

4

Washington

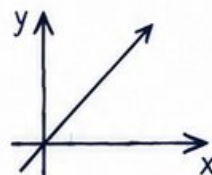
Smarter Balanced

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



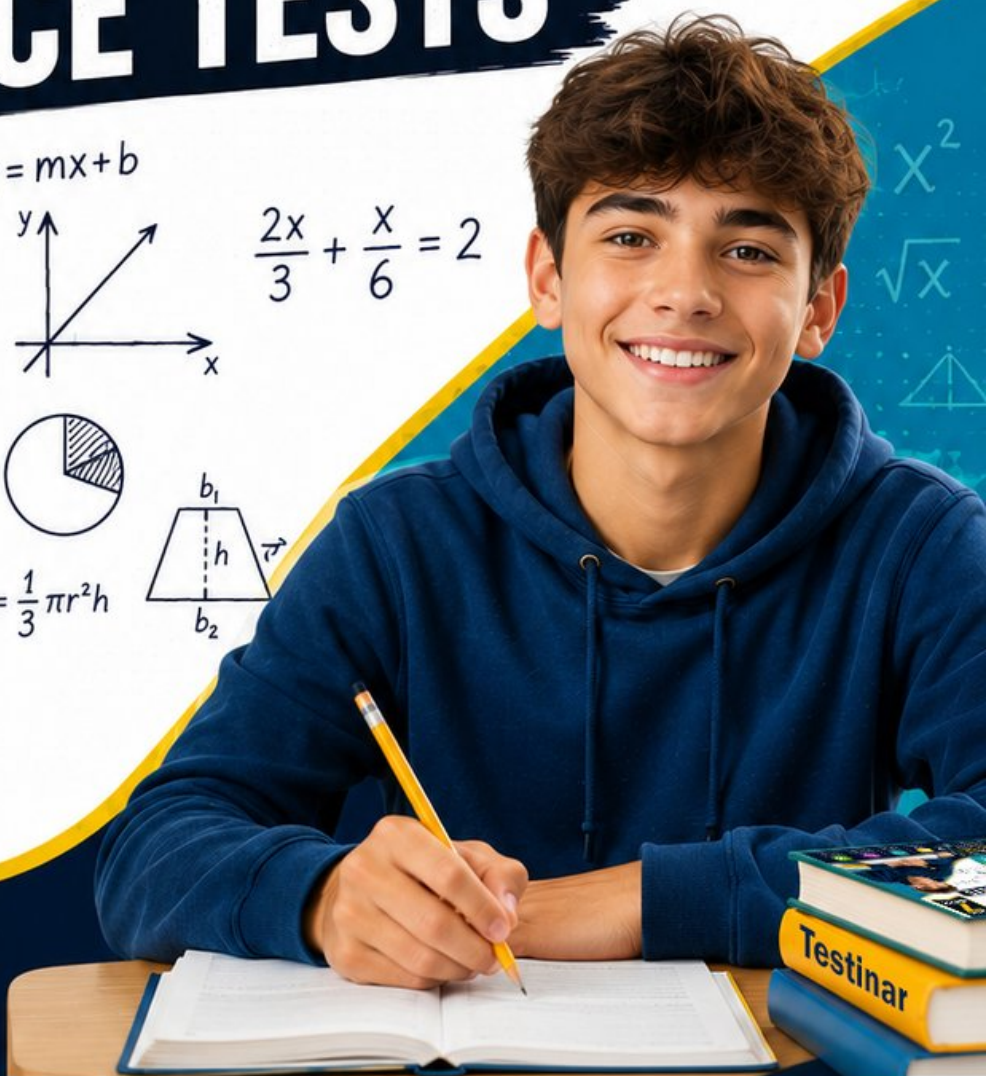
Strengthen
Math Skills



Detailed Answers
& Explanations



Improve Test
Performance



4 Washington Smarter Balanced Grade 7 Math Practice Tests

Compact Smarter Balanced Math Prep with Answers and Explanations



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, Washington 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 Washington 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 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.

Washington 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.



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& answers

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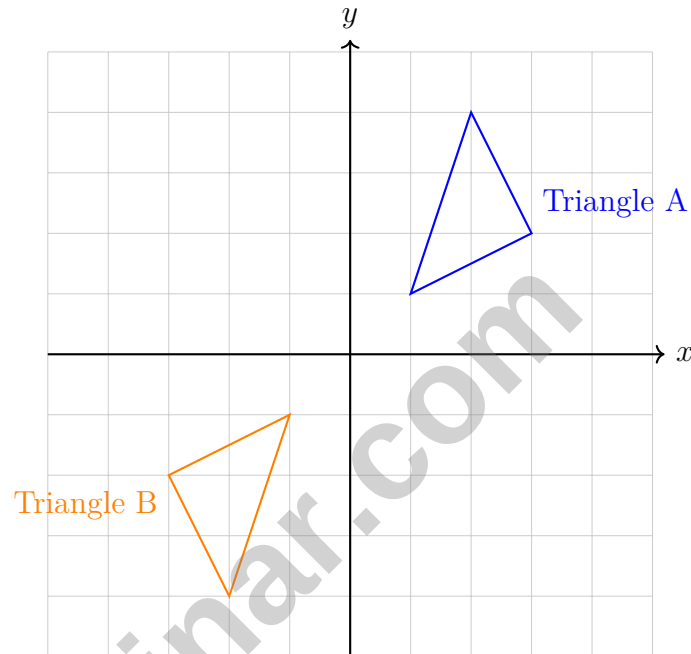
1) What is $-4 - 2$?

☐ A. 2

☐ C. -6

☐ B. -2

☐ D. 6



2)

Triangle A is transformed to create Triangle B. What transformation was applied?

☐ A. Rotation of 180°

☐ C. Translation by $(-2, -3)$

☐ B. Reflection over the y -axis

☐ D. Reflection over the line $y = x$

3) A circular garden has radius 2.5 meters. The gardener wants to fence around it. What length of fencing is needed? Use $\pi \approx 3.14$.

☐ A. 7.85 m

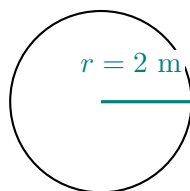
☐ C. 19.625 m

☐ B. 15.7 m

☐ D. 39.25 m



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4)

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

☐ A. 6.28 m^2

☐ C. 25.12 m^2

☐ B. 12.56 m^2

☐ D. 50.24 m^2

- 5) A can of juice has a cylindrical shape with radius 3 inches and height 6 inches. Approximately how many cubic inches of juice can the can hold? Use $\pi \approx 3.14$.

☐ A. 56.52 in^3

☐ C. 169.56 in^3

☐ B. 113.04 in^3

☐ D. 339.12 in^3

- 6) A bag contains 2 dimes, 3 nickels, and 5 pennies. A coin is picked at random. What is the probability of not picking a penny?

☐ A. $\frac{3}{10}$

☐ C. $\frac{7}{10}$

☐ B. $\frac{5}{10}$

☐ D. $\frac{1}{5}$

- 7) Looking at the soccer team box plots again, where do the distributions overlap?

☐ A. From 4 to 6 hours (overlap of both boxes)

☐ C. Overlap occurs only at the medians

☐ B. No overlap exists between teams

☐ D. Team B completely contains Team A's range



8) A card is drawn from a standard deck. What is the probability of drawing a king OR a queen?

☐ A. $\frac{4}{52}$

☐ C. $\frac{2}{52}$

☐ B. $\frac{2}{13}$

☐ D. $\frac{1}{26}$

9) A stem-and-leaf plot of student heights (in cm) shows:

Stem	Leaves
14	8, 9
15	0, 2, 4, 6, 8
16	1, 3, 5, 7, 9
17	0, 2, 4

What is the mean of the data? (Rounded to nearest whole number)

☐ A. 158

☐ C. 160

☐ B. 159

☐ D. 161

10) A game uses a spinner divided into 8 equal sections. The spinner was spun 800 times. One section appeared 85 times. Comparing the experimental and theoretical probabilities, which statement is true?

☐ A. Both equal $\frac{1}{8}$.

☐ C. Experimental is higher than theoretical.

☐ B. Experimental is $\frac{85}{800}$; theoretical is $\frac{1}{8}$.

☐ D. Theoretical is higher than experimental.



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Scale: 1 cm : 2.5 m

3.6 cm $\times$ 2.4 cm

1)

A scale drawing of a loading dock is 3.6 cm by 2.4 cm with a scale of 1 cm : 2.5 m. What is the area of the actual loading dock in square meters?

☐ A. 8.64 m²

☐ C. 54 m²

☐ B. 21.6 m²

☐ D. 81 m²

2) A family's monthly expenses total \$2,500. If their monthly income is \$3,000, what percentage of their income do they spend?

3) What is $0.7 \times (-10)$?

☐ A. -7

☐ C. 6

☐ B. -6

☐ D. 7

4) What is the side length of a square with area 121 square feet?

☐ A. 10 feet

☐ C. 12 feet

☐ B. 11 feet

☐ D. 13 feet



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5) Use the distributive property to simplify $3(x + 5) - 2x$.

☐ A. $3x + 15 - 2x = x + 15$

☐ C. $3x + 5 - 2x$

☐ B. $x + 5$

☐ D. $3x + 15$

6) A car uses 6 gallons of gas to travel 168 miles. At the same rate, approximately how many gallons of gas are needed for a 96-mile trip?

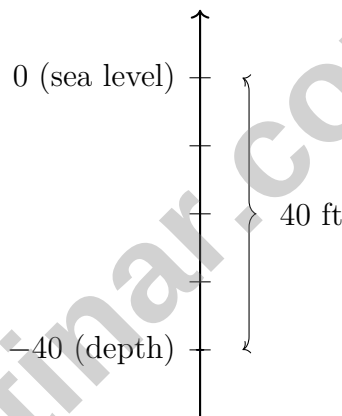
☐ A. ≈ 5 gallons

☐ C. ≈ 4.1 gallons

☐ B. ≈ 3.7 gallons

☐ D. ≈ 3.4 gallons

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



☐ A. 40 (ignores direction/below sea level)

☐ C. 0 (at sea level, not below)

☐ B. -80 (double the depth)

☐ D. -40 (correct; below is negative)

8) Which expression is simplified?

☐ A. $3x + 2x - y$

☐ C. $5x - y$

☐ B. $5x + 2x - y + y$

☐ D. $2x + 3x + 4y$



1) A student solved $-4x + 2 > 10$ and wrote $x > -2$. What error did the student make?

- ☐ A. Did not subtract 2 correctly ☐ C. The solution is actually correct
☐ B. Did not flip the inequality sign when dividing by -4 ☐ D. Should have added instead of subtracted

2) A recipe calls for $3\frac{1}{2}$ cups of water. If you make $\frac{2}{3}$ of the recipe, how much water do you need? Express your answer as a mixed number.

3) Three-digit data in a stem-and-leaf plot with stem 14 and leaves 2, 5, 8 represents which values?

- ☐ A. 142, 145, 148 ☐ C. 14.2, 14.5, 14.8
☐ B. 1402, 1405, 1408 ☐ D. 214, 514, 814

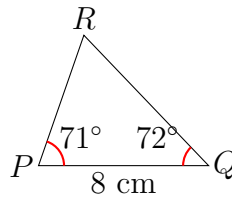
4) A composite figure is made of a rectangle (8 ft by 5 ft) with a square (3 ft by 3 ft) attached to one side. What is the total area?

- ☐ A. 40 ft^2 ☐ C. 49 ft^2
☐ B. 45 ft^2 ☐ D. 56 ft^2

5) A rectangular prism with a volume of 360 m^3 has a base area of 40 m^2 . Find the height.

- ☐ A. 4 m ☐ C. 9 m
☐ B. 7 m ☐ D. 14400 m





6)

A triangle has angles of 71° and 72° , and the side between them is 8 cm . How many non-congruent triangles can be drawn?

☐ A. 1☐ C. 3☐ B. 2☐ D. Infinitely many

7) A student claims: "An arc is the same as a chord." Is this correct?

☐ A. Yes, they are the same☐ C. Yes, but only if the arc is very small☐ B. No; an arc is a curved part of the circle, while a chord is a straight line segment☐ D. No; a chord is always longer than an arc8) Which expression is equivalent to $3(2y + 7)$?☐ A. $6y + 21$ ☐ C. $3y + 10$ ☐ B. $6y + 7$ ☐ D. $2y + 21$ 9) Write 9.75×10^5 in standard form.

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Washington 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 Washington 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.1-7.NS.3)** $-4 - 2 = -4 + (-2) = -6$. Moving left 2 units from -4 gives -6 .
- 2) **Choice A is correct.** **(7.G.1-7.G.5)** A 180° rotation maps $(1, 1) \rightarrow (-1, -1)$, $(3, 2) \rightarrow (-3, -2)$, and $(2, 4) \rightarrow (-2, -4)$, matching Triangle B.
- 3) **Choice B is correct.** **(7.G.4-7.G.6)** Fencing needed $= C = 2\pi r = 2 \times 3.14 \times 2.5 = 15.7$ m.
- 4) **Choice B is correct.** **(7.G.4-7.G.6)** $A = \pi r^2 = 3.14 \times 2^2 = 3.14 \times 4 = 12.56$ m².
- 5) **Choice C is correct.** **(7.G.4-7.G.6)** $V = \pi r^2 h \approx 3.14 \times 9 \times 6 = 169.56$ in³.
- 6) **Choice B is correct.** **(7.SP.5-7.SP.8)** Total coins $= 2 + 3 + 5 = 10$. Non-penny coins $= 2 + 3 = 5$. $P(\text{not penny}) = \frac{5}{10} = \frac{1}{2}$.
- 7) **Choice A is correct.** **(7.SP.3)** Team A's box spans 2–6 hours; Team B's box spans 4–9 hours. The overlap region is where both boxes exist: from 4 to 6 hours. This means both teams have students who practice in this shared range.
- 8) **Choice B is correct.** **(7.SP.5-7.SP.8)** King OR Queen: $P(\text{King}) + P(\text{Queen}) = \frac{4}{52} + \frac{4}{52} = \frac{8}{52} = \frac{2}{13}$ (mutually exclusive).
- 9) **Choice B is correct.** **(7.SP.1-7.SP.4)** Sum: $148 + 149 + 150 + 152 + 154 + 156 + 158 + 161 + 163 + 165 + 167 + 169 + 170 + 172 + 174 = 2388$. Mean $= 2388/15 = 159.2 \approx 159$.
- 10) **Choice B is correct.** **(7.SP.6)** Experimental: $\frac{85}{800} \approx 0.106$. Theoretical: $\frac{1}{8} = 0.125$. The experimental probability came from the observed data.
- 11) **Choice A is correct.** **(7.G.4-7.G.6)** True triangle area: $\frac{1}{2} \times 10 \times 2 = 10$ in². Student's error: $20 - 10 = 10$ in² overestimate.
- 12) **Choice A is correct.** **(7.G.4-7.G.6)** Rectangular: $V = 4 \times 3 \times 10 = 120$ cm³. Triangular: $V = 6 \times 10 = 60$ cm³. The rectangular prism is larger.
- 13) **Choice B is correct.** **(7.G.1-7.G.5)** $80^\circ + 100^\circ + 95^\circ + 85^\circ = 360^\circ$, which is the sum of the interior angles of a quadrilateral.
- 14) **Choice B is correct.** **(7.SP.5-7.SP.8)** Experimental probability $= \frac{\text{times event occurred}}{\text{total trials}} = \frac{10}{60}$.
- 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) **Choice B is correct.** **(7.G.1-7.G.5)** We have angle α at G , the side $GH = 7$ cm between them, and angle β at H . This is Angle-Side-Angle (ASA): two angles and the included side are given.
- 17) **Choice C is correct.** **(7.SP.1-7.SP.4)** $\frac{28}{70} = \frac{x}{3500}$. Reduce: $\frac{2}{5} = \frac{x}{3500} \Rightarrow x = 1400$.
- 18) **Choice D is correct.** **(7.RP.1-7.RP.3)** Actual dimensions: $4 \times 10 = 40$ feet; $2.5 \times 10 = 25$ feet. Perimeter $= 2(40 + 25) = 130$ feet.
- 19) **Choice C is correct.** **(7.RP.3)** If $12 = 0.15 \times h$, then $h = \frac{12}{0.15} = 80$ cm.
- 20) **The correct answer is B,C.** **(7.RP.1-7.RP.3)** Option B: cost $= 1.50 \times$ pounds (proportional, of form $y = kx$). Option C: distance $=$ speed $\times$ time (proportional). Option A is a general trend but not a strict proportional relationship. Option D: height does not scale proportionally with age (growth rates vary).
- 21) **Choice B is correct.** **(7.SP.1-7.SP.4)** 28% of $5000 = 0.28 \times 5000 = 1400$ books.
- 22) **Choice D is correct.** **(7.RP.1-7.RP.3)** Cost per pencil $= \frac{1/2}{8} = \frac{1}{2} \times \frac{1}{8} = \frac{1}{16} = 0.0625$ dollars.
- 23) **The correct answer is -12 .** **(7.NS.2)** $-9 \times \frac{4}{3} = \frac{-36}{3} = -12$.
- 24) **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.
- 25) **Choice D is correct.** **(7.RP.1-7.RP.3)** The constant k in $C = kn$ represents the cost per student. In the first, $k = 15$ (dollars per student); in the second, $k = 20$ (dollars per student). Different constants mean different unit prices.
- 26) **Choice D is correct.** **(7.RP.1-7.RP.3)** The point $(1, 0.4)$ is the unit-rate point, so the constant of proportionality is $k = 0.4$. Therefore, the equation is $y = 0.4x$. (Verify: $(5, 2)$ gives $2 = 0.4 \times 5$ ✓)
- 27) **The correct answer is $(6, 7)$.** **(7.NS.1-7.NS.3)** $6^2 = 36$ and $7^2 = 49$. Since $36 < 40 < 49$, the answer is between 6 and 7 .



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Hi, Brave Learner!

◇ No one gets stronger by only doing easy problems. The questions that slowed you down were part of the training. This carefully paced book gave you four steady Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. ◇

★ **Remember this:** Mistakes are not proof that you cannot do math. They are directions. They show what to review, what to ask about, and what to practice next. ★

How to Use Mistakes

- **Name It:** Was it reading, setup, arithmetic, or checking?
- **Fix It:** Correct the work while the question is fresh.
- **Repeat It:** Try one similar problem soon.
- **Remember It:** Write the lesson in your own words.

Grade 7 test-day tip: Treat every corrected error as a point you are preparing to earn next time.

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

Jay Daie

Your Brave-Learning 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.



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Detailed Answers & Explanations



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- ✓ The Number System
- ✓ Expressions & Equations
- ✓ Geometry
- ✓ Percents & Decimals
- ✓ Statistics & Probability
- ✓ Data Analysis
- ✓ Measurement & Conversions
- ✓ Algebraic Thinking
- ✓ And More!



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