

5

Hawaii

Smarter Balanced

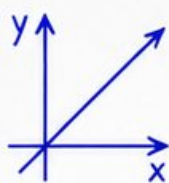
GRADE

7

MATH

PRACTICE TESTS

Standards Aligned
Problem Solving
For Comprehensive
Assessment Programs



$$y = mx + b$$

$$\frac{2}{3} + \frac{1}{6} = \frac{5}{6}$$



$$V = \pi r^2 h$$

**5 PRINTED TESTS****2 ONLINE TESTS**

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



Build
Confidence



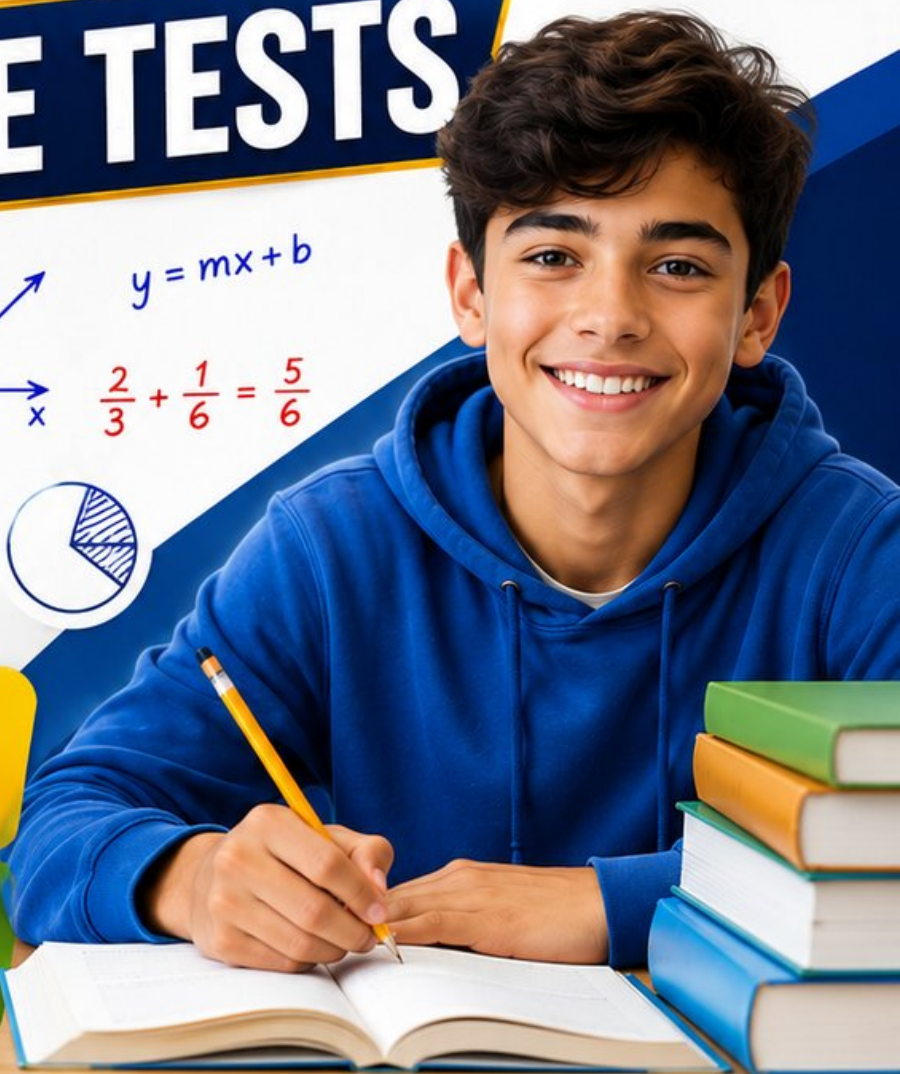
Strengthen
Math Skills



Detailed Answers
& Explanations

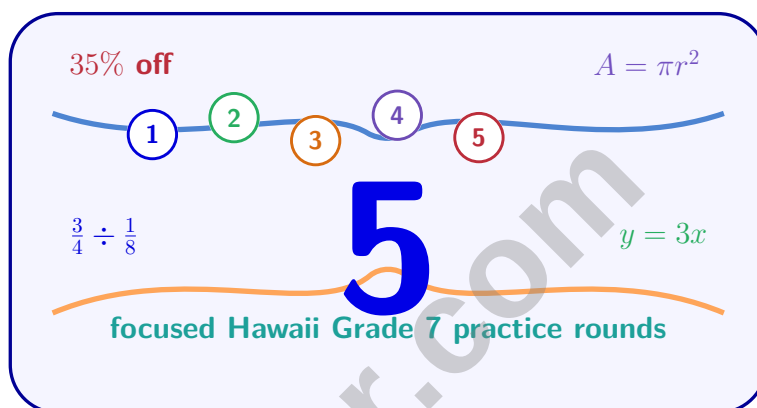


Improve Test
Performance



5 Hawaii Smarter Balanced Grade 7 Math Practice Tests

Concise Grade 7 Practice with Explanations, Keys, and Review Tools



Five 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!

Five focused rounds for sharper Smarter Balanced math thinking

This book gives you five 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 five-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?

Five Smarter Balanced tests, 200 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 3–5	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.



Scan me!
For more practice
& answers

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- 1) The temperature was -7°C in the morning. It rose by 15°C during the day. What was the temperature after the rise?
- ☐ A. -22°C ☐ C. 8°C
☐ B. -8°C ☐ D. 22°C
- 2) Which is the simplest form of $10 - 15$?
- ☐ A. -5 ☐ C. 25
☐ B. 5 ☐ D. -25
- 3) A basketball player made 16 shots. This represents 80% of her attempts. How many shots did she attempt?
- ☐ A. 18 ☐ C. 22
☐ B. 24 ☐ D. 20
- 4) A restaurant bill is \$85 before tax. With a 9% sales tax, what is the total bill?
- ☐ A. \$94.85 ☐ C. \$77.65
☐ B. \$85.90 ☐ D. \$92.65
- 5) A lemonade stand charges \$0.75 per cup. What is the constant of proportionality for revenue per cup?



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- 6) A percent can be converted to an angle in a circle graph. What angle corresponds to 25% of a circle?

☐ A. 45° ☐ C. 90° ☐ B. 60° ☐ D. 120° 

- 7) 60 out of 100

What percent is shown in the bar model above?

☐ A. 6%☐ C. 60%☐ B. 40%☐ D. 100%

- 8) A model railroad layout has a scale of 1 : 160. If a real railroad track is 50 meters long, how long should the model track be in centimeters?

- 9) A savings account earns simple interest at 4.5% per year. If you deposit \$600 today, how much interest will you earn after 3 years?



- 10) What is $\frac{17}{50}$ as a decimal?
- ☐ A. 0.17 ☐ C. 0.51
☐ B. 0.34 ☐ D. 0.74
- 11) The temperature at 6 AM was -8°C . It rose by 3.5°C by 9 AM. What was the temperature at 9 AM?
- ☐ A. -11.5°C ☐ C. 4.5°C
☐ B. -4.5°C ☐ D. 11.5°C
- 12) Which number, when written in scientific notation, has an exponent of -4 ?
- ☐ A. 0.00068 ☐ C. 68,000
☐ B. 0.000068 ☐ D. 680,000
- 13) A worker earns \$60 for working $2\frac{1}{2}$ hours. What is the hourly wage?
- ☐ A. \$150 per hour ☐ C. \$25 per hour
☐ B. \$20 per hour ☐ D. \$24 per hour
- 14) Which pair of points could NOT lie on a proportional graph through the origin?
- ☐ A. (0, 0) and (2, 10) ☐ C. (2, 4) and (4, 8)
☐ B. (1, 7) and (2, 14) ☐ D. (3, 6) and (5, 11)
- 15) A student estimated the volume of a cube to be 110 cubic centimeters, but the actual volume is 125 cubic centimeters. Calculate the percent error to the nearest tenth of a percent.



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& answers

- 1) A trapezoid-like composite shape is formed by a 6 m by 4 m rectangle with a triangle (6 m base, 3 m height) on top. What is the combined area?
- ☐ A. 18 m^2 ☐ C. 30 m^2
☐ B. 27 m^2 ☐ D. 33 m^2
- 2) Jordan invests \$2000 at a simple interest rate of 3.5% per year for 5 years. How much interest will he earn?
- ☐ A. \$70 ☐ C. \$350
☐ B. \$175 ☐ D. \$700
- 3) A printer produces 960 pages in 8 minutes. Find the equation for pages p in terms of minutes m .
- ☐ A. $p = \frac{m}{120}$ ☐ C. $p = 960m$
☐ B. $p = 8m$ ☐ D. $p = 120m$
- 4) A bike rental costs \$2.50 per hour. If h is the number of hours and c is the total cost, what is the constant of proportionality in the equation $c = kh$?
- ☐ A. 1.0 ☐ C. \$5.00
☐ B. 0.40 ☐ D. 2.5
- 5) Solve: $4x < 20$
- ☐ A. $x > 5$ ☐ C. $x \geq 5$
☐ B. $x < 5$ ☐ D. $x < 80$



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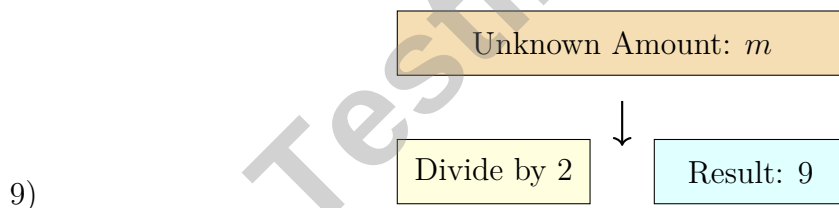
- 6) A cube's surface area is 294 cm^2 . A second cube has edge length twice as long. What is the surface area of the larger cube?

- ☐ A. 588 cm^2 ☐ C. 1764 cm^2
☐ B. 1176 cm^2 ☐ D. 2352 cm^2

- 7) Simplify $12x - 8x + 5y - 2y - x$, then evaluate when $x = 1$ and $y = 2$.

- 8) A simulation models the probability of a customer making a purchase as $\frac{2}{5}$. Which of the following spinners would be most appropriate for this simulation?

- ☐ A. A spinner with 3 equal sections, 1 shaded
☐ B. A spinner with 5 equal sections, 2 shaded
☐ C. A spinner with 10 equal sections, 4 shaded
☐ D. A spinner with 5 equal sections, 3 shaded



What is the unknown amount m ?

- ☐ A. 4.5 ☐ C. 18
☐ B. 11 ☐ D. 36



- 1) Two dot plots show monthly snowfall (in inches) for Mountain Town A and B. Town A: 2, 4, 4, 6, 6, 6, 6, 8, 10. Town B: 0, 1, 5, 8, 12, 14. The town council needs predictable snow for budget planning. Which town's snowfall is more predictable?

- ☐ A. Town A (data clusters at 4–8 inches)
- ☐ B. Town B (wider range allows better diversity)
- ☐ C. Town A's range (8 inches) is smaller, but Town B is more predictable due to higher peak values
- ☐ D. Town B (extreme values of 0 and 14 are more informative for planning)

- 2) Solve for x : $\frac{x}{2} - 1 = 4$

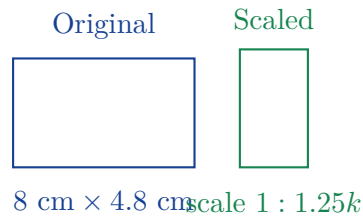
- 3) A student claims 0.34×10^5 is in proper scientific notation. Is this correct?

- ☐ A. Yes, it is correct.
- ☐ B. No; the coefficient is too small.
- ☐ C. No; the exponent is wrong.
- ☐ D. No; both the coefficient and exponent are wrong.

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

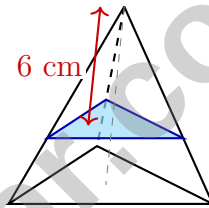
- ☐ A. $x = 6$
- ☐ B. $x = 8$
- ☐ C. $x = 12$
- ☐ D. $x = 15$





5)

A scale drawing of a rectangular room is $8\text{ cm} \times 4.8\text{ cm}$. The drawing is enlarged proportionally so the new dimensions are $10\text{ cm} \times 6\text{ cm}$. If the original scale was $1\text{ cm} : 5\text{ m}$, what is the scale of the enlarged drawing?

☐ A. $1\text{ cm} : 4\text{ m}$
☐ C. $1\text{ cm} : 3.125\text{ m}$
☐ B. $1\text{ cm} : 6.25\text{ m}$
☐ D. $1\text{ cm} : 2.5\text{ m}$


6)

parallel triangular slice

A triangular pyramid is sliced by a plane parallel to the base, creating a triangular cross-section. If the original pyramid has height 9 cm and the plane is 6 cm below the apex, what is the linear scale factor of the cross-section to the base?

☐ A. $\frac{1}{3}$
☐ C. $\frac{2}{9}$
☐ B. $\frac{3}{4}$
☐ D. $\frac{2}{3}$


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& answers

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.NS.1b) The temperature change is modeled by $-7 + 15 = 8$. A rise of 15° means we add 15 to the initial temperature of -7° .
- 2) **Choice A is correct.** (7.NS.1-7.NS.3) $10 - 15 = 10 + (-15) = -5$.
- 3) **Choice D is correct.** (7.RP.3) If $16 = 0.80 \times a$, then $a = \frac{16}{0.80} = 20$ attempts.
- 4) **Choice D is correct.** (7.RP.3) Tax = $0.09 \times 85 = \$7.65$. Total = $85 + 7.65 = \$92.65$.
- 5) **The correct answer is 0.75.** (7.RP.1-7.RP.3) Revenue is price per cup times cups sold, so the constant is 0.75.
- 6) **Choice C is correct.** (7.SP.1-7.SP.4) 25% of $360^\circ = 0.25 \times 360^\circ = 90^\circ$.
- 7) **Choice C is correct.** (7.RP.3) The shaded portion represents 60 out of 100 units. Set up the proportion: $\frac{60}{100} = \frac{p}{100}$, so $p = 60\%$.
- 8) **The correct answer is 31.25.** (7.RP.1-7.RP.3) $50 \text{ m} = 5000 \text{ cm}$. Divide by scale: $5000 \div 160 = 31.25 \text{ cm}$.
- 9) **The correct answer is \$81.** (7.RP.3) $I = 600 \times 0.045 \times 3 = \81 .
- 10) **Choice B is correct.** (7.NS.2d) Divide $17 \div 50 = 0.34$. Since $50 = 2 \times 5^2$, this is a terminating decimal.
- 11) **Choice B is correct.** (7.NS.1-7.NS.3) $-8 + 3.5 = -4.5^\circ\text{C}$.
- 12) **Choice A is correct.** (7.NS.1-7.NS.3) $0.00068 = 6.8 \times 10^{-4}$ (move decimal 4 places right).
- 13) **Choice D is correct.** (7.RP.1-7.RP.3) Hourly wage = $\frac{60}{2\frac{1}{2}} = \frac{60}{\frac{5}{2}} = 60 \times \frac{2}{5} = 24$ dollars per hour.
- 14) **Choice D is correct.** (7.RP.1-7.RP.3) For a line through the origin with form $y = kx$: (3, 6) gives $k = 6/3 = 2$. Check (5, 11): $k = 11/5 = 2.2 \neq 2$. The constant of proportionality does not match, so this pair cannot both lie on the same proportional line through the origin.
- 15) **The correct answer is 12%.** (7.RP.3) Percent error = $\frac{|110-125|}{125} \times 100\% = \frac{15}{125} \times 100\% = 12\%$.
- 16) **Choice D is correct.** (7.RP.1-7.RP.3) Unit rate = $240 \div 8 = 30$ widgets per hour.
- 17) **Choice D is correct.** (7.RP.3) Month 1 to 2: $(\$110 - \$100) \div \$100 = 0.10 = 10\%$ growth. Month 2 to 3: $(\$121 - \$110) \div \$110 \approx 0.10 = 10\%$ growth. This illustrates the difference between simple interest (fixed dollar amount like \$10 each month) and compound growth (percentage-based: 10% of the balance each month).
- 18) **Choice B is correct.** (7.NS.1-7.NS.3) Convert to common denominator 4: $3\frac{3}{4} - 1\frac{2}{4} = 2\frac{1}{4}$.
- 19) **The correct answer is A, C.** (7.RP.1-7.RP.3) From the table, $k = 14/2 = 7$, so A is true and the equation is $y = 7x$ (C is true). B is false: $k = 7$, not 2.8. D is false: when $x = 10$, $y = 7 \cdot 10 = 70$, not 68.
- 20) **Choice B is correct.** (7.NS.1-7.NS.3) Change in elevation: $0 - (-480) = 480 \text{ m}$. Rate: $480 \div 16 = 30 \text{ m/hr}$ upward.
- 21) **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 $\sqrt{75} \approx 8.66$.
- 22) **Choice A is correct.** (7.NS.1-7.NS.3) Monthly cost with 15% discount: $\$60 \times (1 - 0.15) = \$60 \times 0.85 = \$51$ per month. Six months: $\$51 \times 6 = \306 . Total with enrollment: $\$306 + \$25 = \$331$.
- 23) **Choice C is correct.** (7.G.1-7.G.5) Actual dimensions: $18 \text{ m} \times 12 \text{ m}$. Perimeter: $2(18 + 12) = 60 \text{ m}$.
- 24) **Choice B is correct.** (7.EE.1-7.EE.2) Expanding $3(2x + 5)$ gives $3 \cdot 2x + 3 \cdot 5 = 6x + 15$.
- 25) **Choice C is correct.** (7.SP.5-7.SP.8) The 180° sector represents $\frac{180}{360} = \frac{1}{2}$ of the spinner, the largest fraction. This is a non-uniform model.
- 26) **Choice A is correct.** (7.NS.2) $-2(3 + 5) = -2(8) = -16$ or $-2(3) + (-2)(5) = -6 + (-10) = -16$.
- 27) **Choice A is correct.** (7.SP.3) Athletic Group clusters tightly around 8 glasses with range 3 (6–9). Casual Group ranges from 2–10 (range 8) with uneven distribution, indicating less consistent hydration habits.
- 28) **Choice D is correct.** (7.RP.3) Correct tip = $0.15 \times 80 = \$12$. Error = $15 - 12 = \$3.00$ (too high).
- 29) **Choice D is correct.** (7.G.4-7.G.6) Decompose into two rectangles: First rectangle $7 \times 2 = 14$ sq units. Second rectangle $7 \times 2 = 14$ sq units. Add them: $14 + 14 = 28$ sq units.
- 30) **Choice D is correct.** (7.RP.1-7.RP.3) Apples: $5 \times \$0.60 = \3.00 . Oranges: $3 \times \$1.20 = \3.60 . Total: $\$3.00 + \$3.60 = \$6.60$.
- 31) **Choice D is correct.** (7.RP.3) Tip: $0.15 \times 42.80 = \$6.42$.



Hi, Persistent Problem Solver!

◇ Some Grade 7 questions ask you to hold several ideas in your mind at once. That can feel hard, and that is exactly why practice matters. ◇

★ **Remember this:** You showed persistence by continuing through the set. That habit is powerful because difficult problems often open after one more good attempt. You practiced across 5 full Grade 7 practice tests, and that repeated effort matters. ★

Persistence Tools

- **Try a Smaller Case:** Use an easier number to see the pattern.
- **Draw It:** Make the situation visible.
- **Restate It:** Say the question in your own words.
- **Check One Step:** Fix the first unclear place.

Grade 7 test-day tip: When stuck, do not restart everything. Find the first step you trust, then rebuild from there.

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

Jay Daie

Your Persistence Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **5** 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:

5 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!



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