

3

Hawaii

Smarter Balanced

GRADE

7

MATH

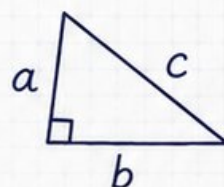
PRACTICE TESTS

✓ Standards Aligned
Problem Solving
For Comprehensive
Assessment Programs



$$y = mx + b$$

$$\frac{2}{3}x - \frac{4}{5} = \frac{1}{2}$$



$$3(x - 2) = 2x + 5$$



3 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



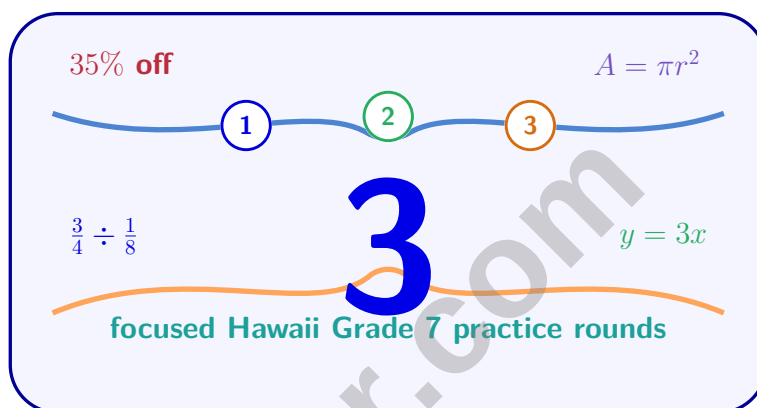
Detailed Answers
& Explanations



Improve Test
Performance

3 Hawaii Smarter Balanced Grade 7 Math Practice Tests

Targeted Smarter Balanced Practice with Explanations and Review Tools



Three 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!

Three focused rounds for sharper Smarter Balanced math thinking

This book gives you three 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 three-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?

Three Smarter Balanced tests, 120 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.
Test 3	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.

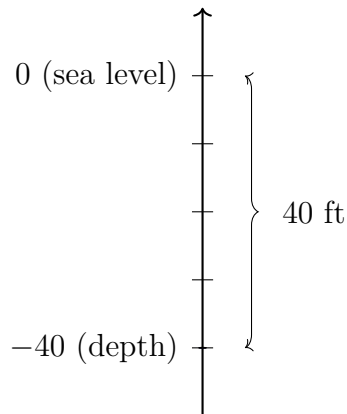


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For more practice
& answers

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- 1) A scuba diver descends 40 feet below sea level. Which integer represents this depth?

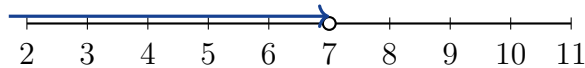


- ☐ A. 40 (ignores direction/below sea level)
- ☐ B. -80 (double the depth)
- ☐ C. 0 (at sea level, not below)
- ☐ D. -40 (correct; below is negative)
- 2) A student estimated her test score would be 88% but she scored 80%. What is the percent error?
- ☐ A. 90%
- ☐ B. 9%
- ☐ C. 11%
- ☐ D. 10%
- 3) Expand and simplify: $-1(x + 5) + 2x$
- ☐ A. $x - 5$
- ☐ B. $-x - 5$
- ☐ C. $x + 5$
- ☐ D. $3x - 5$
- 4) If you have -5 dollars (meaning you owe 5 dollars) and you lose an additional 12 dollars, what is your new balance? Express your answer as an integer with the appropriate sign.



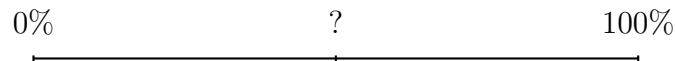
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- 5) A student is asked to graph the solution to an inequality. The student draws an open circle at 7 and an arrow pointing left. What is the inequality they should be solving?

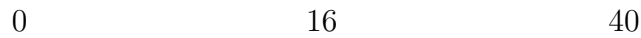


- ☐ A. $n \geq 7$ ☐ C. $n > 7$
☐ B. $n < 7$ ☐ D. $n \leq 7$
- 6) A comparison of two loans shows: Loan 1 costs \$240 in interest on \$3000 for 2 years, while Loan 2 costs \$360 in interest on \$3000 for 2 years. How much higher is Loan 2's interest rate than Loan 1's?
- ☐ A. 8% ☐ C. 6%
☐ B. 4% ☐ D. 2%
- 7) A scale model of a statue uses the ratio 1 : 50. If the model is 3 feet tall, what is the height of the actual statue?
- ☐ A. 50 feet ☐ C. 150 feet
☐ B. 100 feet ☐ D. 200 feet
- 8) Simplify: $\frac{7}{\frac{8}{\frac{3}{5}}}$





9)



According to the double number line, 16 corresponds to what percent of 40?

- ☐ A. 30% ☐ C. 40%
- ☐ B. 35% ☐ D. 45%
- 10) A hat is priced at \$28. After a $\frac{1}{4}$ discount, what is the sale price?
- ☐ A. \$35 ☐ C. \$7
- ☐ B. \$14 ☐ D. \$21
- 11) Calculate $6 + (-6)$.
- ☐ A. 0 ☐ C. -12
- ☐ B. 12 ☐ D. 1
- 12) Which expression represents “4 times the difference of n and 2”?
- ☐ A. $4n - 2$ ☐ C. $4(n - 2)$
- ☐ B. $4 - 2n$ ☐ D. $2(4 - n)$
- 13) The equation $y = 5x$ represents a proportional relationship. Find the value of y when $x = 8$.



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- 1) The test scores of 24 students are: 72, 78, 81, 75, 89, 92, 74, 80, 85, 88, 76, 91, 84, 79, 86, 83, 77, 90, 73, 87, 82, 94, 68, 95. Which display would BEST show the spread and identify outliers?

☐ A. Circle graph

☐ B. Box plot

☐ C. Pictograph

☐ D. Scatter plot

- 2) Simplify: $(x^3)^7$

☐ A. x^{10}

☐ B. x^{21}

☐ C. x^{49}

☐ D. x^{343}

- 3) A plumber charges \$65 for a service call and \$40 per hour of work. The total bill was \$185. Which equation helps find h , the number of hours worked?

☐ A. $40 + 65h = 185$

☐ B. $65 + 40h = 185$

☐ C. $65(h + 40) = 185$

☐ D. $40h = 185 + 65$

- 4) A savings account has \$500. If the balance decreases by 12%, how much money is left in the account?

- 5) Solve: $4x + 3 = 15$

☐ A. $x = 2$

☐ B. $x = 3$

☐ C. $x = 4$

☐ D. $x = 6$



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6) Solve for x : $-2(x - 4) = 6$

☐ A. $x = 1$

☐ C. $x = 3$

☐ B. $x = 2$

☐ D. $x = 4$

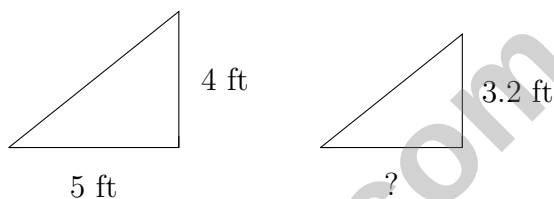
7) A scale drawing shows a rectangular room with dimensions 5 cm $\times$ 3 cm. The scale is 1 cm : 3 m. What is the area of the actual room in square meters?

☐ A. 15 m²

☐ C. 135 m²

☐ B. 45 m²

☐ D. 225 m²



8)

Two similar right triangles are shown. The left triangle has legs 5 ft (horizontal) and 4 ft (vertical). The right triangle has a vertical leg of 3.2 ft. Find the horizontal leg of the right triangle.

☐ A. 2.56 ft

☐ C. 4 ft

☐ B. 3.2 ft

☐ D. 5 ft

9) Which circle below has a circumference of approximately 37.7 cm? Use $\pi \approx 3.14$.

☐ A. Radius 6 cm

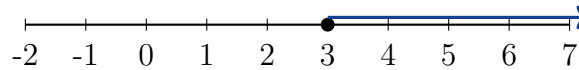
☐ C. Radius 6 cm, but using $C = \pi r$ (incorrect formula)

☐ B. Diameter 6 cm

☐ D. Diameter 12 cm



- 1) Identify the correct inequality for this graph.



- ☐ A. $x < 3$ ☐ C. $x > 3$
☐ B. $x \geq 3$ ☐ D. $x \leq 3$
- 2) A jar holds 20 identical slips of paper. How many slips must be labeled “YES” if the probability of drawing “YES” is 0.4?

- ☐ A. 4 ☐ C. 6
☐ B. 8 ☐ D. 10

Tip Scenarios on \$60 Bill

15% tip: \$9.00 18% tip: \$10.80

20% tip: \$12.00 25% tip: \$15.00

- 3)

If a diner leaves a 25% tip on a \$60 bill, what is the total amount paid?

- ☐ A. \$69 ☐ C. \$75
☐ B. \$72 ☐ D. \$85
- 4) Maya earns \$200 a week. If she puts 12% of her earnings into a savings account each week, how much does she save weekly?

- ☐ A. \$12 ☐ C. \$24
☐ B. \$20 ☐ D. \$30



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- 5) An account earns 12% interest compounded annually. If you start with \$400, how much more interest do you earn in year 2 compared to year 1?
- ☐ A. \$0 (same each year) ☐ C. \$53.76
☐ B. \$96 ☐ D. \$5.76
- 6) A subscription service costs \$10 per month. After a 50% price increase, what is the new monthly cost?
- ☐ A. \$5 ☐ C. \$15
☐ B. \$12 ☐ D. \$20
- 7) Compute $-6 + (-4)$.
- ☐ A. -10 ☐ C. 2
☐ B. -2 ☐ D. 10
- 8) Which expression represents “4 less than half of c ”?
- ☐ A. $\frac{c}{2} - 4$ ☐ C. $\frac{c-4}{2}$
☐ B. $4 - \frac{c}{2}$ ☐ D. $\frac{c}{2} + 4$
- 9) Simplify: $-3x + 5x - x + 2x$
- ☐ A. $3x$ ☐ C. $9x$
☐ B. $5x$ ☐ D. $2x$
- 10) What is the GCF of $10a$ and $15ab$?
- ☐ A. $5a$ ☐ C. $15a$
☐ B. $10a$ ☐ D. $5ab$



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 D is correct.** (7.NS.1-7.NS.3) Descending (going down) below sea level is represented by a negative number. A descent of 40 feet is -40 .
- 2) **Choice D is correct.** (7.RP.3) Percent error = $\frac{|88-80|}{80} \times 100\% = \frac{8}{80} \times 100\% = 10\%$.
- 3) **Choice A is correct.** (7.EE.1-7.EE.2) Expand: $-1(x) - 1(5) + 2x = -x - 5 + 2x = x - 5$. Combine like terms.
- 4) **The correct answer is -17 .** (7.NS.1-7.NS.3) The new balance is $-5 - 12 = -17$. You now owe 17 dollars.
- 5) **Choice B is correct.** (7.EE.4b) An open circle (excludes the boundary) at 7 with a left arrow means all values less than (but not equal to) 7, which is $n < 7$.
- 6) **Choice D is correct.** (7.RP.3) Loan 1 rate: $240 = 3000 \times r \times 2 \Rightarrow r = 0.04 = 4\%$. Loan 2 rate: $360 = 3000 \times r \times 2 \Rightarrow r = 0.06 = 6\%$. Difference: $6\% - 4\% = 2\%$.
- 7) **Choice C is correct.** (7.RP.1-7.RP.3) Multiply model height by scale factor: $3 \times 50 = 150$ feet.
- 8) **The correct answer is $\frac{35}{24}$.** (7.RP.1-7.RP.3) $\frac{7}{3} \div \frac{8}{5} = \frac{7}{3} \times \frac{5}{8} = \frac{35}{24}$.
- 9) **Choice C is correct.** (7.RP.3) $\frac{16}{40} = \frac{2}{5} = 0.40 = 40\%$.
- 10) **Choice D is correct.** (7.RP.3) Discount = $\frac{1}{4} \times 28 = \7 . Sale price = $28 - 7 = \$21$.
- 11) **Choice A is correct.** (7.NS.1b) A number and its opposite always sum to zero (additive inverse). 6 and -6 are opposites, so $6 + (-6) = 0$.
- 12) **Choice C is correct.** (7.EE.1-7.EE.2) Difference of n and 2 is $(n - 2)$. Four times this is $4(n - 2)$.
- 13) **The correct answer is 40.** (7.RP.1-7.RP.3) Substitute: $y = 5(8) = 40$.
- 14) **Choice A is correct.** (7.EE.1) Combine: $(10 - 3 + 7)m = 14m$.
- 15) **Choice C is correct.** (7.EE.1-7.EE.2) GCF of $48m$ and 24: GCF of 48 and 24 is 24. No variable is common to both. GCF is 24.
- 16) **Choice B is correct.** (7.G.4-7.G.6) $SA = 2(6 \cdot 5 + 6 \cdot 4 + 5 \cdot 4) = 2(30 + 24 + 20) = 2(74) = 148 \text{ yd}^2$.
- 17) **Choice D is correct.** (7.SP.5-7.SP.8) A larger number of trials produces a more stable relative frequency, reducing random variation.
- 18) **Choice D is correct.** (7.RP.3) Use the proportion $\frac{7}{20} = \frac{p}{100}$: $p = 35$. All three forms are equivalent: $0.35 = \frac{7}{20} = 35\%$.
- 19) **The correct answer is A,C.** (7.SP.1-7.SP.4) Bread: $0.35 \times 400 = 140$ items, so A is correct. Pastries and cakes together make 200 items, not 50, so B is false. Other: $0.15 \times 400 = 60$ items, so C is correct. Pastries (28%) plus other (15%) equals 43%, not 45%.
- 20) **Choice A is correct.** (7.NS.2d) Both $0.8 = \frac{8}{10} = \frac{4}{5}$ (in simplest form). The answer is A, the fully simplified fraction.
- 21) **Choice A is correct.** (7.NS.1-7.NS.3) $12 \times 10^{-6} = 1.2 \times 10^{-5} = 0.000012$. Adjusting the coefficient and exponent by one power of 10 yields the equivalent form.
- 22) **Choice B is correct.** (7.EE.3-7.EE.4) Discount % = $\frac{\text{savings}}{\text{original}} \times 100 = \frac{12}{60} \times 100 = 20\%$.
- 23) **Choice A is correct.** (7.EE.4b) Add 3: $1.5x \leq 7.5$. Divide by 1.5: $x \leq 5$.
- 24) **Choice A is correct.** (7.G.1-7.G.5) Blueprint 1 at scale 1:4 ft: actual hallway is $2.5 \times 4 = 10$ ft and $8 \times 4 = 32$ ft. Blueprint 2 shows the same hallway (10 ft $\times$ 32 ft) as 5×16 in. Scale of B: $10 \text{ ft} \div 5 \text{ in} = 2 \text{ ft per inch}$, or 1 in : 2 ft. Ratio check: scale B (2 ft/in) is half scale A (4 ft/in), so drawing B should be $4 \div 2 = 2 \times$ larger: B is 5×16 in vs A is 2.5×8 in. Correct!
- 25) **Choice B is correct.** (7.G.1-7.G.5) The ratio of areas equals the square of the ratio of corresponding lengths. The cut is at height 4 cm out of 12 cm, so the ratio is $\frac{4}{12} = \frac{1}{3}$. Squaring: $(\frac{1}{3})^2 = \frac{1}{9}$.
- 26) **Choice B is correct.** (7.G.1-7.G.5) Let the complement be x . Then $R = x + 12$ and $R + x = 90^\circ$. So $(x + 12) + x = 90^\circ$, giving $x = 39^\circ$ and $R = 51^\circ$.
- 27) **Choice B is correct.** (7.G.1-7.G.5) A 180° rotation about the origin maps $(x, y) \rightarrow (-x, -y)$. The vertex (1, 0) of Figure A should map to $(-1, 0)$; however, Figure B's location suggests a different structure. Visual inspection confirms the 180° rotation: Figure A (upper right) maps to Figure B (lower left), which is the expected behavior of a 180° rotation about the origin.



One Last Encouragement

Hi, Determined Student!

◇ You did meaningful Grade 7 practice. That matters because confidence is built through action, not waiting until everything feels easy. This short, concentrated book gave you three focused Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. ◇

★ **Remember this:** Carry this with you: you can learn hard things by breaking them into steps, asking good questions, and reviewing with honesty. ★

Take This With You

- **You Can Start:** Even when the problem looks big.
- **You Can Adjust:** When the first method is not enough.
- **You Can Learn:** From every corrected mistake.
- **You Can Improve:** One practice session at a time.

Grade 7 test-day tip: Walk into test day ready to think, not ready to be perfect. Thinking clearly is the goal.

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 **3** 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:

3 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.



Detailed Answers & Explanations

Learn from clear explanations and step-by-step solutions.



Improve Test 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!

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