4 Hawaii Smarter Balanced

GRADE 7 MATH

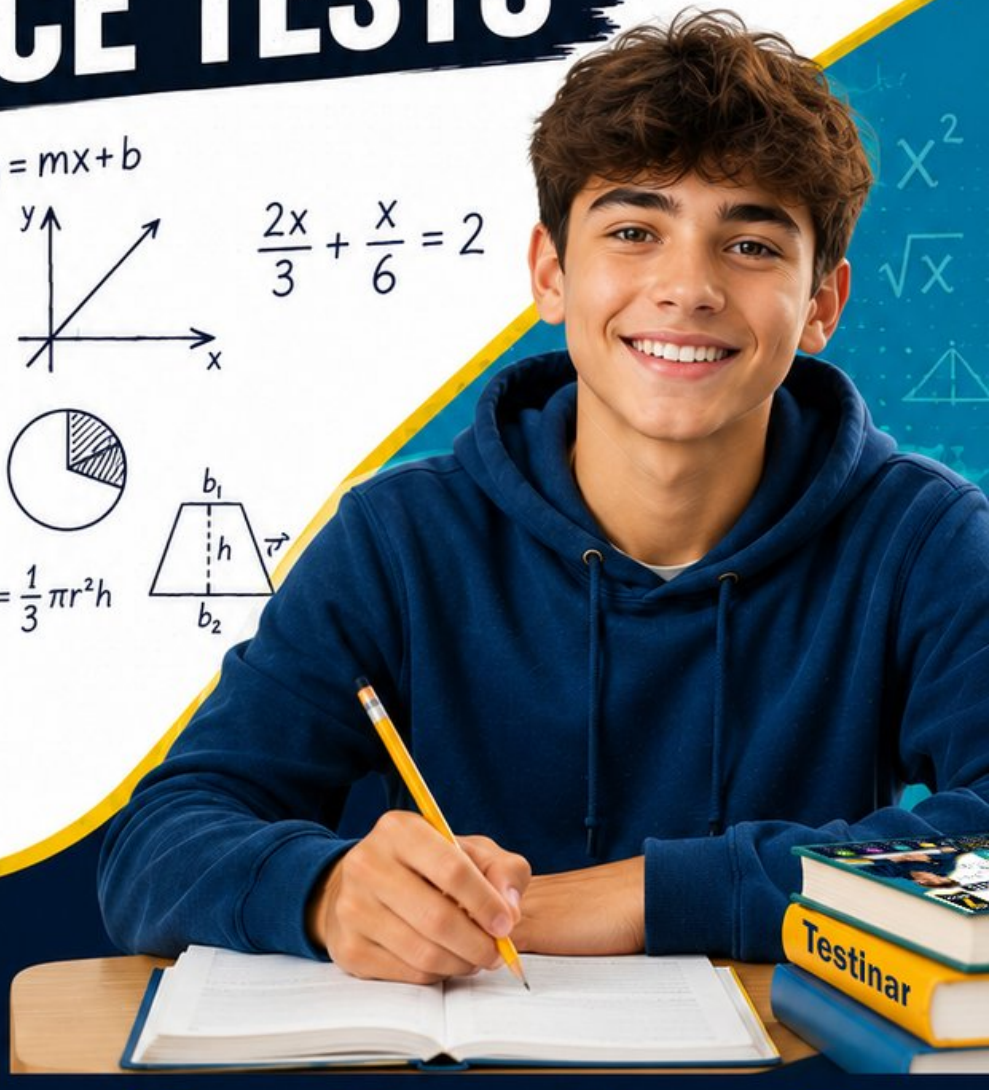
PRACTICE TESTS

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

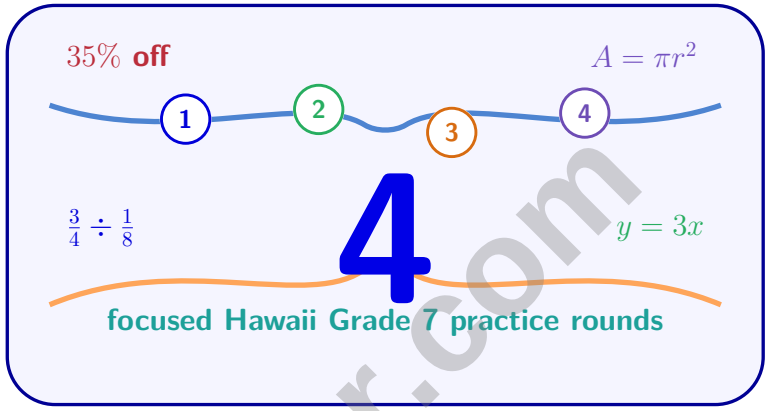
2 ONLINE TESTS

USE THESE TWO **ADDITIONAL ONLINE PRACTICE TESTS** FOR EXTRA REVIEW AFTER THE PRINTED TESTS IN THIS BOOK.

- Build Confidence
- Strengthen Math Skills
- Detailed Answers & Explanations
- Improve Test Performance

4 Hawaii Smarter Balanced Grade 7 Math Practice Tests

Four Math Practice Rounds with Smarter Balanced Review Built In



Four 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!

Four focused rounds for sharper Smarter Balanced math thinking

This book gives you four 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.

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.

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?

Four Smarter Balanced 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.

Table of Contents

1) A photo is 8 inches wide and 6 inches tall. It is enlarged by a scale factor of 2.5. What are the new dimensions?

☐ A. 5.5 inches × 3.5 inches
☐ B. 10 inches × 8 inches
☐ C. 16 inches × 12 inches
☐ D. 20 inches × 15 inches

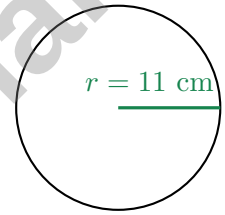
2) Two similar triangles have a perimeter of 24 inches and 36 inches respectively. If the smaller triangle has an area of 48 square inches, what is the area of the larger triangle?

☐ A. 72 square inches
☐ B. 96 square inches
☐ C. 108 square inches
☐ D. 144 square inches

3) If you double the radius of a circle, what happens to the circumference?

☐ A. It stays the same.
☐ B. It doubles.
☐ C. It quadruples.
☐ D. It is cut in half.

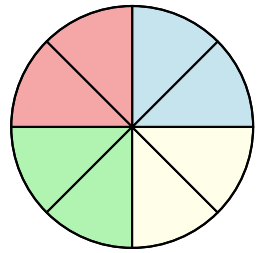
4)



What is the area? Use $\pi \approx 3.14$.

☐ A. 69.08 cm^2
☐ B. 121 cm^2
☐ C. 379.94 cm^2
☐ D. 759.88 cm^2

5)



A spinner has 8 equal sections: 2 blue, 2 red, 2 green, and 2 yellow. Which expression shows the complement rule for finding the probability of NOT spinning blue or red?

☐ A. $\frac{2}{8}$
☐ B. $\frac{3}{8}$
☐ C. $1 - \frac{1}{2}$
☐ D. $\frac{6}{8}$

6) Two spinners are spun. The first spinner has sections labeled 1, 2, and 3. The second spinner has sections labeled A and B. How many outcomes are in the sample space?

☐ A. 5
☐ B. 6
☐ C. 8
☐ D. 9

7) 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

8) A student compared two dot plots and made this claim: "Distribution A has a median of 50 and Distribution B has a median of 55, so B is always greater." Identify the error.

☐ A. Median is typical value, not a guarantee; distributions can overlap
☐ B. Medians are always accurate
☐ C. Distribution A must be higher
☐ D. Comparison requires ranges, not medians

9) A store tracks customer purchases over a week. Out of 500 customers, 375 purchased at least one item. What is the experimental probability that a customer purchases at least one item?

☐ A. $\frac{125}{500}$
☐ B. $\frac{375}{500}$
☐ C. 0.20
☐ D. 1.33

10) The stem-and-leaf plot shows ages at a community event:

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

What percentage of attendees are in their 40s?

☐ A. 20%
☐ B. 25%
☐ C. 30%
☐ D. 35%

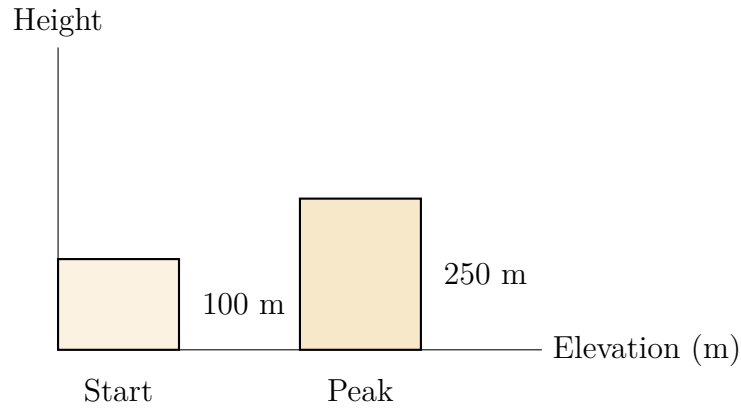
11) A composite figure is formed by joining a trapezoid (parallel sides 5 cm and 7 cm, height 4 cm) with a rectangle (7 cm × 3 cm). What is the total area?

☐ A. 24 cm^2
☐ B. 45 cm^2
☐ C. 48 cm^2
☐ D. 60 cm^2

12) A triangular prism has a right-triangular base with legs 8 m and 9 m, and the prism has a depth of 5 m. What is the volume?

☐ A. 90 m^3
☐ B. 108 m^3
☐ C. 180 m^3
☐ D. 360 m^3

1)



A hiker starts at 100 m elevation and reaches a peak at 250 m elevation. What is the elevation gain?

☐ A. 150 m
☐ B. 200 m
☐ C. 250 m
☐ D. −150 m

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

3) A floor plan is drawn with a scale of 1 cm : 1.5 m. A room in the plan is 4 cm long. How long is the actual room in centimeters?

☐ A. 60 cm
☐ B. 150 cm
☐ C. 200 cm
☐ D. 600 cm

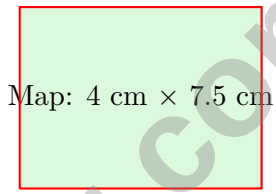
4) Which expression is equivalent to $0.95p$?

☐ A. $p - 0.95p$
☐ B. $p - 0.05p$
☐ C. $p + 0.05p$
☐ D. $0.95 + p$

5) What is $2\frac{1}{2} \times 4$?

☐ A. 8
☐ B. 9
☐ C. 10
☐ D. 12

6) A rectangular park on a map measures 4 cm by 7.5 cm. If the scale is 1 cm = 20 m, what is the actual perimeter of the park?



Scale: 1 cm = 20 m

☐ A. 260 m
☐ B. 360 m
☐ C. 520 m
☐ D. 460 m

1) Which probability best matches the phrase “even chance”?

☐ A. 0.2
☐ B. 0.5
☐ C. 0.8
☐ D. 0.9

2) Two box plots compare the price (in dollars) of gasoline over a year at two locations. Location 1: Min = \$2.10, Median = \$2.50, Max = \$2.90. Location 2: Min = \$2.00, Median = \$2.50, Max = \$3.20. A traveler wants stable prices. Which location has more volatile prices?

☐ A. Location 1 (smaller range: \$0.80)
☐ B. Location 2 (larger range: \$1.20)
☐ C. Both have identical volatility
☐ D. Location 1 (higher median means stability)

3) A rectangular garden is 10 m wide and 8 m tall. A triangular section is removed from the bottom, with the triangle’s base being 10 m and height 2 m. What is the remaining area?

☐ A. 70 m^2
☐ B. 80 m^2
☐ C. 90 m^2
☐ D. 100 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
☐ B. 6 in
☐ C. 9 in
☐ D. 12 in

5) Which set of conditions does NOT uniquely determine a triangle?

☐ A. Three side lengths given
☐ B. Two side lengths and the angle between them given
☐ C. Two side lengths and an angle NOT between them
☐ D. Two angles and any side length given

6) A circle has a diameter of 14 cm. What is its radius?

☐ A. 7 cm
☐ B. 14 cm
☐ C. 21 cm
☐ D. 28 cm

7) Evaluate $3a^2 - 2a + 4$ when $a = 1$.

☐ A. 9
☐ B. -1
☐ C. 3
☐ D. 5

8) Simplify: $3xy + 5xy - 2xy$

☐ A. $6xy$
☐ B. $10xy$
☐ C. $8xy$
☐ D. 0

9) Which pair of expressions are equivalent?

☐ A. $2(x + 7)$ and $2x + 7$
☐ B. $3(2y - 4)$ and $6y - 12$
☐ C. $5(a + 2)$ and $5a + 2$
☐ D. $4(3m - 1)$ and $12m - 1$

10) A bank account starts with a balance of \$250.75. The account loses \$12.50 per month for 5 months. What is the final balance?

11) A cube has edge length 4 cm. What is the total surface area?

☐ A. 16 cm^2
☐ B. 64 cm^2
☐ C. 96 cm^2
☐ D. 128 cm^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.

Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

1) **Choice D is correct.** 7.RP.1-7.RP.3 Multiply each dimension by the scale factor: $8 \times 2.5 = 20$ inches; $6 \times 2.5 = 15$ inches.
2) **Choice C is correct.** 7.G.1-7.G.5 The linear scale factor is $\frac{36}{24} = 1.5$. Area scales by $(1.5)^2 = 2.25$. New area $= 48 \times 2.25 = 108$ square inches.
3) **Choice B is correct.** 7.G.4-7.G.6 If $C = 2\pi r$ and r becomes $2r$, then $C_{\text{new}} = 2\pi(2r) = 4\pi r = 2(2\pi r) = 2C_{\text{old}}$.
4) **Choice C is correct.** 7.G.4-7.G.6 $A = 3.14 \times 11^2 = 3.14 \times 121 = 379.94$ cm^2.
5) **Choice C is correct.** 7.SP.5-7.SP.8 Blue or red: $\frac{4}{8} = \frac{1}{2}$. Complement: $1 - \frac{1}{2} = \frac{1}{2} = \frac{4}{8}$.
6) **Choice B is correct.** 7.SP.5-7.SP.8 First spinner: 3 outcomes; second spinner: 2 outcomes. Total: $3 \times 2 = 6$ outcomes.
7) **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.
8) **Choice A is correct.** 7.SP.3 Median shows the center/typical value. Even if B's median (55) exceeds A's (50), overlap means some values in A exceed some in B. Median comparison shows typical difference, not individual comparisons.
9) **Choice B is correct.** 7.SP.6 Out of 500 customers, 375 made a purchase. Experimental probability $= \frac{375}{500} = 0.75$.
10) **Choice B is correct.** 7.SP.1-7.SP.4 Total: $2+3+4+2+4 = 15$ people. In 40s: 4 people. Percent: $4/15 \approx 0.267 \approx 25\%$ (closest).
11) **Choice B is correct.** 7.G.4-7.G.6 Decompose into a trapezoid and a rectangle. Trapezoid: $\frac{1}{2}(5+7)\times 4 = \frac{1}{2}\times 12\times 4 = 24$ cm^2. Rectangle: $7 \times 3 = 21$ cm^2. Add: $24 + 21 = 45$ cm^2.
12) **Choice C is correct.** 7.G.4-7.G.6 Base area $= \frac{1}{2} \times 8 \times 9 = 36$ m^2. Volume $= 36 \times 5 = 180$ m^3.
13) **Choice B is correct.** 7.G.1-7.G.5 When two sides and the angle between them are given, exactly one triangle can be constructed (up to congruence).
14) **Choice A is correct.** 7.G.1-7.G.5 An equilateral triangle has all sides and all angles equal. Since the angle sum is $180°$ and all three angles are equal, each angle is $180° \div 3 = 60°$.
15) **The correct answer is** -3 **.** 7.NS.1-7.NS.3 The opposite of -3 is 3, and the opposite of 3 is -3.
16) **The correct answer is** 2 **.** 7.NS.2 $(-2) \times 3 = -6$. Then $(-6) \times (-\frac{1}{3}) = \frac{6}{3} = 2$. Two negatives give positive.
17) **Choice C is correct.** 7.G.4-7.G.6 A diameter is a chord that passes through the center. All diameters are chords.
18) **The correct answer is A,D.** 7.RP.1-7.RP.3 A and D are unit rates because each gives a price per single unit of weight. Option B is a distance, and option C is a total count.
19) **Choice B is correct.** 7.SP.5-7.SP.8 $20\% = \frac{20}{100} = \frac{1}{5}$ (simplified).
20) **Choice B is correct.** 7.SP.1-7.SP.4 First sample (downtown only): $\frac{20}{100} = 0.20$ or 20%, but biased to one area. The larger random sample showing 15% is more representative of the entire city population.
21) **Choice D is correct.** 7.NS.1-7.NS.3 $3 - 7 = 3 + (-7) = -4$. We move left on the number line by 7 units from 3.
22) **Choice D is correct.** 7.RP.3 $33\frac{1}{3}\% = \frac{1}{3}$; $\frac{1}{3} \times 120 = 40$.
23) **Choice D is correct.** 7.RP.3 Discount amount $= 60 - 36 = \$24$. Percent $= (24/60) \times 100 = 40\%$.
24) **Choice B is correct.** 7.SP.1-7.SP.4 40% of $80 = 0.40 \times 80 = 32$ households.
25) **Choice C is correct.** 7.RP.3 Multiply 2 by 1.5: $2 \times 1.5 = 3$ cups. Alternatively, using a proportion: $\frac{150}{100} = \frac{x}{2}$, so $x = 3$.
26) **Choice D is correct.** 7.RP.1-7.RP.3 Unit rate $= \frac{3/4}{1/6} = \frac{3}{4} \times 6 = \frac{18}{4} = \frac{9}{2} = 4.5$ mph.
27) **Choice D is correct.** 7.RP.1-7.RP.3 The ratio is $y/x = 2/6 = 1/3$. For a fourth point: $y = \frac{x}{3}$. Check: $(15, 5)$ gives $5 = \frac{15}{3}$ (correct).
28) **Choice D is correct.** 7.RP.1-7.RP.3 The constant is $k = \frac{28}{4} = 7$ dollars per pound. For 10 pounds: cost $= 7 \times 10 = 70$ dollars.
29) **Choice D is correct.** 7.RP.1-7.RP.3 The unit rate is $12 \div 5 = 2.4$. So the equation is $y = 2.4x$.

Hi, Progress Maker!

◇ You have done more than complete a set of tests. You have rehearsed the habits that make Grade 7 math feel less surprising. ◇

⋆ **Remember this:** Progress is not always loud. Sometimes it looks like fewer careless errors, clearer work, better pacing, and more confidence when a problem is unfamiliar. You practiced across 4 full Grade 7 practice tests, and that repeated effort matters. ⋆

Signs of Growth

- **Clear Work:** Your steps are easier to follow.
- **Better Pacing:** You know when to move on and return.
- **Stronger Checks:** You catch mistakes earlier.
- **Calmer Thinking:** You know what to try next.

Grade 7 test-day tip: Keep one short list of mistakes you often make, then check that list before each practice session.

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

Jay Daie

Your Growth Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes 4 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:

- 4 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.

Improve Understanding
Learn with clear explanations and step-by-step solutions.

Test Confidence
Familiarize with test formats and improve accuracy and speed.

Boost 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!

VISIT TESTINAR.COM/MATH7

FOR MORE PRACTICE TESTS AND LEARNING RESOURCES.

PRACTICE REGULARLY | STAY FOCUSED | SOLVE CONFIDENTLY | SUCCEED BRIGHTLY