

8

Arizona

AASA

GRADE 7

MATH

PRACTICE TESTS



Standards Aligned
Problem Solving

For Comprehensive
Assessment Programs



8 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 SKILLS



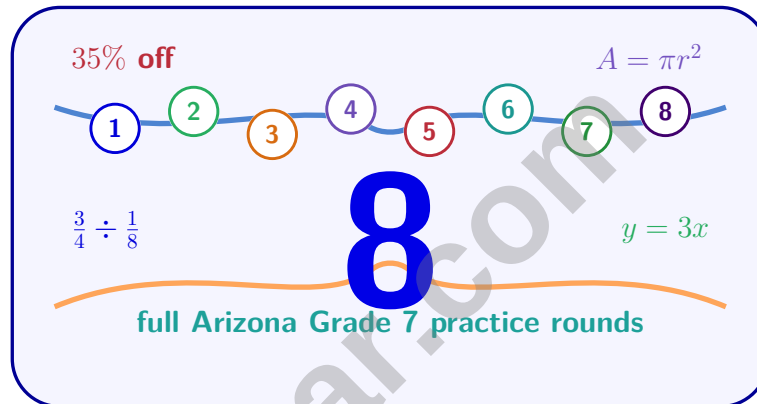
THINK SMARTER



BE TEST-READY

8 Arizona AASA Grade 7 Math Practice Tests

Fresh practice in Arizona Grade 7 proportional reasoning, expressions, rational numbers, geometry, and data displays



Eight 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!

Eight focused rounds for sharper AASA math thinking

This book gives you eight 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

An eight-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?

Eight AASA tests, 320 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 7–8	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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& answers

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1) A runner tracks distance and heartbeats. For every $\frac{1}{5}$ mile run, the runner's heart beats 25 times. What is the constant of proportionality relating heartbeats to miles?

☐ A. $k = \frac{1}{5}$ beats per mile

☐ C. $k = 0.2$ beats per mile

☐ B. $k = 5$ beats per mile

☐ D. $k = 125$ beats per mile

2) Which expression is simplified?

☐ A. $3x + 2x - y$

☐ C. $5x - y$

☐ B. $5x + 2x - y + y$

☐ D. $2x + 3x + 4y$

3) A bank account earns 3% annual interest on a balance of \$1 000. How much interest will the account earn in one year?

Simplify the expression below:

$$\frac{(j^3)^2}{j^5}$$

Which law applies FIRST?

4)

Power Rule

Product Rule

Simplify $\frac{(j^3)^2}{j^5}$:

☐ A. j^1 or j

☐ C. j^{11}

☐ B. j^7

☐ D. j^{30}



- 5) A store owner ordered boxes of inventory. Each box costs \$7, and there is a \$23 shipping fee. If the total cost is \$114, which equation represents b , the number of boxes ordered?

☐ A. $7b + 23 = 114$

☐ C. $b + 7 + 23 = 114$

☐ B. $23b + 7 = 114$

☐ D. $7(b + 23) = 114$

- 6) Check which solution is correct for $6x + 2 = 26$.

☐ A. $x = 2$

☐ C. $x = 5$

☐ B. $x = 4$

☐ D. $x = 6$

- 7) Solve for x : $6(x + 2) = 30$

☐ A. $x = 1$

☐ C. $x = 5$

☐ B. $x = 3$

☐ D. $x = 7$

- 8) At a bakery, 8 cups of flour are divided equally into $\frac{1}{4}$ -cup portions. How many portions are there?

☐ A. 2 portions

☐ C. 16 portions

☐ B. 8 portions

☐ D. 32 portions

- 9) A temperature drops 1.2°C every 2 hours. How many degrees has it dropped after 10 hours?

☐ A. -2.4°C

☐ C. -12°C

☐ B. -6°C

☐ D. -8.8°C



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10) What is $\sqrt{64}$?

☐ A. 6

☐ C. 9

☐ B. 8

☐ D. 7

11) Simplify: $(3f + 11) - (f - 2)$

☐ A. $2f + 13$

☐ C. $4f + 13$

☐ B. $2f + 9$

☐ D. $2f - 9$

12) An investment grows from \$900 to \$1,059.48 in 2 years with annual compound interest. Find the interest rate as a decimal.

13) What is the solution to $\frac{3x-6}{2} = 9$?

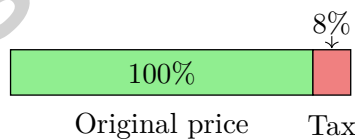
☐ A. $x = 6$

☐ C. $x = 12$

☐ B. $x = 8$

☐ D. $x = 15$

14)



Using the percent bar above, which expression represents the total cost (original price p plus tax)?

☐ A. $1.08p$

☐ C. $p + 0.08$

☐ B. $0.92p$

☐ D. $p - 0.08p$



1) What is 3×0.5 ?

☐ A. 0.5

☐ B. 1.5

☐ C. 3.5

☐ D. 6

$$4 \times \begin{array}{|c|c|} \hline 2x & -3 \\ \hline \end{array}$$

2)

$$4(2x - 3) = 20$$

Solve for x : $4(2x - 3) = 20$

☐ A. $x = 1$

☐ B. $x = 2$

☐ C. $x = 3$

☐ D. $x = 4$

3) Simplify: $(3f - 9) - (2f - 5)$

☐ A. $f - 4$

☐ B. $f + 4$

☐ C. $5f - 4$

☐ D. $f - 14$

4) A recipe calls for $2\frac{1}{2}$ cups of flour, written as $(2 + 0.5)$ cups. A baker triples the recipe. Which expression best shows the distributive property being applied?

☐ A. $3 \times 2.5 = 7.5$

☐ B. $3(2 + 0.5)$

☐ C. $3(2) + 3(0.5)$

☐ D. 7.5 cups total

5) The IQR of a dataset is 12. What does this mean?

☐ A. The range is 12

☐ B. The middle 50% of data spans 12 units

☐ C. The mean is 12

☐ D. All values are within 12 of the median



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- 6) A stem-and-leaf plot represents math test scores. The back-to-back format compares two classes: Class A (left) and Class B (right). If Class B's stem 8 shows leaves 0, 2, 5, 7, 9 on the right, what scores does this represent?

☐ A. 80, 82, 85, 87, 89

☐ C. 8, 2, 5, 7, 9

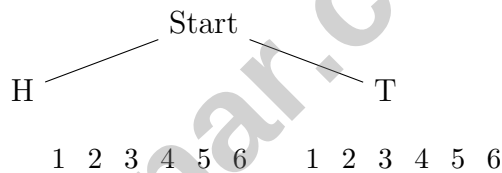
☐ B. 08, 02, 05, 07, 09

☐ D. 88, 82, 85, 87, 89

- 7) A six-sided die shows the numbers 1, 1, 2, 3, 3, 3 on its faces. What is the probability of rolling a 1?

☐ A. $\frac{1}{6}$
☐ C. $\frac{2}{6}$
☐ B. $\frac{2}{5}$
☐ D. $\frac{1}{2}$

- 8) A fair six-sided die is rolled and a coin is flipped. Which of the following is the correct way to count the sample space?


☐ A. $6 + 2 = 8$ outcomes

☐ C. $6 - 2 = 4$ outcomes

☐ B. $6 \times 2 = 12$ outcomes

☐ D. $\frac{6}{2} = 3$ outcomes

- 9) Which of the following describes mutually exclusive events?

☐ A. Rolling a 3 AND rolling an even number on one die roll

☐ C. Drawing a heart AND drawing a face card

☐ B. Spinning red AND spinning blue on one spinner

☐ D. Flipping heads AND flipping tails on one coin flip


1) A stem-and-leaf plot shows the ages of workers at two companies. Company X has data: 22, 24, 25, 26, 29; Company Y has data: 18, 19, 22, 45, 48. Which statement is best supported?

- ☐ A. Company X has a higher median and less spread
- ☐ B. Company Y has younger workers overall
- ☐ C. Both companies have the same age distribution
- ☐ D. Company X workers are older than Company Y workers

2) A histogram shows the distribution of test scores for two classes with the same mean (80) but different shapes: Class A is symmetric (bell-shaped), Class B is right-skewed (tail on right). What does this tell you about variability?

- ☐ A. Class A has higher variability
- ☐ B. Class B has higher variability
- ☐ C. You cannot determine variability from shape alone
- ☐ D. Both classes have the same variability

3) A poster is enlarged to 1.5 times its original size. If the original poster was 20 inches by 30 inches, what is the new area in square inches?



4) An angle is 3 times its complement. What is the measure of the larger angle?

- ☐ A. 67.5°
- ☐ B. 45°
- ☐ C. 22.5°
- ☐ D. 90°



5)

Outcome	Red	Blue	Yellow
Probability	0.4	0.35	0.25

Does this table represent a valid probability model?

- ☐ A. No, Yellow's probability is too small.
☐ B. No, the probabilities do not sum to 1.
☐ C. Yes, all probabilities are between 0 and 1.
☐ D. No, Red's probability is too large.
- 6) The ordered data is: 15, 18, 21, 24, 27, 30, 33. In the stem-and-leaf plot, what is the position of the median in the ordered list?
- ☐ A. 3rd position
☐ B. 4th position
☐ C. 5th position
☐ D. 6th position
- 7) Expand: $2(x + 3 + 4)$
- ☐ A. $2x + 6$
☐ B. $2x + 14$
☐ C. $6x + 7$
☐ D. $x + 7$
- 8) A scuba diver is at a depth of -45 feet (below sea level). She ascends 15 feet. What is her new depth?
- ☐ A. -60 feet
☐ B. -30 feet
☐ C. 30 feet
☐ D. 60 feet
- 9) A principal amount earns \$200 in interest at 8% annual rate over 5 years. What was the original principal?
- ☐ A. \$400
☐ B. \$800
☐ C. \$600
☐ D. \$500



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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 D is correct.** (7.RP.1-7.RP.3) The rate is $\frac{25 \text{ beats}}{\frac{1}{5} \text{ mile}} = 25 \div \frac{1}{5} = 25 \times 5 = 125$ beats per mile.
- 2) **Choice C is correct.** (7.EE.1) A simplified expression has all like terms combined. Option C has no like terms remaining.
- 3) **The correct answer is \$30.** (7.RP.3) Interest earned: $0.03 \times 1000 = \$30$.
- 4) **Choice A is correct.** (7.EE.1-7.EE.2) Apply power rule first: $(j^3)^2 = j^6$. Then quotient rule: $\frac{j^6}{j^5} = j^{6-5} = j^1 = j$.
- 5) **Choice A is correct.** (7.EE.4a) Cost per box (\$7b) plus fixed shipping (\$23) equals total (\$114). Equation: $7b + 23 = 114$, so $b = 13$.
- 6) **Choice B is correct.** (7.EE.3-7.EE.4) Substitute $x = 4$: $6(4) + 2 = 24 + 2 = 26$ ✓. Subtract 2: $6x = 24$, divide by 6: $x = 4$.
- 7) **Choice B is correct.** (7.EE.4a) Distribute: $6x + 12 = 30$. Subtract 12: $6x = 18$. Divide by 6: $x = 3$.
- 8) **Choice D is correct.** (7.NS.1-7.NS.3) $8 \div \frac{1}{4} = 8 \times \frac{4}{1} = 32$.
- 9) **Choice B is correct.** (7.NS.1-7.NS.3) In 10 hours, there are $10 \div 2 = 5$ periods of 2 hours. Total drop: $1.2 \times 5 = 6^\circ\text{C}$, or -6°C .
- 10) **Choice B is correct.** (7.NS.1-7.NS.3) $8 \times 8 = 64$, therefore $\sqrt{64} = 8$.
- 11) **Choice A is correct.** (7.EE.1-7.EE.2) Distribute the negative: $3f + 11 - f + 2 = (3f - f) + (11 + 2) = 2f + 13$.
- 12) **The correct answer is 0.08.** (7.RP.3) $900(1+r)^2 = 1059.48 \Rightarrow (1+r)^2 = 1.1772 \Rightarrow 1+r = 1.08 \Rightarrow r = 0.08$.
- 13) **Choice B is correct.** (7.EE.3-7.EE.4) Multiply by 2: $3x - 6 = 18$. Add 6: $3x = 24$. Divide by 3: $x = 8$.
- 14) **Choice A is correct.** (7.EE.1-7.EE.2) The percent bar shows $100\% + 8\% = 108\%$ total. This is $p + 0.08p = 1.08p$.
- 15) **Choice D is correct.** (7.SP.5-7.SP.8) $\frac{2}{7} + \frac{2}{7} + \frac{3}{7} = \frac{7}{7} = 1$. All probabilities are in $[0, 1]$, so this is valid.
- 16) **Choice D is correct.** (7.RP.3) Tip percentage = $\frac{18}{120} = 0.15 = 15\%$.
- 17) **Choice A is correct.** (7.NS.2) $-2(3+5) = -2(8) = -16$ or $-2(3) + (-2)(5) = -6 + (-10) = -16$.
- 18) **The correct answer is A,C.** (7.NS.1-7.NS.3) $-5 + 7 = 2$. Choice A: $7 - 5 = 2$ (correct). Choice B: $-5 - 7 = -12$ (wrong). Choice C: $7 + (-5) = 2$ (correct). Choice D: 2 (this is the result, but not an equivalent expression). Choice
- 19) **Choice B is correct.** (7.SP.3) Class A's range of 30 (67–97) is larger than Class B's range of 14 (71–85), showing greater variability. Class A's median (82) is higher than Class B's (78). Despite overlap at 71–85, Class A is higher and more variable overall.
- 20) **Choice A is correct.** (7.G.4-7.G.6) Rectangle: $16 \times 12 = 192 \text{ yd}^2$. Triangle: $\frac{1}{2} \times 12 \times 4 = 24 \text{ yd}^2$. Remaining: $192 - 24 = 168 \text{ yd}^2$.
- 21) **Choice C is correct.** (7.SP.1-7.SP.4) The student misunderstands how stems and leaves combine, not reading or computational. This is a conceptual misunderstanding.
- 22) **Choice C is correct.** (7.RP.1-7.RP.3) Scale: 1 cm = 50 km. For 6 cm: $6 \times 50 = 300 \text{ km}$.
- 23) **Choice B is correct.** (7.G.4-7.G.6) Base area = $\frac{1}{2} \times 10 \times 6 = 30 \text{ in}^2$. Depth = $\frac{V}{B} = \frac{360}{30} = 12 \text{ in}$.
- 24) **Choice C is correct.** (7.G.1-7.G.5) In any triangle, the smallest angle is always opposite the shortest side, and the largest angle is opposite the longest side.
- 25) **Choice B is correct.** (7.G.1-7.G.5) For (3, 4, 5): $3^2 + 4^2 = 9 + 16 = 25 = 5^2$ ✓. For (5, 12, 13): $5^2 + 12^2 = 25 + 144 = 169 = 13^2$ ✓. Both are right triangles. Since they have different side lengths, they are not congruent.
- 26) **Choice A is correct.** (7.G.4-7.G.6) $\pi \approx 3.14159 \dots$. The common approximations are 3.14 and $\frac{22}{7} \approx 3.142857$.
- 27) **Choice B is correct.** (7.SP.1-7.SP.4) Group 1: $\frac{24}{80} = 0.30$ or 30%; Group 2: $\frac{35}{100} = 0.35$ or 35%; Group 3: $\frac{27}{90} = 0.30$ or 30%. Group 2 is different.
- 28) **Choice D is correct.** (7.RP.3) Sale price = original $\times 0.60$. So $36 = \text{original} \times 0.60$, giving original = $36 \div 0.60 = \$60$.
- 29) **Choice D is correct.** (7.RP.1-7.RP.3) Table P: $4/1 = 4$, $8/2 = 4$, $12/3 = 4$ (constant ratio $k = 4$, proportional). Table Q: $5/1 = 5$, $9/2 = 4.5$, $13/3 \approx 4.33$ (not constant).



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Hi, Grade 7 Math Star!

◇ You finished this practice set with real effort. Grade 7 math asks you to connect ideas, explain your thinking, and stay steady through multi-step problems. ◇

★ **Remember this:** Every page you completed helped build stronger habits: reading carefully, choosing a method, showing work, and checking whether the answer makes sense. You practiced across 8 full Grade 7 practice tests, and that repeated effort matters. ★

What You Built

- **Focus:** You stayed with challenging questions.
- **Accuracy:** You learned to slow down when details matter.
- **Reasoning:** You practiced explaining why a method works.
- **Readiness:** You are more prepared than when you started.

Grade 7 test-day tip: Before test day, review the questions that made you pause. Those are the best teachers.

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

Jay Daie

Your Grade 7 Math Friend

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **8** 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:

8 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
- ✓ 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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