

9

Hawaii

Smarter Balanced

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**



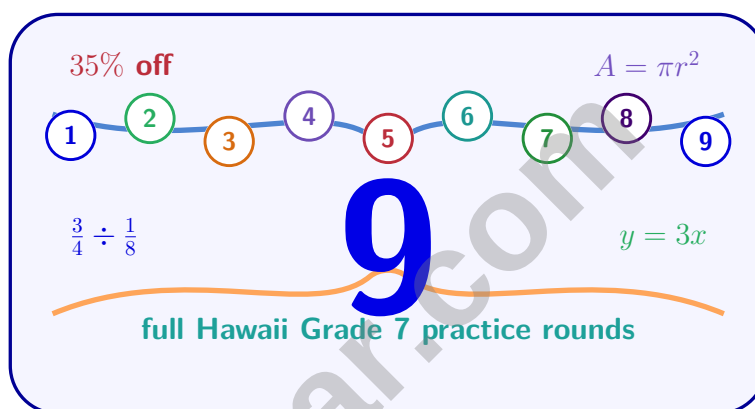
**SHARPEN
THINKING**



BE TEST-READY
Improve Performance

9 Hawaii Smarter Balanced Grade 7 Math Practice Tests

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



Nine complete 40-question Grade 7 Smarter Balanced 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, Hawaii Grade 7 Problem Solver!

Nine focused rounds for sharper Smarter Balanced math thinking

This book gives you nine full Grade 7 Smarter Balanced 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 Hawaii 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.

Hawaii 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 Smarter Balanced 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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For more practice
& answers

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1) A savings account grows from \$600 to \$684 in one year with annual compound interest. What is the interest rate?

☐ A. 10%

☐ C. 14%

☐ B. 12%

☐ D. 15%

2) A restaurant bill is \$45. Marcus leaves an 18% tip. How much is the tip?

☐ A. \$6.75

☐ C. \$10.80

☐ B. \$14.40

☐ D. \$8.10

3) The stem-and-leaf plot below shows test scores.

Stem	Leaves
4	2, 6, 8
5	1, 3, 7, 9
6	0, 5, 5, 8
7	2, 4, 6

What is the maximum score?

☐ A. 76

☐ C. 79

☐ B. 77

☐ D. 86

4) A student tossed a coin 100 times. The coin landed tails 58 times and heads 42 times. What is the difference between the experimental and theoretical probabilities of getting heads?

☐ A. 0.42

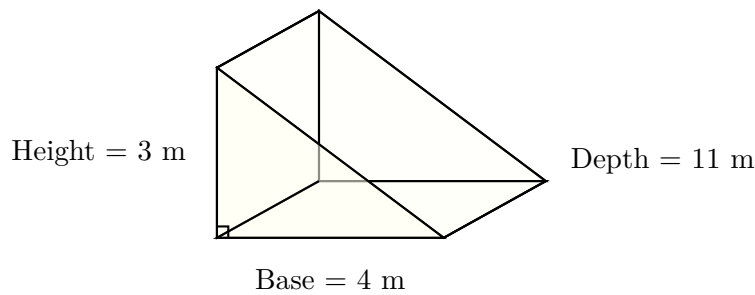
☐ C. 0.08

☐ B. 0.10

☐ D. 0.16



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5)

A right triangular prism has a right-triangular base with legs 4 m and 3 m and a depth of 11 m. What is the volume?

☐ A. 18 m^3 ☐ C. 66 m^3 ☐ B. 36 m^3 ☐ D. 132 m^3

6) Which of the following is always true about a chord?

☐ A. It must pass through the center☐ C. It is always shorter than the radius☐ B. It has both endpoints on the circle☐ D. It is parallel to a diameter7) A probability is $\frac{3}{5}$. Which of the following is NOT equivalent to this probability?☐ A. 0.6☐ C. $\frac{6}{10}$ ☐ B. 60%☐ D. 65%

8)

Principal	Rate	Time (years)	Interest
\$500	3%	2	?

Based on the table above, how much interest will be earned?

☐ A. \$15☐ C. \$45☐ B. \$60☐ D. \$30

- 9) A landscaper creates a scale model of a garden. The model shows a square garden with side length 5 inches. The actual garden has a side length of 25 feet. What is the scale?
- ☐ A. 1 : 5 ☐ C. 5 : 25
☐ B. 1 : 120 ☐ D. 1 : 60
- 10) A restaurant gained 48 customers on Monday and lost 30 customers on Tuesday (compared to Sunday). What was the net change in customers over the two days?
- ☐ A. -78 ☐ C. 18
☐ B. -18 ☐ D. 78
- 11) A water tank is 40% full. If the tank holds 250 liters, how many liters of water are in it?
- ☐ A. 80 liters ☐ C. 120 liters
☐ B. 150 liters ☐ D. 100 liters
- 12) A table shows the relationship between ingredients. Which entry is an ERROR (does not follow the proportional pattern)?

Cups Sugar	1	2	3	4
Cups Flour	3	6	9	13

- ☐ A. Sugar 1, Flour 3 ☐ C. Sugar 3, Flour 9
☐ B. Sugar 2, Flour 6 ☐ D. Sugar 4, Flour 13



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- 1) In a circle, two sectors have central angles: Sector X has a central angle of 40° , and Sector Y has a central angle of 80° . How does Sector Y 's area compare to Sector X 's area?
- ☐ A. Sector Y is half the size ☐ C. Sector Y is twice the size
☐ B. Sector Y is the same size ☐ D. Cannot be determined
- 2) A baker uses 3 eggs for every 2 cups of flour. If the baker uses 9 eggs, how much flour is needed?
- ☐ A. 3 cups ☐ C. 9 cups
☐ B. 4 cups ☐ D. 6 cups
- 3) A student writes the equation $y = 0.5x + 3$ to model a scenario. Is this a proportional relationship? Explain why or why not.
- ☐ A. Yes, the slope is 0.5. ☐ D. No, there is a constant term (+3)
☐ B. No, the constant is greater than 1. so it does not pass through the origin.
☐ C. Yes, all linear equations are proportional.
- 4) If a proportional relationship has $k = \frac{1}{2}$, which equation represents it?
- ☐ A. $y = 2x$ ☐ C. $y = x + \frac{1}{2}$
☐ B. $y = \frac{1}{2}x + 1$ ☐ D. $y = \frac{1}{2}x$
- 5) Factor: $-10x - 20$
- ☐ A. $-10(x + 2)$ ☐ C. $-10(x - 2)$
☐ B. $10(x - 2)$ ☐ D. $10(-x - 2)$



6) Evaluate $3(x + y)$ when $x = 2$ and $y = -3$.

☐ A. 3

☐ C. -3

☐ B. -1

☐ D. 1

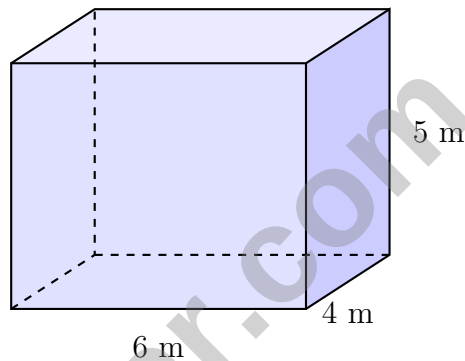
7) Solve: $x + 7 < 12$

☐ A. $x < 5$

☐ C. $x \leq 5$

☐ B. $x > 5$

☐ D. $x < 19$



8)

An isometric rectangular prism with dimensions $6\text{ m} \times 5\text{ m} \times 4\text{ m}$ is shown. Determine the surface area.

☐ A. 120 m^2

☐ C. 166 m^2

☐ B. 148 m^2

☐ D. 240 m^2

9) A shop charges \$5 per pizza and then adds a delivery fee. If 4 pizzas plus delivery cost \$28 total, what is the delivery fee?

☐ A. \$3

☐ C. \$8

☐ B. \$5

☐ D. \$12



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- 1) A video game costs \$60. A player also purchases in-game currency at \$9.99 per bundle. If the total spent is \$99.96, which equation represents b , the number of currency bundles?

☐ A. $60b + 9.99 = 99.96$

☐ C. $60(b + 9.99) = 99.96$

☐ B. $9.99 + 60b = 99.96$

☐ D. $9.99b + 60 = 99.96$

- 2) Factor: $5x + 25$

☐ A. $5(x + 5)$

☐ C. $5(x + 25)$

☐ B. $5x(1 + 5)$

☐ D. $25(x + 1)$

- 3) Solve for x : $4(2x + 1) = 3(x + 8)$

☐ A. $x = 2$

☐ C. $x = 4$

☐ B. $x = 3$

☐ D. $x = 5$

- 4) A student's account balance is \$125.75. She makes purchases of \$42.50, \$18.25, and \$21.00. Then she deposits a check for \$75.50. What is her final balance?

- 5) A rectangular garden is 20 meters by 30 meters. A scale drawing is made with a scale of 1 cm : 2 m. What are the dimensions of the drawing?

☐ A. 10 cm by 15 cm

☐ C. 40 cm by 60 cm

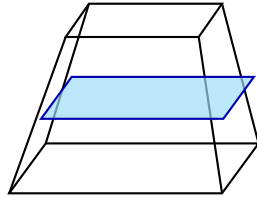
☐ B. 20 cm by 30 cm

☐ D. 100 cm by 150 cm



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- 6) Simplify $-5x + 3x + 2y - y$, then evaluate when $x = 1$ and $y = 1$.



mid-height square slice

7)

A frustum of a square pyramid has a lower base of 4×4 cm, an upper base of 2×2 cm, and a height of 3 cm. A horizontal plane cuts through the frustum halfway between the bases. What is the side length of the square cross-section?

- ☐ A. 2 cm
 ☐ C. 3 cm
☐ B. 2.5 cm
 ☐ D. 3.5 cm
- 8) 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°
- 9) Point $R(2, 5)$ is reflected over the line $y = x$. What are the new coordinates?
- ☐ A. $(5, 2)$
☐ C. $(2, -5)$
☐ B. $(-2, -5)$
☐ D. $(-5, -2)$



Hawaii Smarter Balanced 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 Hawaii Smarter Balanced practice test.



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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice C is correct.** (7.RP.3) $600(1 + r) = 684 \Rightarrow 1 + r = 1.14 \Rightarrow r = 0.14 = 14\%$.
- 2) **Choice D is correct.** (7.RP.3) Tip amount $= 0.18 \times 45 = \$8.10$.
- 3) **Choice A is correct.** (7.SP.1-7.SP.4) The largest stem is 7 with the largest leaf 6, giving 76.
- 4) **Choice C is correct.** (7.SP.6) Experimental probability of heads: $\frac{42}{100} = 0.42$. Theoretical: 0.5. Difference: $|0.42 - 0.5| = 0.08$.
- 5) **Choice C is correct.** (7.G.4-7.G.6) Base area $= \frac{1}{2} \times 4 \times 3 = 6 \text{ m}^2$. Volume $= 6 \times 11 = 66 \text{ m}^3$.
- 6) **Choice B is correct.** (7.G.4-7.G.6) By definition, a chord connects two points on the circle. It need not pass through the center.
- 7) **Choice D is correct.** (7.SP.5-7.SP.8) $\frac{3}{5} = 0.6 = 60\%$. Only 65% is different.
- 8) **Choice D is correct.** (7.RP.3) $I = 500 \times 0.03 \times 2 = \30 .
- 9) **Choice D is correct.** (7.RP.1-7.RP.3) Convert 25 feet to inches: $25 \times 12 = 300$ inches. Scale $= 5 : 300 = 1 : 60$.
- 10) **Choice C is correct.** (7.NS.1b) Net change $= 48 + (-30) = 18$. There was a net gain of 18 customers.
- 11) **Choice D is correct.** (7.RP.3) 40% of 250 is $0.40 \times 250 = 100$ liters.
- 12) **Choice D is correct.** (7.RP.1-7.RP.3) Expected ratio: $3/1 = 3$. For sugar 4: flour should be $3 \times 4 = 12$, not 13.
- 13) **Choice C is correct.** (7.RP.3) Find 55% of 200 using the proportion $\frac{55}{100} = \frac{x}{200}$. Cross-multiply: $x = 110$.
- 14) **Choice C is correct.** (7.RP.3) Other expenses $= (100 - 50 - 20 - 15)\% = 15\%$ of $\$3,600 = 0.15 \times 3600 = \540 .
- 15) **Choice A is correct.** (7.EE.1-7.EE.2) Combine: $(5p + 2p) + (3 - 9) = 7p - 6$.
- 16) **Choice B is correct.** (7.EE.1-7.EE.2) When raising a power to a power, multiply the exponents: $(y^2)^6 = y^{2 \times 6} = y^{12}$.
- 17) **The correct answer is 20.** (7.RP.1-7.RP.3) Cross multiply: $7 \times 100 = 35 \times x$. So $700 = 35x$, giving $x = 20$.
- 18) **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
- 19) **Choice C is correct.** (7.SP.1-7.SP.4) Shape (skewness) describes asymmetry, but variability (spread) is measured by range, IQR, or standard deviation. Two distributions can have different shapes but similar spreads, or vice versa.
- 20) **Choice D is correct.** (7.RP.1-7.RP.3) Runner A: $\frac{1/3}{1/20} = \frac{1}{3} \times 20 = \frac{20}{3} \text{ mph}$. Runner B: $\frac{2/5}{1/12} = \frac{2}{5} \times 12 = \frac{24}{5} = 4.8 \text{ mph}$. Runner A is faster.
- 21) **Choice D is correct.** (7.RP.1-7.RP.3) The constant of proportionality is $\$0.10$ per minute, so $c = 0.10m$.
- 22) **Choice C is correct.** (7.NS.1-7.NS.3) $10^2 = 100$ and $11^2 = 121$. Since 120 is very close to 121, $\sqrt{120} \approx 10.95$, which is closest to 11.
- 23) **The correct answer is 1050.** (7.SP.1-7.SP.4) $\frac{35}{140} = \frac{x}{4200}$. Reduce: $\frac{1}{4} = \frac{x}{4200} \Rightarrow x = 1050$.
- 24) **Choice B is correct.** (7.NS.1-7.NS.3) Total flour $= 4 \times \frac{5}{8} = \frac{20}{8} = \frac{5}{2} = 2\frac{1}{2}$ cups.
- 25) **Choice D is correct.** (7.EE.4a) One-time unlock is $\$9.99$ plus $\$4.99$ each month. Formula: $C = 4.99m + 9.99$.
- 26) **The correct answer is 0.** (7.G.1-7.G.5) Compute $169 - (25 + 144) = 0$. This indicates the triangle is a right triangle.
- 27) **Choice A is correct.** (7.EE.3-7.EE.4) Multiply by 5, then subtract 12: $5x - 12 = 28$. This is the correct translation.
- 28) **Choice D is correct.** (7.G.1-7.G.5) Both scales simplify to the same ratio. D: $\frac{1}{4} \text{ in} : 1 \text{ ft} = \frac{1}{4} \text{ in} : 12 \text{ in} = 1 : 48$. And $\frac{1}{2} \text{ in} : 2 \text{ ft} = \frac{1}{2} \text{ in} : 24 \text{ in} = 1 : 48$. Both produce the same drawing size. A produces different sizes ($1 : 400$ vs. $1 : 300$), B produces different sizes, C produces different sizes ($1 : 333.3$ vs. $1 : 500$).
- 29) **Choice D is correct.** (7.EE.1-7.EE.2) Both are equivalent: $7(2a + 3b) = 7(2a) + 7(3b)$. However, the first is the standard factored form (GCF factored once). The second form shows distribution but should be simplified.
- 30) **Choice C is correct.** (7.SP.5-7.SP.8) Blue: 5 sections, red: 3 sections. Total favorable: $5 + 3 = 8$. $P(\text{blue or red}) = \frac{8}{12} = \frac{2}{3}$.
- 31) **Choice B is correct.** (7.NS.2) A: $5 \times 2 = 10$. B: $(-5) \times 3 = -15$. C: $5 \times (-2) = -10$. D: $(-5) \times (-2) = 10$. The smallest is -15 (only B).



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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.

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.



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