

5

Nevada

Smarter Balanced

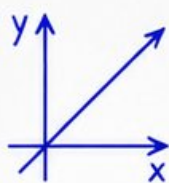
GRADE

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



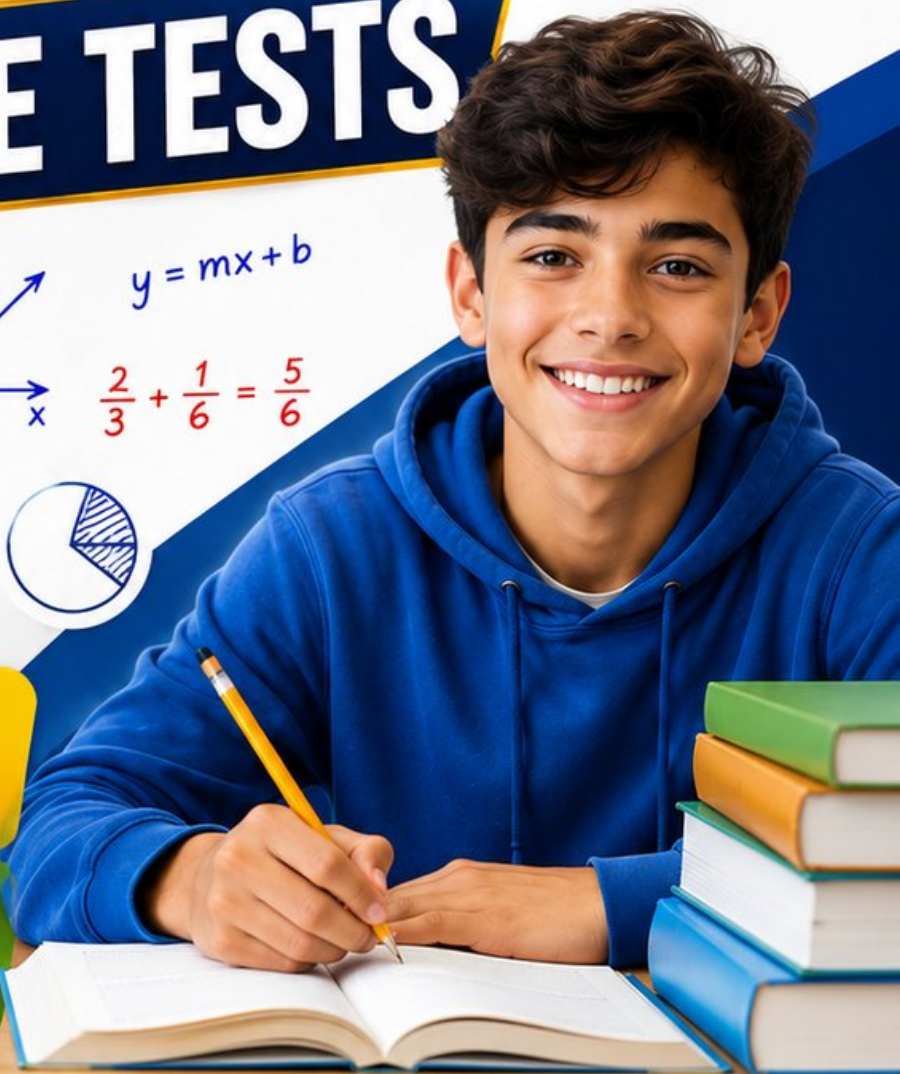
Strengthen
Math Skills



Detailed Answers
& Explanations

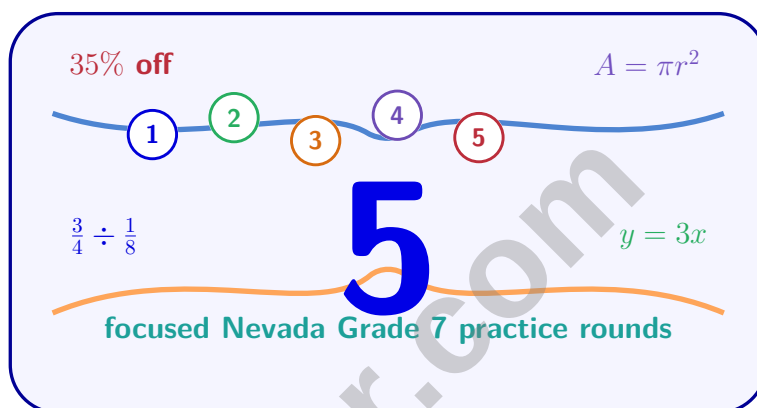


Improve Test
Performance



5 Nevada Smarter Balanced Grade 7 Math Practice Tests

Grade 7 Practice Rounds with Review, Answers, and Explanations



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, Nevada 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 Nevada 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.

Nevada 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.



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& answers

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1) Solve for x : $-2(3x + 1) = 10$

☐ A. $x = -2$

☐ C. $x = 1$

☐ B. $x = -1$

☐ D. $x = 2$

2) Which equation is equivalent to finding the distance between -12 and 3 on a number line?

☐ A. $|-12 - 3|$

☐ C. $3 - 12$

☐ B. $-12 - 3$

☐ D. $|-12 - (-3)|$

3) A recipe calls for 2 cups of flour for every 5 cups of milk. What is the constant of proportionality from milk to flour?

4) What percent of 120 is 30?

☐ A. 15%

☐ C. 25%

☐ B. 20%

☐ D. 30%

5) A poster is enlarged to 1.5 times its original size. If the original poster was 20 inches by 30 inches, what is the new area in square inches?



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& answers

6) A book is marked down by 30% from its original price of \$25. What is the discount amount?

☐ A. \$22.50

☐ B. \$17.50

☐ C. \$15

☐ D. \$7.50

7) What is $-8 + 5$?

☐ A. -13

☐ B. 13

☐ C. 3

☐ D. -3

8) A circle graph shows nutrient breakdown in a vitamin tablet. If carbohydrates represent 144° of the circle, what percent is that?

☐ A. 30%

☐ B. 40%

☐ C. 50%

☐ D. 60%

9) How much principal is needed to earn \$500 in simple interest at 5% per year over 4 years?

10) A recipe calls for $\frac{3}{4}$ cup of sugar. If you are making $\frac{1}{2}$ of the recipe, how much sugar do you need?

☐ A. $\frac{3}{8}$ cup

☐ B. $\frac{1}{2}$ cup

☐ C. $\frac{5}{4}$ cups

☐ D. $1\frac{1}{2}$ cups



11)

Input-Output Table

x	y
1	5
2	8
3	11

What is y in terms of x ?

☐ A. $y = 3x - 2$

☐ C. $y = 3x + 2$

☐ B. $y = 2x + 3$

☐ D. $y = x + 4$

12) A runner covers $2\frac{1}{2}$ miles in $\frac{2}{5}$ hour. What is the runner's speed?

☐ A. 6.5 mph

☐ C. $\frac{5}{4}$ mph

☐ B. $\frac{5}{2}$ mph

☐ D. $\frac{25}{4}$ mph

13) A table shows the relationship between ingredients. Which entry is an ERROR (does not follow the proportional pattern)?

Cups Sugar	1	2	3	4
Cups Flour	3	6	9	13

☐ A. Sugar 1, Flour 3

☐ C. Sugar 3, Flour 9

☐ B. Sugar 2, Flour 6

☐ D. Sugar 4, Flour 13



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& answers

1) Which expression is NOT equal to y^6 ?

☐ A. $y^3 \cdot y^3$

☐ B. $(y^2)^3$

☐ C. $\frac{y^{10}}{y^4}$

☐ D. $y^2 \cdot y^3$

2) A city planner wants to find the actual distance between two landmarks from a map. The map scale is 1 cm : 0.5 km. The distance on the map is 8 cm. What is the actual distance?

☐ A. 0.5 km

☐ B. 0.0625 km

☐ C. 16 km

☐ D. 4 km

3) A baker makes cookies in batches. Every batch requires $\frac{1}{4}$ cup of vanilla. If the baker makes b batches, which equation shows the total vanilla v (in cups) needed?

☐ A. $v = 4b$

☐ B. $b = \frac{1}{4}v$

☐ C. $v = b + \frac{1}{4}$

☐ D. $v = \frac{1}{4}b$

4) A data table shows that 8 items cost \$40 and 12 items cost \$60. Is this a proportional relationship? If yes, what is k ?

☐ A. Not proportional

☐ B. Yes; $k = 12$

☐ C. Yes; $k = 8$

☐ D. Yes; $k = 5$

5) To simulate drawing a card from a standard deck and finding whether it is a heart (probability $\frac{1}{4}$), which spinner design is best?

☐ A. Spinner with 2 equal sections (one shaded, one not)

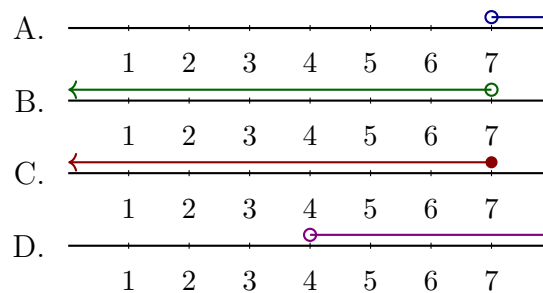
☐ B. Spinner with 4 equal sections (one shaded, three not)

☐ C. Spinner with 6 equal sections (two shaded, four not)

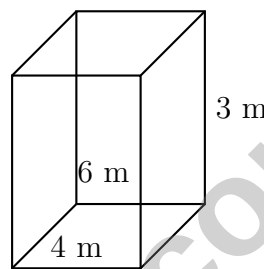
☐ D. Spinner with 13 equal sections (one shaded, twelve not)



6) Solve the inequality $x - 3 < 4$ and identify which number line is correct.



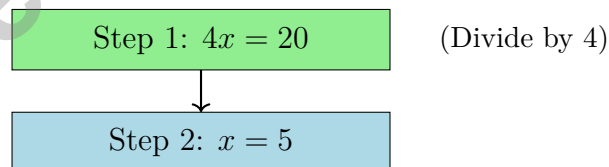
7)



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 m². ☐ C. The surface area is 84 m².
☐ B. The surface area is 72 m². ☐ D. The surface area is 216 m².

8)



What equation did Step 1 start from?

- ☐ A. $4x + 5 = 20$ ☐ C. $4x + 8 = 28$
☐ B. $4x - 5 = 15$ ☐ D. $4x - 4 = 16$



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1) A cylinder with a fixed volume of 100 cubic inches will have a greater height if the radius is:

- ☐ A. Smaller ☐ D. The height and radius are always equal
☐ B. Larger
☐ C. The height is independent of radius

2) A swimmer is currently 4 kg below their target weight. If they gain 0.5 kg per week, how many weeks w must pass to reach or exceed their target weight?

- ☐ A. $0.5w - 4 \geq 0$ ☐ C. $w \geq 8$
☐ B. $0.5w \geq 4$ ☐ D. $w \leq 8$

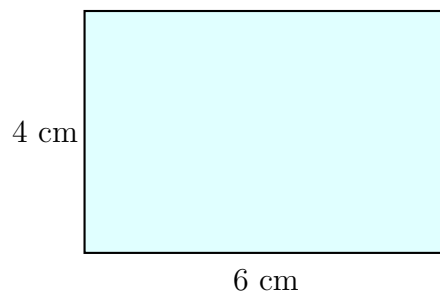
3) Solve for x : $6(x - 2) = 36$

4) Solve: $-3(x + 2) = 9$

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



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& answers



Scale: 1 cm : 3 m

5)

A scale drawing shows a field with dimensions 6 cm by 4 cm. What is the perimeter of the actual field in meters?

☐ A. 20 m

☐ C. 60 m

☐ B. 30 m

☐ D. 120 m

6) A scale model of a car is drawn at a scale of 1 in : 5 ft. If the model is 8 inches long, what is the length of the actual car?

☐ A. 13 ft

☐ C. 45 ft

☐ B. 40 ft

☐ D. 64 ft

7) A proportional relationship passes through the origin and the point (5, 12). Which equation represents this relationship?

☐ A. $y = 60x$

☐ C. $y = 12x$

☐ B. $y = 5x$

☐ D. $y = 2.4x$

8) A right triangle has legs of length 7 cm and 24 cm. What is the length of the hypotenuse?



Nevada 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 Nevada Smarter Balanced practice test.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice A is correct.** (7.EE.4a) Distribute: $-6x - 2 = 10$. Add 2: $-6x = 12$. Divide by -6 : $x = -2$.
- 2) **Choice A is correct.** (7.NS.1-7.NS.3) Distance is found using absolute value: $|-12 - 3| = |-15| = 15$ or equivalently $|3 - (-12)| = 15$. Only choice A gives the correct distance.
- 3) **The correct answer is $\frac{2}{5}$.** (7.RP.1-7.RP.3) The ratio flour to milk is $2 : 5$, so the constant is $\frac{2}{5}$.
- 4) **Choice C is correct.** (7.RP.3) $\frac{30}{120} = \frac{1}{4} = 0.25 = 25\%$.
- 5) **The correct answer is 1350.** (7.RP.1-7.RP.3) New dimensions: $20 \times 1.5 = 30$ inches and $30 \times 1.5 = 45$ inches. New area = $30 \times 45 = 1350$ sq in.
- 6) **Choice D is correct.** (7.RP.3) Discount amount = $0.30 \times 25 = \$7.50$.
- 7) **Choice D is correct.** (7.NS.1b) Start at -8 on a number line and move 5 units right: $-8 + 5 = -3$.
- 8) **Choice B is correct.** (7.SP.1-7.SP.4) $144^\circ \div 360^\circ \times 100 = 40\%$.
- 9) **The correct answer is \$2500.** (7.RP.3) $500 = P \times 0.05 \times 4 \Rightarrow 500 = 0.2P \Rightarrow P = \2500 .
- 10) **Choice A is correct.** (7.NS.1-7.NS.3) Multiply: $\frac{3}{4} \times \frac{1}{2} = \frac{3}{8}$ cup.
- 11) **Choice C is correct.** (7.EE.1-7.EE.2) Pattern: when $x = 1$, $y = 5$; when $x = 2$, $y = 8$; when $x = 3$, $y = 11$. Each increase of 1 in x adds 3 to y . Check: $3(1) + 2 = 5$ ✓.
- 12) **Choice D is correct.** (7.RP.1-7.RP.3) Unit rate: $\frac{2\frac{1}{2}}{2/5} = \frac{5/2}{2/5} = \frac{5}{2} \times \frac{5}{2} = \frac{25}{4} = 6.25$ mph.
- 13) **Choice D is correct.** (7.RP.1-7.RP.3) Expected ratio: $3/1 = 3$. For sugar 4: flour should be $3 \times 4 = 12$, not 13.
- 14) **Choice D is correct.** (7.RP.1-7.RP.3) The unit-rate point is $(1, 0.6)$, indicating \$0.60 per gallon.
- 15) **Choice C is correct.** (7.RP.3) Since the total is 100% and green is 70%, the remaining red region is $100\% - 70\% = 30\%$. Check: $\frac{30}{100} = 30\%$.
- 16) **Choice C is correct.** (7.RP.3) Other expenses = $(100 - 50 - 20 - 15)\% = 15\%$ of $\$3,600 = 0.15 \times 3600 = \540 .
- 17) **The correct answer is 13%.** (7.RP.3) Percent error = $\frac{|2.8 - 3.2|}{3.2} \times 100\% = \frac{0.4}{3.2} \times 100\% = 12.5\%$, rounds to 13%.
- 18) **Choice A is correct.** (7.NS.1-7.NS.3) Regroup the whole and fraction: $4\frac{1}{4} = 3 + 1\frac{1}{4} = 3\frac{5}{4}$. Subtract: $3\frac{5}{4} - 1\frac{3}{4} = 2\frac{2}{4} = 2\frac{1}{2}$.
- 19) **Choice C is correct.** (7.NS.1-7.NS.3) $\frac{5}{6} \div \frac{1}{6} = \frac{5}{6} \times \frac{6}{1} = 5$.
- 20) **The correct answer is A,D.** (7.RP.1-7.RP.3) Options A and D are the two correct answers. A is true because $y = kx = 2x$ is the equation for any proportional relationship with $k = 2$. D is true because substituting $x = 2$ into $y = 2x$ gives $y = 4$. All other options are false.
- 21) **Choice A is correct.** (7.NS.2d) $0.125 = \frac{125}{1000}$. Find GCD(125, 1000) = 125. Divide both: $\frac{125 \div 125}{1000 \div 125} = \frac{1}{8}$. A is simplest form.
- 22) **Choice A is correct.** (7.NS.1-7.NS.3) Net change = $15 - 4 + 8 = 19$ yards.
- 23) **Choice A is correct.** (7.NS.1-7.NS.3) $10^9 = 1$ billion. So $5.8 \times 10^9 = 5.8$ billion.
- 24) **Choice A is correct.** (7.NS.2) $0.4 \times 0.5 = 0.2$. Count total decimal places: $4 \times 5 = 20$, then place decimal to get $0.20 = 0.2$.
- 25) **Choice B is correct.** (7.NS.1-7.NS.3) $1 \times 1 = 1$, so $\sqrt{1} = 1$.
- 26) **Choice B is correct.** (7.EE.1-7.EE.2) Distribute the 2 and distribute the negative: $10x - 4 - (3x - 4) = 10x - 4 - 3x + 4$. Combine like terms: $(10x - 3x) + (-4 + 4) = 7x + 0 = 7x$. The simplified form shows that the constants cancel, leaving only $7x$.
- 27) **Choice A is correct.** (7.SP.5-7.SP.8) Since $P(\text{Win}) + P(\text{Lose}) = 1$, we have $P(\text{Lose}) = 1 - 0.75 = 0.25$. (Negative probabilities are undefined.)
- 28) **Choice D is correct.** (7.RP.3) Total haircut revenue = $25 \times 8 = \$200$. Commission = commission rate $\times$ sales = $0.40 \times 200 = \$80$.



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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