

10

Washington

Smarter Balanced

GRADE

7

MATH

PRACTICE TESTS

Standards Aligned Problem
Solving For Comprehensive
Assessment Programs



10 PRINTED TESTS

Realistic practice to build
confidence and mastery



2 ONLINE TESTS

Extra practice for
continued success



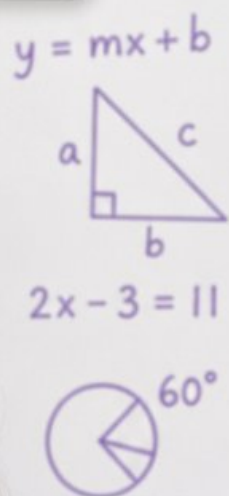
DETAILED ANSWER EXPLANATIONS

Learn with step-by-step
solutions



FOCUSED & EFFECTIVE

Target key math skills
with purposeful practice



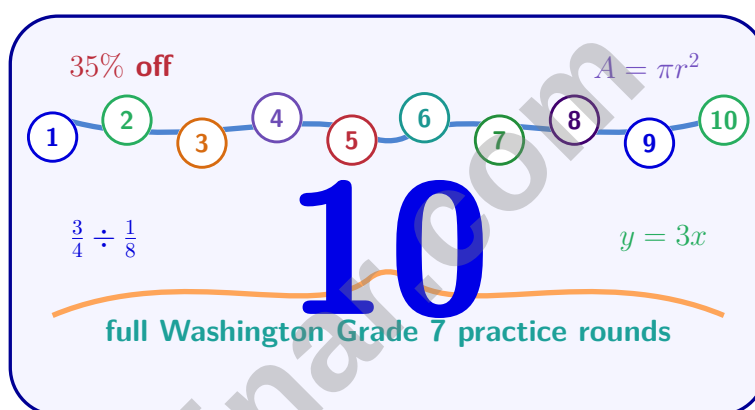
10 PRINTED TESTS
+2 ONLINE TESTS

Use these two additional online practice
tests for extra review after the printed
tests in this book.

PRACTICE ★ REVIEW ★ SUCCEED

10 Washington Smarter Balanced Grade 7 Math Practice Tests

Washington Grade 7 Smarter Balanced Practice for rain-or-shine preparation in ratios, percents, equations, geometry, data, and probability



Ten 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!

Ten focused rounds for sharper Washington Smarter Balanced math thinking

This book gives you ten 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 ten-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?

Ten Washington Smarter Balanced tests, 400 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.
Test 10	A final Washington round to show growth across the whole book.
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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1)

Simulated Roll	1	2	3	4
Frequency	48	52	45	55

A spinner with 4 equal sections is spun 200 times to estimate probabilities. Which two sections have relative frequencies closest to the theoretical probability of 0.25?

- ☐ A. Sections 1 and 2
 ☐ C. Sections 1 and 3
☐ B. Sections 2 and 4
 ☐ D. Sections 3 and 4

2) Which solution is correct for $3x + 6 = 15$?

- ☐ A. $x = 1$
☐ C. $x = 5$
☐ B. $x = 3$
☐ D. $x = 7$

3) Simplify: $5(2a + 3) - (a + 6)$.

- ☐ A. $10a + 15 - a - 6 = 9a + 9$
☐ C. $11a - 6$
☐ B. $10a + 9$
☐ D. $10a + 3$

4) A dot plot shows the number of goals scored by soccer players: 2 (two players), 3 (three players), 4 (four players), 5 (two players), 6 (one player). What is the mean number of goals?

- ☐ A. 3.5 goals
 ☐ C. 4 goals
☐ B. 3.8 goals
 ☐ D. 5.5 goals

5) Which of the following represents the complete sample space for flipping a coin and choosing a number from $\{1, 2, 3\}$?

$\{H1, H2, H3, T1, T2, T3\}$

- ☐ A. 3 outcomes
 ☐ C. 5 outcomes
☐ B. 4 outcomes
 ☐ D. 6 outcomes



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6) A number cube is rolled and a coin is flipped. What is $P(\text{rolling a 4 and flipping tails})$?

☐ A. $\frac{1}{12}$

☐ B. $\frac{1}{8}$

☐ C. $\frac{1}{6}$

☐ D. $\frac{7}{12}$

7) A test for a new medicine was conducted on 1000 patients. 850 patients showed improvement. What is the experimental probability that a patient will show improvement?

☐ A. 0.15

☐ B. 0.85

☐ C. 1.18

☐ D. 1.76

8) A stem-and-leaf plot shows:

Stem	Leaves
22	0, 3, 7
23	1, 4, 6, 9
24	2, 5, 8

What is the sum of the minimum and maximum values?

☐ A. 470

☐ B. 471

☐ C. 468

☐ D. 473

9) A bicycle wheel has diameter 0.6 meters. If the bike travels 30 meters, how many complete rotations did the wheel make? Use $\pi \approx 3.14$, round to the nearest whole number.



- 10) A weather forecast says there is a 60% chance of rain tomorrow. What is this probability as a decimal?
- ☐ A. 0.06 ☐ C. 6.0
☐ B. 0.6 ☐ D. 60
- 11) A contractor estimated 8 hours of work but the job took 10 hours. What is the percent error?
- ☐ A. 20% ☐ C. 2%
☐ B. 25% ☐ D. 80%
- 12) Expand: $\frac{1}{3}(9y - 12)$
- ☐ A. $3y - 4$ ☐ C. $3y - 12$
☐ B. $9y - 4$ ☐ D. $y - 4$
- 13) An investor earns \$450 in simple interest from a \$3000 investment over 3 years. What is the annual interest rate?
- ☐ A. 4% ☐ C. 6%
☐ B. 7% ☐ D. 5%
- 14) A student evaluates $-4 - (-6)$ and claims the answer is -10 . What is the student's mistake?
- ☐ A. Computing $-4 + 6 = 2$ when the answer should be -10 ☐ C. Adding instead of subtracting the opposite value
☐ B. Adding the numbers instead of converting to addition: $-4 + (-6) = -10$ ☐ D. Correctly applying the rule but making a computation error



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- 1) A quarter circle has a radius of 8 centimeters. What is its area? Use $\pi \approx 3.14$.
- ☐ A. 12.56 cm^2 ☐ C. 50.24 cm^2
☐ B. 25.12 cm^2 ☐ D. 100.48 cm^2
- 2) A histogram shows the price ranges for two car models. Model S: prices concentrated around \$25,000. Model T: prices spread from \$18,000 to \$32,000 with peak at \$24,000. Which model is easier to budget for?
- ☐ A. Model S (consistent pricing around \$25,000) ☐ C. Both models have identical pricing
☐ B. Model T (wider range means more options) ☐ D. Model T (cheaper at lower end)
- 3) A back-to-back stem-and-leaf plot shows January and July temperatures. If stem 7 appears for both months with January leaves 1, 4, 8 and July leaves 3, 5, 7, 9, which month has greater variation within stem 7?
- ☐ A. January (greater spread) ☐ C. Both have equal spread
☐ B. July (greater spread) ☐ D. Cannot determine from stem alone
- 4) A rectangular prism with volume 500 in^3 has a length of 10 inches and a width of 5 inches. What is the height?
- ☐ A. 100 in ☐ C. 10 in
☐ B. 50 in ☐ D. 5 in
- 5) Expand: $\frac{1}{5}(10r + 5)$
- ☐ A. $2r + 1$ ☐ C. $2r + 5$
☐ B. $10r + 1$ ☐ D. $r + 1$



6) Simplify: $8a + 5b - 3a - 2b$

☐ A. $5a + 3b$

☐ B. $11a + 3b$

☐ C. $5a + 7b$

☐ D. $16ab$

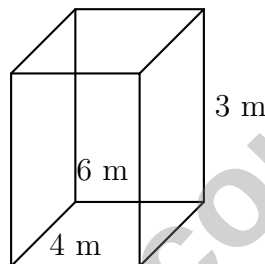
7) Factor: $6ab - 9b + 3b$

☐ A. $3b(2a - 2)$

☐ B. $3(2ab - 3b + b)$

☐ C. $b(6a - 9 + 3)$

☐ D. $3b(2a)$



8)

A net of a rectangular prism is partially shown with dimensions 4 m, 6 m, and 3 m. If all six faces are included in the net, which statement about the total surface area is correct?

☐ A. The surface area is 108 m^2 .

☐ B. The surface area is 72 m^2 .

☐ C. The surface area is 84 m^2 .

☐ D. The surface area is 216 m^2 .

9) A circle graph shows how a family spends its monthly budget. Rent is 30%, food is 25%, utilities is 15%, and savings is 30%. Which categories tie for the largest sector?

☐ A. Food and Utilities

☐ B. Utilities and Savings

☐ C. Rent and Savings

☐ D. Food and Rent



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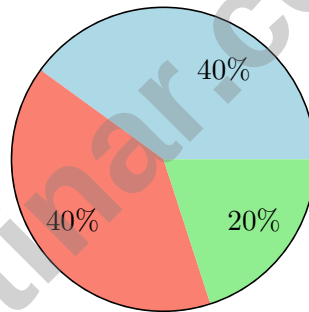
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- 1) Two box plots show salaries (in thousands of dollars) for two companies. Company P: Min 30, Q1 40, Median 50, Q3 65, Max 90; Company Q: Min 35, Q1 42, Median 48, Q3 60, Max 85. Which company has higher salaries overall?

- ☐ A. Company P (higher median and Q3) ☐ C. Both companies pay equally
☐ B. Company Q (higher minimum) ☐ D. Company Q (higher maximum)

- 2) If $\frac{7}{x} = \frac{35}{100}$, what is x ?



3)

The circle graph shows the results of a survey on transportation methods. Blue is cars (40%), salmon is buses (40%), and green is bicycles (20%). If 500 people were surveyed, how many use bicycles?

- ☐ A. 50 ☐ C. 200
☐ B. 100 ☐ D. 400



- 4) A company has 1000 employees. To find the average salary, it surveys 100 randomly selected employees. The average salary from these 100 employees is called a:

☐ A. parameter ☐ C. sample statistic
☐ B. population mean ☐ D. bias measure

- 5) In a sample of 140 workers, 35 work the night shift. The company employs 4200 people. How many workers are expected to work the night shift?

- 6) Which number is equivalent to 9.08×10^5 ?

☐ A. 908,000 ☐ C. 9,080,000
☐ B. 90,800 ☐ D. 90,800,000

- 7) Combine: $(9g - 7) + (4g + 12) - (5g - 3)$

☐ A. $8g + 8$ ☐ C. $18g + 8$
☐ B. $8g - 2$ ☐ D. $8g + 20$

- 8) Simplify: $\frac{e^{11} \cdot e^4}{e^9}$

☐ A. e^6 ☐ C. e^{16}
☐ B. e^{24} ☐ D. e^2



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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 B is correct.** (7.SP.5-7.SP.8) Theoretical: $\frac{200}{4} = 50$ each. Frequencies: 1 is 48 (dev 2), 2 is 52 (dev 2), 3 is 45 (dev 5), 4 is 55 (dev 5). Sections 2 and 4 are closest: $\frac{52}{200} = 0.26$ and $\frac{55}{200} = 0.275$.
- 2) **Choice B is correct.** (7.EE.3-7.EE.4) Subtract 6: $3x = 9$. Divide by 3: $x = 3$.
- 3) **Choice A is correct.** (7.EE.1-7.EE.2) Distribute: $5(2a) + 5(3) - (a + 6) = 10a + 15 - a - 6$. Combine: $(10a - a) + (15 - 6) = 9a + 9$.
- 4) **Choice B is correct.** (7.SP.1-7.SP.4) Sum = $2(2) + 3(3) + 4(4) + 5(2) + 6(1) = 4 + 9 + 16 + 10 + 6 = 45$. Count = 12. Mean = $\frac{45}{12} \approx 3.75 \approx 3.8$ goals.
- 5) **Choice D is correct.** (7.SP.5-7.SP.8) The sample space lists all 6 pairs: H1, H2, H3, T1, T2, T3.
- 6) **Choice A is correct.** (7.SP.5-7.SP.8) $P(4 \text{ and tails}) = \frac{1}{6} \cdot \frac{1}{2} = \frac{1}{12}$.
- 7) **Choice B is correct.** (7.SP.6) Experimental probability = $\frac{850}{1000} = 0.85$.
- 8) **Choice C is correct.** (7.SP.1-7.SP.4) Minimum value: 220 (stem 22, leaf 0). Maximum value: 248 (stem 24, leaf 8). Sum: $220 + 248 = 468$.
- 9) **The correct answer is 16.** (7.G.4-7.G.6) Circumference = $\pi d = 3.14 \times 0.6 = 1.884$ m. Rotations = $30 \div 1.884 \approx 16$.
- 10) **Choice B is correct.** (7.SP.5-7.SP.8) $60\% = \frac{60}{100} = 0.6$.
- 11) **Choice A is correct.** (7.RP.3) Percent error = $\frac{|8-10|}{10} \times 100\% = \frac{2}{10} \times 100\% = 20\%$.
- 12) **Choice A is correct.** (7.EE.1-7.EE.2) Distribute $\frac{1}{3}$: $\frac{1}{3}(9y) - \frac{1}{3}(12) = 3y - 4$.
- 13) **Choice D is correct.** (7.RP.3) $450 = 3000 \times r \times 3 \Rightarrow 450 = 9000r \Rightarrow r = 0.05 = 5\%$.
- 14) **Choice B is correct.** (7.NS.1-7.NS.3) The error is choice B. The student forgot to flip the sign of -6 to $+6$. The correct process: $-4 - (-6) = -4 + 6 = 2$. The student mistakenly added $-4 + (-6) = -10$ instead.
- 15) **Choice D is correct.** (7.RP.1-7.RP.3) If $\frac{1}{2}$ inch = 10 yards, then 1 inch = 20 yards. So $100 \div 20 = 5$ inches.
- 16) **Choice C is correct.** (7.RP.3) The shaded region is $\frac{60}{100} = 60\%$ of the grid.
- 17) **Choice D is correct.** (7.NS.1b) If $-9 + x = 4$, then $x = 4 - (-9) = 4 + 9 = 13$. Check: $-9 + 13 = 4$ ✓.
- 18) **Choice A is correct.** (7.EE.1) Combine: $\frac{1}{3}a + \frac{2}{3}a + b = a + b$.
- 19) **Choice A is correct.** (7.EE.1-7.EE.2) GCF of 4 and 8 is 4. Factor: $4x + 8y = 4(x + 2y)$.
- 20) **The correct answer is A,C.** (7.SP.1-7.SP.4) Options A and C are correct limitations. The survey only reaches regular website users (coverage bias) and attracts respondents with strong interests (voluntary response bias). Option B is false; this is not random sampling. Option D is partially true but less precise than A. Option
- 21) **Choice B is correct.** (7.SP.1-7.SP.4) $50\% \text{ of } 360^\circ = 0.50 \times 360^\circ = 180^\circ$.
- 22) **Choice A is correct.** (7.EE.4b) Rewrite as $x + 4 < 8$. Subtract 4: $x < 4$.
- 23) **Choice C is correct.** (7.RP.3) Emergency savings = $8\% \times \$48,000 = 0.08 \times 48000 = \$3,840$.
- 24) **Choice C is correct.** (7.NS.1-7.NS.3) Add in order: First, $-1.5 + 3.2 = 1.7$. Then, $1.7 + (-0.8) = 1.7 - 0.8 = 0.9$ points.
- 25) **Choice A is correct.** (7.NS.1-7.NS.3) $-\frac{3}{5} \div (-\frac{2}{3}) = (-\frac{3}{5}) \times (-\frac{3}{2}) = \frac{9}{10}$. Negative divided by negative is positive.
- 26) **Choice B is correct.** (7.NS.2d) $9 \div 10 = 0.9$. Powers of 10 produce terminating decimals with the numerator shifted by decimal places.
- 27) **Choice A is correct.** (7.NS.1-7.NS.3) Net change = $-\$2.50 + \$1.75 - \$0.85 = -\1.60 .
- 28) **The correct answer is 20.** (7.G.4-7.G.6) $V = \pi r^2 h \Rightarrow 565.2 = 3.14 \times 9 \times h \Rightarrow 565.2 = 28.26h \Rightarrow h = 20$ feet.
- 29) **The correct answer is 2.4.** (7.SP.3) IQR for Employee Y is 12; IQR for Employee X is 5. Ratio: $12 \div 5 = 2.4$ (or expressed as 12:5).
- 30) **Choice A is correct.** (7.NS.1-7.NS.3) $10^9 = 1$ billion. So $5.8 \times 10^9 = 5.8$ billion.
- 31) **Choice A is correct.** (7.EE.1-7.EE.2) Add all sides: $(x + 2) + (3x - 1) + (2x + 4) = (x + 3x + 2x) + (2 - 1 + 4) = 6x + 5$.



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Hi, Math Hero!

◇ This full-length book gave you ten complete Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. You showed up for Grade 7 practice again and again. That is what real growth looks like: steady effort, honest review, and a willingness to try. ◇

★ **Remember this:** A math hero is not someone who never misses a question. A math hero learns from the miss and comes back stronger. ★

Hero Habits

- **Courage:** You try problems that are not automatic.
- **Honesty:** You review what needs work.
- **Patience:** You let skills grow over time.
- **Pride:** You recognize the effort you gave.

Grade 7 test-day tip: Save one solved problem you are proud of. Looking back at progress helps motivation stay strong.

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

Jay Daie

Your Math Hero Guide

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes 10 full-length Math practice tests and 2 extra 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:

10 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
- ✓ Fractions & Decimals
- ✓ Percents
- ✓ Statistics & Probability
- ✓ Data Analysis
- ✓ Measurement & Conversions
- ✓ And More!



2 EXTRA 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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SOLVE
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SUCCEED
BRIGHTLY

PRACTICE ★ REVIEW ★ SUCCEED