

10

Connecticut

Smarter Balanced

GRADE

6

MATH

PRACTICE TESTS

Standards-Aligned Review
Mixed Practice & Answer Key



10 PRINTED TESTS

Realistic practice to build confidence and mastery



2 ONLINE TESTS

Extra practice for continued success



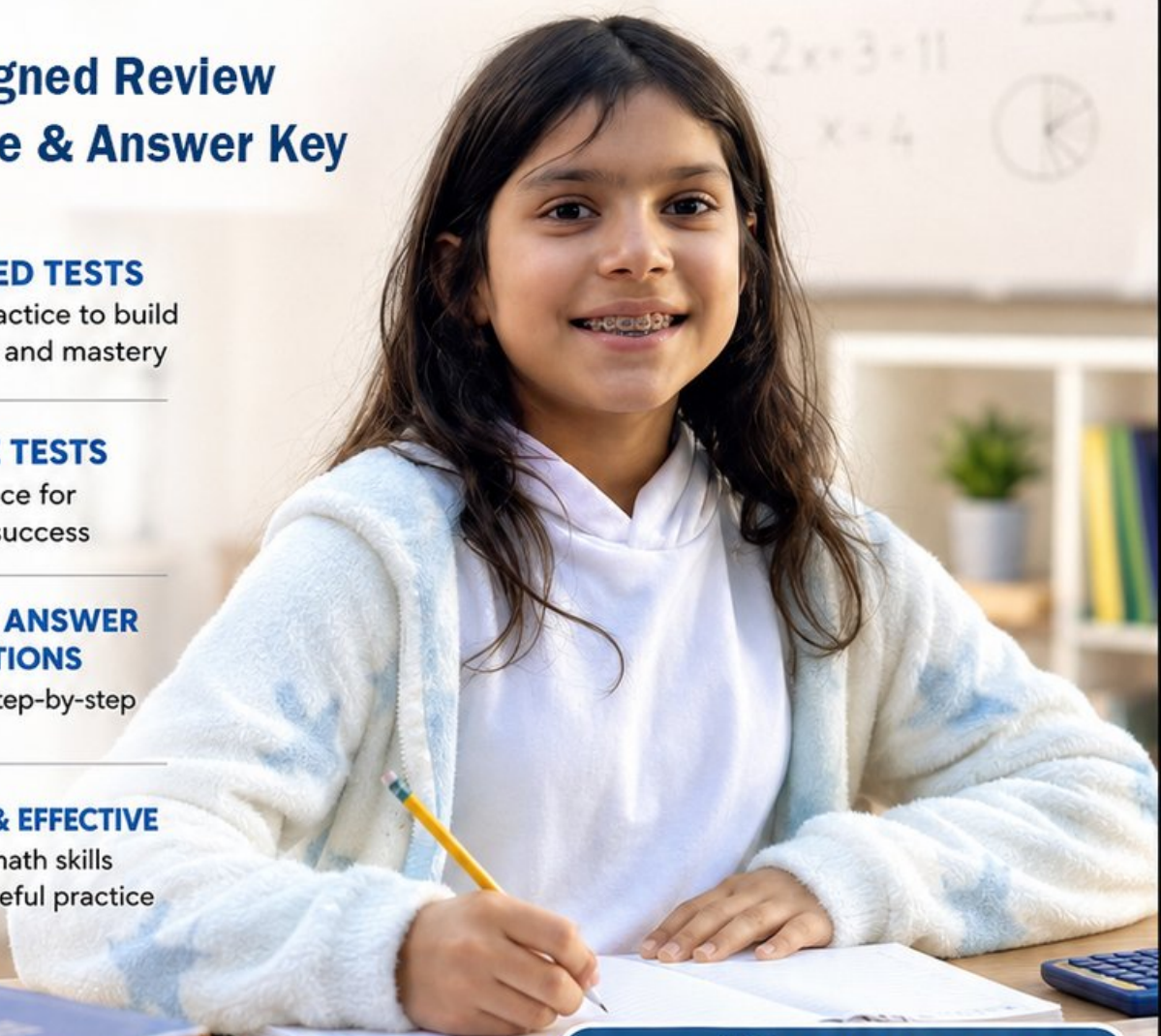
DETAILED ANSWER EXPLANATIONS

Learn with step-by-step solutions



FOCUSED & EFFECTIVE

Target key math skills with purposeful practice



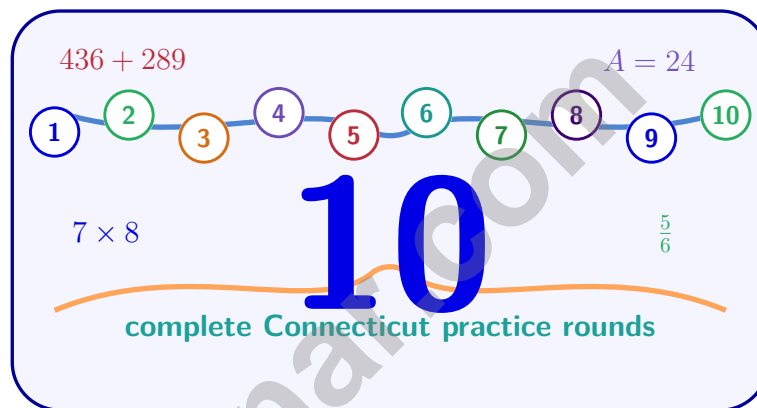
10 PRINTED TESTS
+ 2 ONLINE TESTS

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

PRACTICE • REVIEW • SUCCEED

10 Connecticut Smarter Balanced Grade 6 Math Practice Tests

Standards-Aligned Precise New England Reasoning for Smarter Balanced Assessment Consortium



Ten complete 40-question Grade 6 practice rounds for Smarter Balanced, 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!

Ten steady rounds on a New England math route

This book gives you ten full Grade 6 practice tests for Smarter Balanced. Each round uses shoreline towns, green spaces, and careful 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

Keep units and labels close to every calculation. I will slow down for the question, circle what matters, solve one step at a time, and use mistakes as clues for getting stronger.

Read

Plan

Check

How to Use This Book

A ten-session routine for precise New England reasoning

1. **Preview the skills.** Read the quick review pages before the first test.
2. **Take one test at a time.** Work in a quiet place and answer all 40 questions.
3. **Mark your confidence.** Put a small star beside problems you solved with a strong plan.
4. **Check, then retry.** For missed questions, try the problem again before reading the explanation.
5. **Track your next move.** Use the growth log to name one habit and one skill for the next test.

Connecticut review rhythm: Test one day, correct carefully the next day, then return for the next round when your corrections feel clear.



What Is Inside?

Ten Smarter Balanced tests, 400 questions, and a full review path

Part	What You Will Practice
Tests 1–3	Warm-up 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	Stamina rounds for mixed review, neat work, and flexible strategy choices.
Test 10	Final Connecticut 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. Precise new england reasoning means recognizing the skill even when the next question changes topic.



Scan me!
For more practice
& answers

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5) A cutting board has 3 feet of length. A pattern repeats every $\frac{1}{3}$ foot. How many times does the pattern repeat?

A. 6

C. 9

B. 8

D. 12

6) Which expression represents the quotient when 6,048 is divided by 36?

A. 168

C. 182

B. 178

D. 190

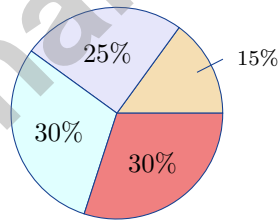
7) A container has 15 balls: 5 red, 4 blue, 3 yellow, and 3 green. If one ball is drawn at random, what is the probability it is **not** red?

A. $\frac{2}{3}$

C. $\frac{1}{3}$

B. $\frac{2}{5}$

D. $\frac{3}{5}$



8)

A circle graph shows expenses for a business. If the total budget is \$4000, how much is allocated to the 15% category?

A. \$500

C. \$700

B. \$800

D. \$600



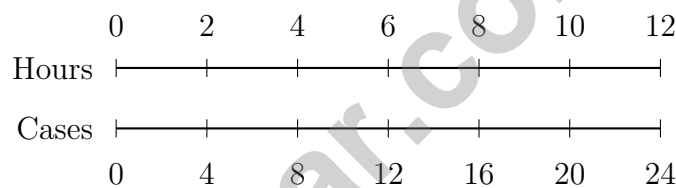
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9) A classroom has 8 boys and 10 girls. Write the ratio of boys to girls in the form “ a to b ”.

- A. 10 to 8
- B. 18 to 8
- C. 8 to 18
- D. 8 to 10

10) A jewelry maker uses beads in a pattern: 4 red beads for every 6 blue beads. Which statement is NOT correct?

- A. The ratio of red to blue is 4 : 6.
- B. The ratio simplifies to 2 : 3.
- C. For every 2 red beads there are 3 blue beads.
- D. For every 3 red beads there are 4 blue beads.



11)

Based on the double number line, what is the rate in cases per hour?

- A. 2 cases per hour
- B. 4 cases per hour
- C. 6 cases per hour
- D. 8 cases per hour

12) A library organizes fiction and non-fiction books in a 9 : 11 ratio. The table shows the collection:

Fiction Books	Non-Fiction Books
9	11
18	22
?	33

- A. 25
- B. 36
- C. 30
- D. 27

1) How many terms does the expression $9a + 4b + 3c + 2$ have?

A. 2

C. 4

B. 3

D. 5

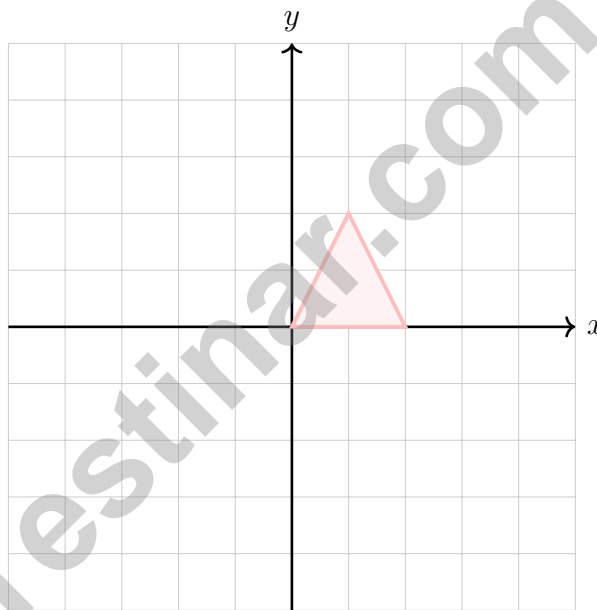
2) A parallelogram has a base of 12 cm and an area of 60 cm^2 . What is its height?

A. 3 cm

C. 6 cm

B. 8 cm

D. 5 cm



3)

Which of the following represents a reflection over the x -axis?

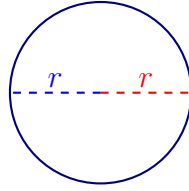
A. $(x, y) \rightarrow (x, -y)$

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

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

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





4)

If $r = 2.5$ cm, what is d ?

If a circle has a radius of 2.5 cm, what is the diameter?

- A. 1.25 cm C. 5 cm
 B. 2.5 cm D. 6.25 cm
- 5) Error Analysis: A student claims, “The question ‘How old is my parent?’ is statistical because I need to ask my parent to find the answer.”
What is the error in this reasoning?
- A. Parents don’t like to share their age. C. Your parent will not give an accurate answer.
 B. Statistical questions are always asked in school. D. Asking someone a question does not make it statistical.
- 6) A gym tracks daily attendance. The range is 45 people. If the minimum attendance is 30, what is the maximum?
- A. 45 C. 75
 B. 60 D. 105
- 7) A data set has 8 values. To find the median, you must:
- A. Find the middle value C. Find the mode
 B. Find the average of the 4th and 5th values D. Count all the values



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& answers

1) What is the perimeter of a square with vertices at $(0, 0)$, $(4, 0)$, $(4, 4)$, and $(0, 4)$?

A. 8 units

C. 16 units

B. 12 units

D. 20 units

2) A proportional relationship is shown on a graph. Two points on the line are $(3, 21)$ and $(7, 49)$. Find the constant of proportionality (the unit rate).



3) Convert 0.09 to a percent.

A. 0.9%

C. 90%

B. 900%

D. 9%

4) A video game costs \$48 at the store. A customer has a coupon for 33% off. What is the approximate sale price?

A. \$32

C. \$16

B. \$24

D. \$40

5) A model airplane is built at a scale of $1 : 200$. If the real airplane is 60 meters long, how long is the model in centimeters?

A. 15 cm

C. 25 cm

B. 20 cm

D. 30 cm



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Connecticut Smarter Balanced Practice Test Answer Keys

How to use this section with a Grade 6 student:

1. check the answer first
2. mark questions to try again
3. rework the problem before reading the full explanation

A calm correction routine turns every missed item into useful practice.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- Choice D is correct.** (6.EE.A.1) Total is $(-2) + (+1) + (-1) = -2 + 1 - 1 = -2$ relative to par.
- Choice B is correct.** (6.SP.B.5c) Discretionary: $100\% - 60\% - 25\% = 15\%$.
- Choice B is correct.** (6.EE.B.8) $8 \div 64 = \$0.125$ per ounce, which is 12.5 cents per ounce.
- Choice C is correct.** (6.SP.B.4) Multiply: $7 \times 2 = 14$ feet.
- Choice C is correct.** (6.SP.B.5) $3 \div \frac{1}{3} = 3 \times 3 = 9$.
- Choice A is correct.** (6.SP.B.4) $6,048 \div 36 = 168$. Verify: $36 \times 168 = 6,048$.
- Choice A is correct.** (6.EE.C.9) Non-red balls = $4 + 3 + 3 = 10$. Probability = $\frac{10}{15} = \frac{2}{3}$.
- Choice D is correct.** (6.RP.A.3) 15% of \$4000 is $0.15 \times 4000 = \$600$.
- Choice D is correct.** (6.NS.C.5) Read the words carefully: “boys to girls” means the boys number comes first. There are 8 boys and 10 girls, so the ratio is 8 to 10.
- Choice D is correct.** (6.NS.B.3) The bead pattern is 4 : 6, which simplifies to 2 : 3. Choice D says 3 : 4, which changes the relationship, so it is the statement that is not correct.
- Choice A is correct.** (6.EE.A.2b) From the double number line, 4 cases correspond to 2 hours. The rate is $4 \div 2 = 2$ cases per hour.
- Choice D is correct.** (6.SP.A.2) The ratio is 9 : 11. When non-fiction is 33 (multiply by 3), fiction is $9 \times 3 = 27$.
- Choice B is correct.** (6.G.A.1) Using the point (2, 1): unit rate = $1 \div 2 = 0.5$ points per minute. Or from (10, 5): unit rate = $5 \div 10 = 0.5$ points per minute.
- Choice D is correct.** (6.G.A.3) To convert a percent to a decimal, divide by 100 (or move the decimal two places left). $19\% = 0.19$.
- The correct answer is (2, -4).** (6.NS.C.7d) Reflecting over the x -axis negates the y -coordinate. Vertex $C(2, 4) \rightarrow C'(2, -4)$.
- Choice D is correct.** (6.EE.A.3) Decrease is $\$250 - \$200 = \$50$. Percent decrease is $\frac{50}{250} = 0.20 = 20\%$.
- The correct answer is 45.** (6.EE.A.2a) Ordered: 32, 38, 42, 45, 48, 50, 55. The middle (4th) value is 45.
- The correct answer is Both A and B have volume 24.** (6.EE.A.2c) A: $6 \times 2 \times 2 = 24 \checkmark$. B: $4 \times 3 \times 2 = 24 \checkmark$. C: $8 \times 3 \times 2 = 48$. D: $5 \times 5 \times 1 = 25$. E: $4 \times 4 \times 2 = 32$. Only A and B equal 24 cubic units.
- Choice A is correct.** (6.EE.B.5) Ratio 5 : 3 with width 12 means each part is $12 \div 3 = 4$ feet. Length is $5 \times 4 = 20$ feet.
- Choice A is correct.** (6.NS.C.7c) Divide: $64 \div 12 = 5\frac{4}{12} = 5\frac{1}{3}$ feet.
- The correct answer is 4.** (6.EE.B.8) Ordered data: 68, 69, 70, 71, 72, 73, 75. $Q_1 = 69$, $Q_3 = 73$, so IQR = $73 - 69 = 4$.
- Choice B is correct.** (6.G.A.1) A debit card draws directly from her bank account, reducing the balance by the purchase amount. Credit cards defer payment (she borrows); interest is earned on savings, not debit purchases; and balances don't increase from purchases.
- Choice B is correct.** (6.G.A.2) Option A has a constant ratio: $6/2 = 3$, $12/4 = 3$, and $18/6 = 3$. Option B does not: $4/2 = 2$, $7/4 = 1.75$, and $10/6 \approx 1.67$.
- Choice A is correct.** (6.NS.C.8) Align the decimal points. In the tenths place, 6 is smaller than 8, so regroup one whole as ten tenths: the 5 becomes 4 and the tenths become 16. Then $16 - 8 = 8$ tenths, $4 - 3 = 1$ one, and $2 - 1 = 1$ ten, so the result is 11.8.
- The correct answer is 30.** (6.SP.A.2) $Q_3 - Q_1 = 80 - 50 = 30$.
- Choice D is correct.** (6.RP.A.1) This is a GCF problem. The GCF of 35 and 49 is 7. So they can make 7 rows with 5 tomato and 7 pepper plants per row.
- Choice D is correct.** (6.NS.B.3) A, B, and C all peel out different-but-valid common factors (8, 4, 2) yet land on $40 \div 24$ every time—that is flexibility the distributive property gives you.
- Choice A is correct.** (6.NS.A.1) Opposite numbers all have equal absolute values. $|-10| = |10| = 10$, $|-6| = |6| = 6$, $|-2| = |2| = 2$.



Hi, Math Champion!

◇ You trained hard! 10 full practice tests is real practice. Your math game is way better now than when you started. ◇

★ **Coach's truth:** kids who practice get better. You practiced. You got better. That's how it works!
★

Your Game Stats

- **Energy:** HIGH! You can finish a long test.
- **Smart Plays:** You know lots of strategies.
- **Calm Head:** You stay cool with hard problems.
- **Game-Day Ready:** You feel strong and prepared.

Coach's tip: the night before the test, get good sleep. Eat a good breakfast. Bring a sharp pencil. Trust your training!

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

Jay Daie

Your Math Coach

PRACTICE MORE. ACHIEVE MORE. SUCCEED!

This **Grade 6 Math Practice Tests** book is designed to help students build strong math skills, deepen their understanding of key concepts, and gain the confidence they need to succeed on any test.

With 10 full-length printed tests and 2 online tests, students get the review, practice, and realistic test experience they need to improve accuracy, strengthen 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

★ **CONFIDENCE TODAY.
SUCCESS 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.



Deepen 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.



10 PRINTED
PRACTICE TESTS



2 ONLINE
PRACTICE TESTS



DETAILED ANSWER
EXPLANATIONS