

9

Connecticut Smarter Balanced

GRADE

6

MATH

PRACTICE TESTS

Standards-Aligned Review
Mixed Practice & Answer Key



9 PRINTED TESTS

Realistic practice to build confidence and mastery



DETAILED ANSWER EXPLANATIONS

Learn with step-by-step solutions



FOCUSED & EFFECTIVE

Target key math skills with purposeful practice



BUILD CONFIDENCE

Strengthen problem solving and test-taking skills



9 PRINTED TESTS
+2 ONLINE TESTS

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

**PRACTICE TODAY.
SUCCEED TOMORROW.**



PRACTICE



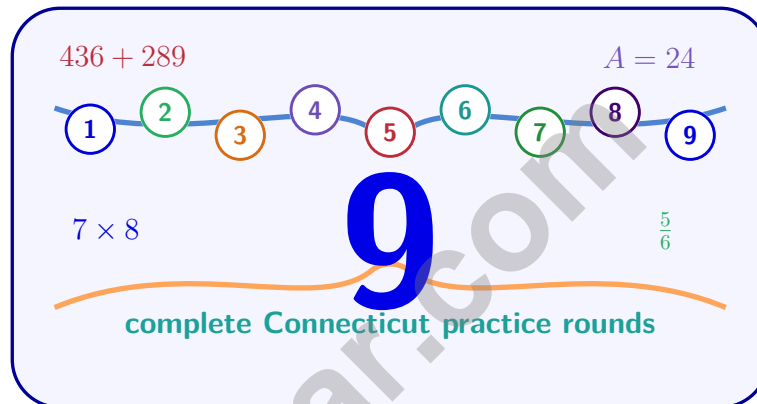
REVIEW



SUCCEED

9 Connecticut Smarter Balanced Grade 6 Math Practice Tests

Standards-Aligned Careful New England Review for Smarter Balanced Assessment Consortium



Nine complete 40-question Grade 6 practice rounds for Smarter Balanced, built for careful New England review with ratios, rational numbers, expressions, equations, geometry, statistics, answer keys, and clear explanations for every item.

Jay Daie and Reza Nazari



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Welcome, Connecticut Math Explorer!

Nine focused rounds using careful New England review

This book gives you nine full Grade 6 practice tests for Smarter Balanced. Each round uses town greens, shoreline routes, and precise classroom thinking as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

Your Connecticut Practice Promise

Make every answer earn its place by reading labels, checking scale, and explaining the step.

Read

Plan

Check

How to Use This Book

A nine-session routine for careful New England review

1. **Preview the skills.** Scan the quick review pages before beginning the first round.
2. **Work in order.** Take one 40-question test at a time in a quiet place.
3. **Mark confidence.** Put a small star beside problems where your plan felt strong.
4. **Correct actively.** Retry missed items before reading the full explanation.
5. **Plan the next round.** Use the growth log to choose one habit and one skill to practice.

Connecticut review rhythm: Pair each test with a review session so errors become a neat checklist.



What Is Inside?

Nine Smarter Balanced tests, 360 questions, and a full review path

Part	What You Will Practice
Tests 1–3	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Tests 4–6	Skill-building rounds with expressions, equations, geometry, data, and problem models.
Tests 7–9	Final stamina rounds for mixed review, neat work, and flexible strategy choices.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Careful new england review means recognizing the skill even when the next question changes topic, changes format, or asks for an explanation.



Scan me!
For more practice
& answers

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5) A company tracks its website visits. The table shows:

Days	1	2	3
Visits	100	200	300

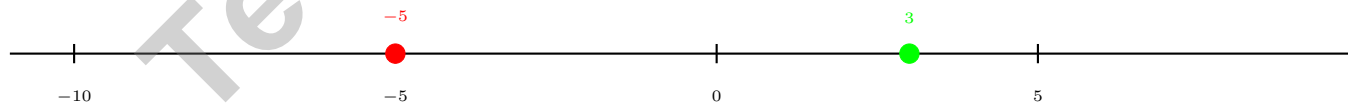
A marketing director says the relationship is proportional because the number of visits increases by 100 each day. Which statement correctly evaluates the relationship?

- A. Yes; constant increase means proportional
 B. No; the relationship must also pass through the origin
 C. Yes; the ratio visits/days is 100 each day
 D. No; visits are always too large
- 6) What is the GCF of 18, 27, and 45?

- A. 3
 B. 9
 C. 6
 D. 18
- 7) Use the distributive property to find 7×18 by rewriting $18 = 10 + 8$.

- A. $70 + 56 = 126$
 B. $7 + 18 = 25$
 C. $140 + 8 = 148$
 D. $70 + 8 = 78$

8)



Which number has a greater absolute value, -5 or 3 ?

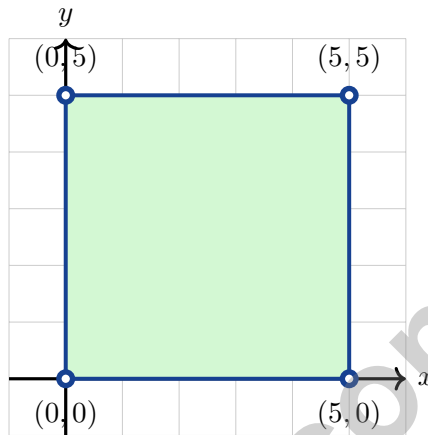
- A. -5 because it is negative
 B. 3 because it is smaller
 C. -5 because $|-5| = 5$ and $5 > 3$
 D. They are equal



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9) Which number has the greatest absolute value?

- A. -2.3
 C. 3.9
 B. -4.1
 D. 1.8

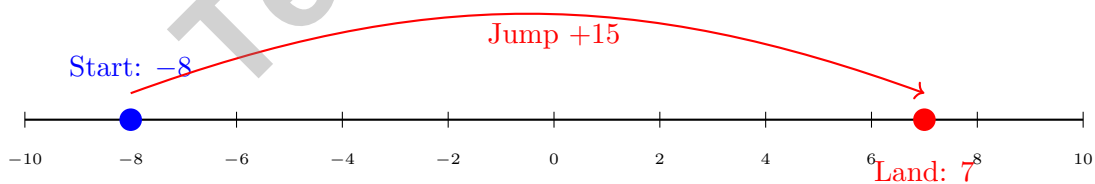


10)

A square has vertices at $(0,0)$, $(5,0)$, $(5,5)$, and $(0,5)$. What is the perimeter?

- A. 15 units
 C. 20 units
 B. 18 units
 D. 25 units

11) A number line shows a starting position at -8 . A jump of $+15$ units moves the position forward. Where does it land?



- A. -23
 C. 23
 B. 15
 D. 7



- 1) A catering company charges a constant fee per person. The graph shows points (6, 72) and (10, 120) on the line representing the cost-per-person ratio. What is the cost per person?
- A. \$8 per person C. \$12 per person
 B. \$10 per person D. \$15 per person
- 2) A student recorded the average temperature change. It dropped 3° every 2 hours for 8 hours. What was the total change?
- A. -12° C. 12°
 B. -8° D. 8°
- 3) An elevator is at floor -8 (basement level). It rises 15 floors. What floor does it reach?
- A. Floor -23 C. Floor 7
 B. Floor -7 D. Floor 23
- 4) Which expression is equivalent to $3 \times 3 \times 3 \times 3$?
- A. 3^2 C. 3^4
 B. 3×4 D. 12^3
- 5) Which expression is equivalent to $10(2y + 1)$?
- A. $20y + 1$ C. $2y + 10$
 B. $12y + 11$ D. $20y + 10$



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1) Which expression is equivalent to $2(5x - 4)$?

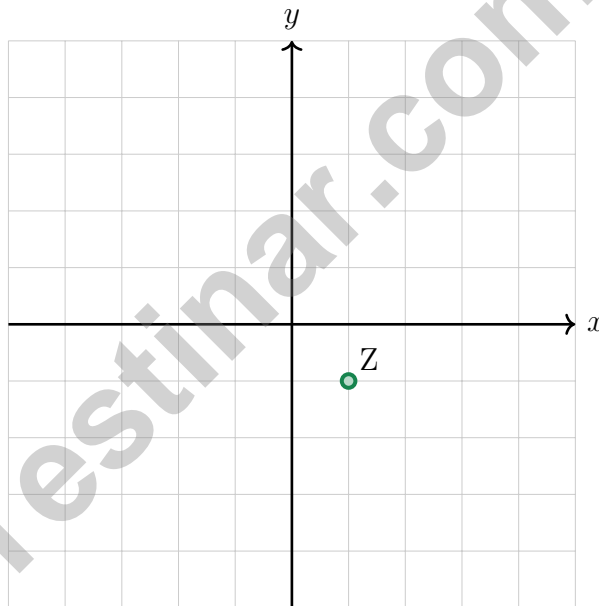
A. $10x - 8$

C. $5x - 8$

B. $7x - 2$

D. $10x - 4$

2) Which data display is BEST for showing how a single numerical variable is distributed across many values?

 A. Bar graph C. Pictograph B. Histogram D. Circle graph

3)

Point Z is at $(1, -1)$. Which rule represents reflection over the x -axis?

A. $(x, y) \rightarrow (x, -y)$

C. $(x, y) \rightarrow (x + a, y + b)$

B. $(x, y) \rightarrow (-x, y)$

D. $(x, y) \rightarrow (-y, -x)$

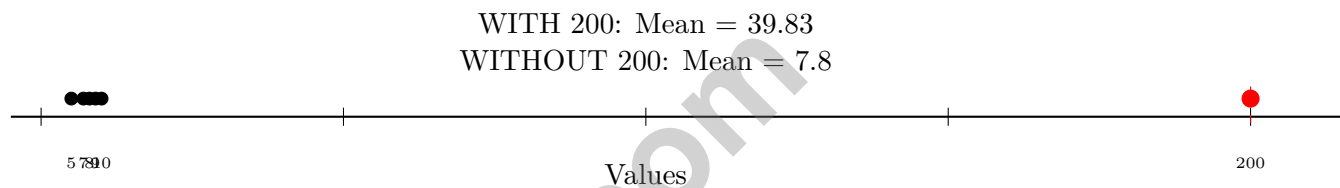


4) A student rewrites a non-statistical question to make it statistical. Which is the BEST rewrite?

Original: "How old is my teacher?"

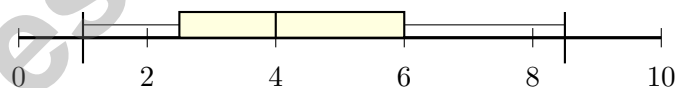
- A. How old are the teachers at our school?
- B. In what year was my teacher born?
- C. How many teachers are there?
- D. What is the average age of all teachers in the United States?

5) A data set is 5, 7, 8, 9, 10, 200. Remove the outlier 200. How does the mean change?



- A. Mean becomes 7.8, a decrease of about 32
- B. Mean becomes 8, a decrease of about 30
- C. Mean becomes 10, a decrease of about 30
- D. Mean stays about the same

6) Use the box plot below. What is the maximum value?



- A. 1
- B. 4
- C. 6
- D. 8.5



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Connecticut Smarter Balanced Practice Test Answer Keys

How to use this Connecticut Smarter Balanced answer section with a Grade 6 student:

1. check the answer first, then write one quick reason the choice is correct
2. mark questions to try again, especially the skills that feel connected to careful New England review
3. rework the problem before reading the full explanation, using this reminder: Make every answer earn its place by reading labels, checking scale, and explaining the step.

A calm Connecticut correction routine turns every missed item into useful practice. Pair each test with a review session so errors become a neat checklist.



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Connecticut Practice Test Answers and Explanations

Review the nine printed Smarter Balanced tests with precise, calm, and ready for the next assessment day habits.

Practice Test 1 Answers and Explanations

- Choice C is correct. **(6.NS.C.7d)** $x = 3$. Since $1 < 3$, the number 1 is less than x .
- Choice C is correct. **(6.NS.B.2)** The number line shows the relationship: 0 to 4,392 on the bottom corresponds to 0 to 244 on the top. The quotient is the top label, which is 244. Verify: $18 \times 244 = 4,392$.
- Choice C is correct. **(6.NS.B.3)** Reading the chart: the digit in the hundredths place is in the third column, which is 7.
- Choice C is correct. **(6.NS.C.5)** Opposites are numbers that are the same distance from zero but on opposite sides. 6 is 6 units right of zero, and -6 is 6 units left of zero, making them opposites.
- Choice C is correct. **(6.NS.C.7d)** The relationship is proportional because the ratio visits/days is constant: $100/1 = 200/2 = 300/3 = 100$. A constant increase alone is not enough to prove proportionality, but the constant ratio confirms it here.
- Choice B is correct. **(6.NS.B.4)** Factors of 18: 1, 2, 3, 6, 9, 18. Factors of 27: 1, 3, 9, 27. Factors of 45: 1, 3, 5, 9, 15, 45. Common to all three: 1, 3, 9. GCF is 9.
- Choice A is correct. **(6.NS.B.4)** $7 \times 18 = 7(10 + 8) = 7 \cdot 10 + 7 \cdot 8 = 70 + 56 = 126$.
- Choice C is correct. **(6.NS.C.7c)** Compare absolute values: $|-5| = 5$ and $|3| = 3$. Since $5 > 3$, the number -5 has the greater absolute value.
- Choice B is correct. **(6.NS.C.6c)** Absolute values: $|-2.3| = 2.3$, $|-4.1| = 4.1$, $|3.9| = 3.9$, $|1.8| = 1.8$. The greatest is 4.1.
- Choice C is correct. **(6.NS.C.8)** Side length: 5 units. Perimeter: $4 \times 5 = 20$ units.
- Choice D is correct. **(6.EE.A.3)** On a number line, jump forward means add: $-8 + 15 = 7$.
- Choice A is correct. **(6.EE.B.6)** Total cost = ticket cost plus snack cost = $12 + x$.
- Choice C is correct. **(6.EE.B.8)** "Fewer than 10" means strictly less than 10, so $c < 10$.
- Choice D is correct. **(6.G.A.2)** $V = 6 \times 4 \times 2 = 24 \times 2 = 48 \text{ in}^3$.
- The correct answer is 90. **(6.RP.A.3c)** 60% of 150 = $0.60 \times 150 = 90$ students.
- Choice C is correct. **(6.G.A.1)** Width: $11 - 3 = 8$ units. Height: $7 - 1 = 6$ units. Area = $8 \times 6 = 48$ square units.
- Choice C is correct. **(6.RP.A.1)** Diameter $d = 2r = 2 \times 4 = 8$ inches.
- The correct answer is B: 2 kg = 2000 g; C: 0.5 miles = 2640 feet. **(6.RP.A.3d)** A is incorrect: $10 \times 8 = 80$ fl oz, not 60. B is correct: $2 \times 1000 = 2000$ grams. C is correct: $0.5 \times 5280 = 2640$ feet. D is incorrect: $1.5 \times 1000 = 1500$ mL, not 150. E is incorrect: $8 \times 2 = 16$ pints, not 32.
- Choice C is correct. **(6.SP.A.2)** This requires collecting data from many novels and computing an average, showing variability and data analysis. The other questions seek single factual answers.
- Choice D is correct. **(6.SP.B.5c)** In a box plot, the vertical line inside the box represents the median of the data.
- Choice A is correct. **(6.SP.B.4)** The histogram shows the 20–30 range with frequency 22 (highest) and the 50–60 range with frequency 4 (lowest), matching the requirement.
- Choice A is correct. **(6.SP.B.4)** Stem 8 has 5 leaves, which is more than any other stem. Thus, the 80–89 range contains the most heart rates.
- Choice D is correct. **(6.NS.B.3)** $-3 + (-6) = -9$; $-12 + 3 = -9$; $5 + (-14) = -9$. All three expressions equal -9 .
- The correct answer is 25000. **(6.NS.C.7d)** 25% of \$100000 = $0.25 \times 100000 = \$25000$.
- Choice D is correct. **(6.EE.A.1)** Parentheses: $4 - 1 = 3$. Exponent: $2^2 = 4$. Multiply: $3 \times 4 = 12$. Subtract: $12 - 1 = 11$.
- Choice C is correct. **(6.EE.A.2b)** A constant term is a number with no variable attached. Here, 7 is the only constant.
- The correct answer is 12. **(6.EE.C.9)** Number of weeks: $\$180 \div \$15 \text{ per week} = 12$ weeks.



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& answers

Inventor's Workshop Note

Hi, Math Inventor!

◇ 9 practice tests. 9 chances to invent new ways to think. You tried things. You changed them. You made your math brain stronger! ◇

★ **Inventors know:** the first try isn't always the best try. Sometimes you fix it. Sometimes you start over. You did all of that! ★

Inventor's Workshop

- **Sketch Pad:** Full of ideas!
- **Toolbox:** Lots of math strategies.
- **Workbench:** Neat and organized.
- **Brave Mind:** You try new things.

Inventor tip: on test day, if your first try doesn't work, switch tools. Inventors don't get stuck on one tool. Pick the right one for the job!

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

Jay Daie

Your Math Inventor

PRACTICE MORE. ACHIEVE MORE.

This **Grade 6 Math Practice Tests** book is designed to help students strengthen their math skills, master important concepts, and build the confidence they need to excel on any test.

With 9 full-length printed tests and 2 online tests, students get the review, practice, and realistic test experience they need to improve accuracy, develop problem-solving abilities, and reach their full potential.

Perfect for classroom use, homework, test preparation, and extra practice at home.

PERFECT FOR:

- ✓ Classroom Practice
- ✓ Homework & Review
- ✓ Independent Learning
- ✓ Test Preparation
- ✓ Skill Reinforcement
- ✓ Building Confidence

★ PRACTICE TODAY.
SUCCEED TOMORROW.

WHAT STUDENTS WILL 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 math concepts aligned with standards.



Test Confidence

Get familiar with test formats and improve accuracy.



Achieve Success

Build confidence and perform your best on test day.

TOPICS COVERED

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



2 ONLINE TESTS

Extra online practice to reinforce learning and build confidence.

MORE PRACTICE. GREATER RESULTS.

Give your child the tools needed to develop strong math skills, confidence, and a positive attitude toward learning.



9 PRINTED
PRACTICE TESTS



2 ONLINE
PRACTICE TESTS



DETAILED ANSWER
EXPLANATIONS