

7 Connecticut

Smarter Balanced

7
PRINTED
TESTS

+
2
ONLINE
TESTS

Grade 6 MATH

PRACTICE TESTS

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

Standards-Aligned *Steady Southern*
Problem Solving for Comprehensive
Assessment Program



7 Full-Length
Printed Tests



Standards-Aligned
Math Practice



Detailed Answer Keys
and Explanations



Build Confidence.
Achieve Success.



You've
Got
This!



PREPARE
PRACTICE
SUCCEED



PRACTICE
WITH PURPOSE



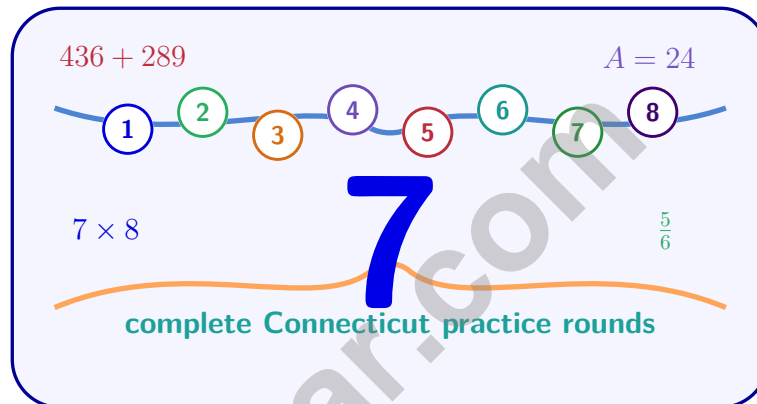
STRENGTHEN
MATH SKILLS



REVIEW, IMPROVE,
AND SUCCEED

7 Connecticut Smarter Balanced Grade 6 Math Practice Tests

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



Seven 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!

Eight focused rounds using careful New England review

This book gives you seven 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 seven-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?

Eight Smarter Balanced tests, 320 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.
Test 7	Final stamina round 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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- 1) A business had a monthly budget of \$8000. They overspent by \$1200. What is the actual spending, and what percent over budget were they?
- A. Spent \$9200; 15% over C. Spent \$6800; 15% under
 B. Spent \$9200; 13% over D. Spent \$9200; 12% over
- 2) Find the mean of the data set: 4, 6, 8, 10, 12.
- A. 6 C. 10
 B. 8 D. 40
- 3) A basketball team's scores in seven games are 56, 62, 58, 71, 65, 60, 68. When ordered: 56, 58, 60, 62, 65, 68, 71. Identify Q1.
- A. 56 C. 60
 B. 62 D. 58
- 4) A survey asks students: "How many hours of homework per week?" Two students analyzed the results differently:

Statistic	Student X says	Student Y says
Mean	8 hours	8 hours
Median	8 hours	8 hours
Std Dev	2 hours	5 hours

What is the key difference in their interpretations?

- A. Student X's data is more spread out C. Both datasets have identical variability
 B. Student Y's data is more spread out D. The standard deviation doesn't affect interpretation



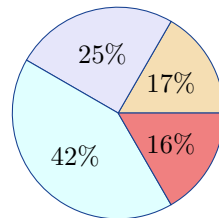
5) The probability that it rains tomorrow is $\frac{3}{5}$. What is the probability that it does **not** rain?

A. $\frac{1}{5}$

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

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

D. $\frac{4}{5}$



6)

A circle graph displays 500 survey responses. What is the central angle for the 42% section?

A. 151.2°

B. 144°

C. 162°

D. 168°

7) A video streaming service requires a constant internet speed. A file of 2.4 gigabytes downloads in 8 minutes. What is the download rate in gigabytes per minute?

A. 0.2 GB/min

B. 0.3 GB/min

C. 0.4 GB/min

D. 0.5 GB/min

8) A fish tank is 8 inches long, 6 inches wide, and 5 inches tall. How many cubic inches of water can it hold?

A. 19 in^3

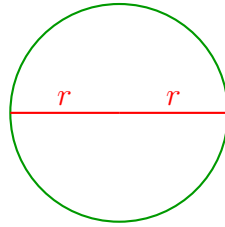
B. 38 in^3

C. 120 in^3

D. 240 in^3



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If $r = 15$ ft, $A = ?$

9)

A circle has a radius of 15 feet. Using $\pi \approx 3.14$, what is the approximate area?

- A. 47.1 ft^2 C. 235.5 ft^2
 B. 94.2 ft^2 D. 706.5 ft^2

10) In a box plot, the upper whisker extends from Q_3 to:

- A. The median C. The maximum
 B. Q_1 D. The mean

11) Using the same stem-and-leaf plot from Question 2, what is the maximum height?

- A. 165 cm C. 175 cm
 B. 167 cm D. 177 cm

12) Which display would be BEST for showing a student's growth in math test scores over an entire school year?

- A. Line graph C. Bar graph of categories
 B. Circle graph D. Pictograph



- 1) A smoothie contains blueberries and strawberries in the ratio 3 : 4. Which pair could NOT describe this smoothie?
- A. 6 blueberries and 8 strawberries C. 12 blueberries and 15 strawberries
- B. 9 blueberries and 12 strawberries D. 15 blueberries and 20 strawberries

Area Model Division: $2,688 \div 32$



$$32 \times 80$$

$$= 2,560$$

$$32 \times 4$$

$$= 128$$

$$\text{Total: } 2,560 + 128 = 2,688$$

- 2) Using the area model above, what is the quotient $2,688 \div 32$?
- A. 84 C. 88
- B. 86 D. 90
- 3) A teacher wants to divide 24 students into equal groups with no students left over. Which group size is NOT possible?
- A. 3 students per group C. 6 students per group
- B. 8 students per group D. 5 students per group
- 4) Which of these situations would be represented by a negative integer?
- A. Climbing a mountain 200 meters C. Swimming down 5 meters below the surface
- B. A temperature increase of 10° D. Earning 50 dollars



5) A garden plot covers 120 square meters. If 45% is planted with vegetables, how many square meters are planted with vegetables?

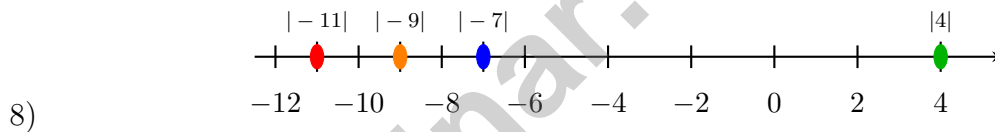
- A. 36 m^2 C. 54 m^2
 B. 45 m^2 D. 66 m^2

6) A jewelry maker has 0.75 kilograms of silver. How many grams of silver does she have?

- A. 7.5 grams C. 750 grams
 B. 75 grams D. 7,500 grams

7) Factor $16 + 32$ using the GCF.

- A. $2(8 + 16)$ C. $8(2 + 4)$
 B. $4(4 + 8)$ D. $16(1 + 2)$



Which expression has the smallest absolute value?

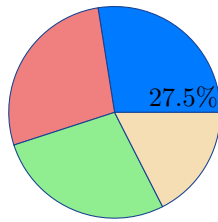
- A. $|-11|$ C. $|4|$
 B. $|-7|$ D. $|-9|$

9) What is the difference between the population and the sample?

- A. The population is smaller than the sample.
 B. The population is the entire group being studied; the sample is a subset that is surveyed.
 C. The population is the number of people; the sample is the data.
 D. There is no difference.



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1)

A survey asked 360 people about favorite season. The circle graph shows 27.5% prefer summer. How many people prefer summer?

- A. 99 C. 108
 B. 90 D. 117

2) A horizontal line segment goes from $(2, 7)$ to $(10, 7)$. What is its length?

- A. 6 units C. 8 units
 B. 7 units D. 9 units

3) Which two statements both describe the same ratio?

- Statement X: The ratio is 5 : 15.
 Statement Y: For every 1 apple there are 3 oranges.

- A. Only Statement X is correct. D. The statements describe different ratios.
 B. Only Statement Y is correct.
 C. Both statements describe the same ratio.



4)

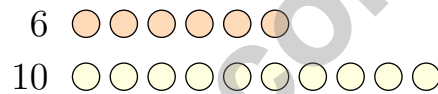
Bags	2	4	6	8
Apples	14	28	42	56

Based on the table, what is the unit rate in apples per bag?

- A. 5 apples per bag
 - B. 7 apples per bag
 - C. 14 apples per bag
 - D. 28 apples per bag
- 5) On a map, the library is at (3, 5) and the park is at (9, 5). If each unit represents 100 meters, what is the distance between the library and the park in meters?

- A. 400 m
- B. 500 m
- C. 600 m
- D. 700 m

6)



The diagram represents a ratio of 6 : 10. Which statement about the ratio 6 : 10 is FALSE?

- A. It simplifies to 3 : 5.
 - B. It can be written as $\frac{6}{10}$ or $\frac{3}{5}$.
 - C. It is equivalent to 12 : 20.
 - D. It is equivalent to 5 : 6.
- 7) A recipe makes 24 servings and uses 6 cups of milk. How much milk per serving?
- A. 0.25 cups
 - B. 0.5 cups
 - C. 1 cup
 - D. 4 cups



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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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& answers

Connecticut Practice Test Answers and Explanations

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

Practice Test 1 Answers and Explanations

- 1) **Choice A is correct.** **(6.EE.C.9)** Actual spending: $\$8000 + \$1200 = \$9200$. Percent over: $\$1200 \div \$8000 = 0.15 = 15\%$.
- 2) **Choice B is correct.** **(6.SP.B.5c)** Mean = $\frac{4 + 6 + 8 + 10 + 12}{5} = \frac{40}{5} = 8$.
- 3) **Choice D is correct.** **(6.SP.B.5c)** Median is 62 (middle of 7 values). Lower half: 56, 58, 60. Q1 is the median of the lower half, which is 58.
- 4) **Choice B is correct.** **(6.SP.B.5)** Same mean and median indicate similar centers, but Student Y's higher standard deviation (5 vs 2) shows much greater variability. Student Y's dataset has students doing anywhere from very little to very much homework; Student X's is more clustered around 8 hours.
- 5) **Choice B is correct.** **(6.NS.B.3)** Using complementary events: $P(\text{not rain}) = 1 - P(\text{rain}) = 1 - \frac{3}{5} = \frac{2}{5}$.
- 6) **Choice A is correct.** **(6.NS.A.1)** 42% of 360° is $0.42 \times 360^\circ = 151.2^\circ$.
- 7) **Choice B is correct.** **(6.RP.A.3b)** $2.4 \div 8 = 0.3$ gigabytes per minute.
- 8) **Choice D is correct.** **(6.G.A.2)** $V = 8 \times 6 \times 5 = 48 \times 5 = 240 \text{ in}^3$.
- 9) **Choice D is correct.** **(6.RP.A.1)** Area = $\pi r^2 \approx 3.14 \times 15^2 = 3.14 \times 225 = 706.5 \text{ ft}^2$.
- 10) **Choice C is correct.** **(6.RP.A.1)** The upper whisker connects Q_3 to the maximum value in the dataset.
- 11) **Choice C is correct.** **(6.SP.B.4)** The largest stem is 17, and the largest leaf for that stem is 5, so the maximum is 175 cm.
- 12) **Choice A is correct.** **(6.RP.A.3)** A line graph is ideal for showing trends and changes over time. Circle graphs show parts of a whole; bar graphs compare categories; pictographs use symbols for counts.
- 13) **Choice C is correct.** **(6.EE.A.2b)** The first term is $5p$, so its coefficient is 5. (Note: this can be combined with $7p$ to get $12p$ as like terms.)
- 14) **The correct answer is 42.** **(6.NS.B.4)** Find prime factors: $14 = 2 \times 7$ and $21 = 3 \times 7$. The LCM uses each prime factor the greatest number of times it appears: $2 \times 3 \times 7 = 42$.
- 15) **Choice B is correct.** **(6.EE.B.6)** Distance = speed \times time = $a \times 5 = 5a$ miles.
- 16) **Choice C is correct.** **(6.EE.B.5)** Multiply both sides by 6: $x = 5 \times 6 = 30$.
- 17) **Choice C is correct.** **(6.EE.B.8)** $n \geq 4$ requires n to be 4 or greater. Since $3 < 4$, it does not satisfy the inequality.
- 18) **Choice B is correct.** **(6.G.A.1)** For a right triangle, $A = \frac{1}{2} \times 5 \times 12 = 30 \text{ m}^2$.
- 19) **Choice C is correct.** **(6.G.A.3)** Side length = $8 - 2 = 6$ units. Area = $6 \times 6 = 36$ square units.
- 20) **The correct answer is -1.5 .** **(6.NS.C.7d)** Compare the values on a number line. The farthest left value is -1.5 .
- 21) **The correct answer is Both scenarios require rounding up because partial containers/buses must be counted as whole units.** **(6.NS.B.2)** A is correct: $5,432 \div 32 = 169$ remainder 24, so 170 crates are needed. C is correct: $6,250 \div 48 = 130$ remainder 10, so 131 buses are needed. B, D, and E distribute items equally with no rounding needed (they divide evenly or we report the quotient with remainder).
- 22) **Choice A is correct.** **(6.RP.A.3d)** A rate compares two quantities measured in different units. Here, cups of flour are compared to eggs, so the comparison is a rate: 2 cups of flour for every 3 eggs.
- 23) **Choice D is correct.** **(6.RP.A.3c)** If the discount is 20%, the customer pays 80% of the original price. So $0.80 \times \text{original} = \80 . Original = $\$80 \div 0.80 = \100 .
- 24) **Choice A is correct.** **(6.RP.A.3d)** Divide: $2500 \div 1000 = 2.5$ kg. The student's error of multiplying would give an absurdly large number.
- 25) **Choice A is correct.** **(6.NS.C.7d)** 30% of $\$80$ is $0.30 \times 80 = \$24$.



Hi, Math Champion!

◇ Look what you did! 7 full practice tests. That's hundreds of math problems. You started as a learner. You are now a math athlete. ◇

★ **Champions know:** hard work pays off. You did the hard work. Your math skills are strong because you practiced. ★

Champion's Stats

- **Focus:** HIGH! You stay on task.
- **Speed:** STRONG! You move at the right pace.
- **Accuracy:** SHARP! You catch your own mistakes.
- **Mindset:** CHAMPION! You believe in yourself.

Champion tip: on test day, walk in proud. You trained for this. You are ready!

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

Jay Daie

Your Math Coach

MASTER TODAY. SUCCEED TOMORROW.

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 comprehensive assessments.

With 7 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 concepts aligned with standards through meaningful practice.



Test Confidence

Become familiar with test formats and improve accuracy and speed.



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.



7 FULL-LENGTH
PRINTED TESTS



STANDARDS-
ALIGNED PRACTICE



DETAILED ANSWER
KEYS & EXPLANATIONS