct.** **(7.RP.3)** $\frac{30}{120} = \frac{1}{4} = 0.25 = 25\%$.
- 7) **Choice D is correct.** **(7.RP.3)** Savings = $0.18 \times 50 = \$9$.
- 8) **The correct answer is $\frac{1}{6}$.** **(7.SP.5-7.SP.8)** Each spin is independent. $P(A) = \frac{3}{6} = \frac{1}{2}$ and $P(B) = \frac{2}{6} = \frac{1}{3}$, so $P(A \text{ then } B) = \frac{1}{2} \cdot \frac{1}{3} = \frac{1}{6}$.
- 9) **Choice D is correct.** **(7.RP.1-7.RP.3)** Each ratio: $25/10 = 2.5$, $50/20 = 2.5$, $75/30 = 2.5$. The constant ratio is \$2.50 per ticket.
- 10) **Choice D is correct.** **(7.RP.1-7.RP.3)** The constant is $k = \frac{6}{3} = 2$. The equation is $y = 2x$.
- 11) **Choice D is correct.** **(7.RP.3)** The correct proportion is part over whole equals percent over 100. Setting it up correctly: $\frac{24}{120} = \frac{p}{100}$ gives $p = 20\%$.
- 12) **Choice D is correct.** **(7.RP.3)** Surplus = $\$1,500 - \$1,200 = \$300$. To savings = $60\% \times \$300 = \180 .
- 13) **Choice B is correct.** **(7.NS.1-7.NS.3)** Afternoon temperature = $-5 + 18 = 13^\circ\text{F}$.
- 14) **Choice A is correct.** **(7.EE.1-7.EE.2)** Combine like terms: $(-2b + 5b) + (6 - 1) = 3b + 5$.
- 15) **Choice A is correct.** **(7.EE.1-7.EE.2)** Quotient rule: $\frac{n^9}{n^4} = n^{9-4} = n^5$.
- 16) **The correct answer is 0.19.** **(7.SP.5-7.SP.8)** Relative frequency: $\frac{96}{500} = 0.192 \approx 0.19$.
- 17) **Choice B is correct.** **(7.EE.4a)** Equation: $8h + 5 = 45$. Subtract 5: $8h = 40$. Divide by 8: $h = 5$ hours.
- 18) **Choice D is correct.** **(7.G.1-7.G.5)** Actual dimensions: $60 \text{ m} \times 40 \text{ m}$. Perimeter: $2(60 + 40) = 200 \text{ m}$.
- 19) **Choice C is correct.** **(7.SP.1-7.SP.4)** Comparing year-to-year increases: 2015 (+\$0.50), 2016 (+\$0.50), 2017 (+\$0.50), 2018 (+\$0.50), 2019 (+\$0.25), 2020 (+\$0.25), 2021 (+\$0.50), 2022 (+\$0.50), 2023 (+\$0.50), 2024 (+\$0.50). The year 2019 shows the smallest single increase at \$0.25.
- 20) **Choice D is correct.** **(7.RP.1-7.RP.3)** Store A: $\frac{2}{1/2} = 2 \times 2 = 4$ dollars/lb. Store B: $\frac{3}{2/3} = 3 \times \frac{3}{2} = 4.5$ dollars/lb. Store A is cheaper.
- 21) **The correct answer is A,C.** **(7.G.4-7.G.6)** Option A is correct (60 m^2). Option C is correct (18 m^2). The true total is $60 + 18 = 78 \text{ m}^2$, so D and
- 22) **Choice C is correct.** **(7.NS.1-7.NS.3)** $-15 + 8 - 3 = -7 - 3 = -10$ points.
- 23) **Choice C is correct.** **(7.NS.1-7.NS.3)** Since $50 < 75$, we have $\sqrt{50} < \sqrt{75}$. Approximately $\sqrt{50} \approx 7.07$ and $\sqrt{75} \approx 8.66$.
- 24) **Choice A is correct.** **(7.EE.1-7.EE.2)** A 25% discount removes 25%, so we keep $1 - 0.25 = 0.75$ of the original price.
- 25) **Choice B is correct.** **(7.G.1-7.G.5)** Let the smaller angle be x . Then $x + (x + 26) = 180^\circ$, so $2x = 154^\circ$ and $x = 77^\circ$. Larger angle: $77 + 26 = 103^\circ$.
- 26) **Choice A is correct.** **(7.G.1-7.G.5)** Corresponding angles in similar figures are congruent, regardless of the scale factor. The corresponding angle is also 45° .
- 27) **The correct answer is 4.** **(7.RP.1-7.RP.3)** New length = $8 \times \frac{1}{2} = 4$ meters.
- 28) **Choice C is correct.** **(7.NS.2)** First: $(-2) \times (-3) = 6$. Then: $6 + (-1) = 5$. Multiply first by order of operations, then add.
- 29) **Choice A is correct.** **(7.SP.5-7.SP.8)** Since probabilities for all outcomes must sum to 1, and there are only two outcomes, $P(\text{Tails}) = 1 - 0.6 = 0.4$.



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Hi, Confident Learner!

◇ This high-stamina book gave you nine substantial Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. Grade 7 math can feel big because it brings together rational numbers, expressions, equations, geometry, probability, and data. ◇

★ **Remember this:** But big topics become manageable when you practice one skill at a time. That is what you have been doing with every test in this book. ★

Confidence Builders

- **Know the Goal:** Identify what the question asks.
- **Use Vocabulary:** Math words point to math actions.
- **Show Work:** Give yourself something to check.
- **Celebrate Effort:** Practice is proof that you are moving.

Grade 7 test-day tip: When reviewing, do not only mark wrong answers. Write one sentence about what you learned from each one.

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

Jay Daie

Your Confidence Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **9** 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:

9 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.

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- ✓ The Number System
- ✓ Expressions & Equations
- ✓ Geometry
- ✓ Percents & Decimals
- ✓ Statistics & Probability
- ✓ Data Analysis
- ✓ Measurement & Conversions
- ✓ Algebraic Thinking
- ✓ And More!



2 ONLINE TESTS

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2 EXTRA ONLINE TEST ACCESS CODE IS INSIDE THE BOOK!

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