

Connecticut

Smarter Balanced

GRADE 6

MATH

PRACTICE TESTS

Standards Aligned Problem Solving
For Comprehensive Assessment Programs



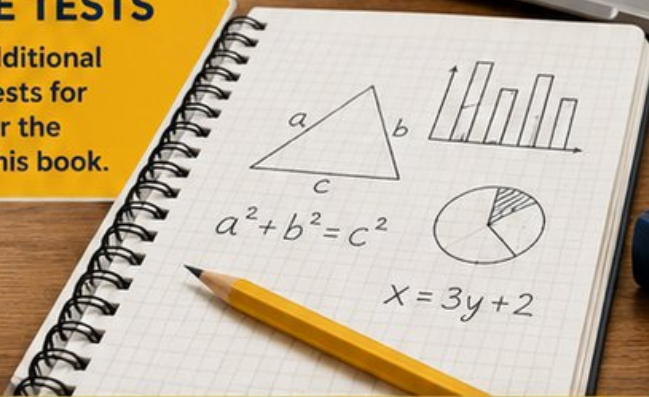
5 PRINTED TESTS

- ✓ Full-Length Practice Tests
- ✓ Realistic Questions
- ✓ Answer Key & Explanations



+ 2 ONLINE TESTS

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

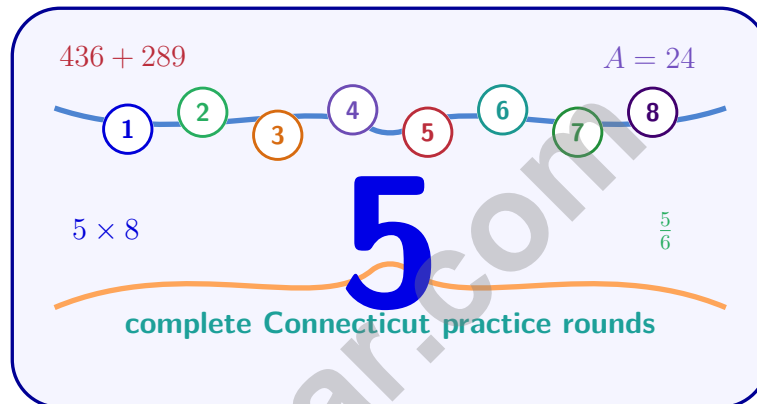


PREPARE • PRACTICE • SUCCEED



5 Connecticut Smarter Balanced Grade 6 Math Practice Tests

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



Five 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.

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Welcome, Connecticut Math Explorer!

Eight focused rounds using careful New England review

This book gives you five 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 five-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 1–2	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Tests 3–4	Skill-building rounds with expressions, equations, geometry, data, and problem models.
Test 5	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.

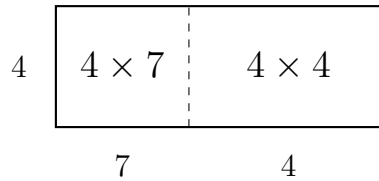


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- 1) The diagram below shows an area split into two rectangles. What is the factored form?



- A. $4(7 + 4) = 44$
 C. $(7 + 4)(4) = 44$
 B. $7(4 + 4) = 56$
 D. $4(7 \times 4) = 112$
- 2)
- The pie chart shows a budget allocation. If monthly income is \$4000 and Essential (blue) is 50%, Want (yellow) is 25%, Debt (red) is 15%, and Save (green) is 10%, how much is allocated to Save?
- A. \$200
 C. \$400
 B. \$300
 D. \$600
- 3) A factory fills bottles with 500 mL of juice each. How many liters is needed to fill 6 bottles?
- A. 0.3 liters
 C. 30 liters
 B. 3 liters
 D. 300 liters



- 8) A fitness trainer gives personal training sessions. The table shows the rate of clients trained:

Clients Trained	Time (weeks)
5	2
10	4
?	6

- A. 12 C. 15
 B. 13 D. 18
- 9) A ratio table is being converted to points for graphing. The table shows:

Students	Desks
4	2
8	4
12	6

If students are on the x-axis and desks are on the y-axis, which ordered pair is correct?

- A. (2, 4) C. (4, 4)
 B. (4, 2) D. (2, 2)
- 10) Class A has range 10 and Class B has range 15. By how much is Class B's range greater?



1) What is the value of $|-12|$?

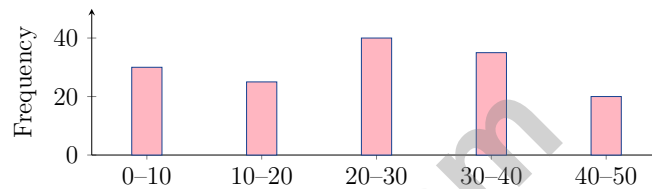
A. 12

C. -12

B. 0

D. 24

2) A histogram shows that the most common range is 20–30 with frequency 40. If the total number of data points is 150, what percentage of data falls in the 20–30 range?



A. 20%

C. 40%

B. 26.7%

D. 33.3%

3) A farmer compares two crop varieties' yields (pounds per acre). Variety A shows a dot plot clustered at 480–520. Variety B shows a dot plot with equal spacing from 400 to 600. What can be inferred?

A. Variety A has higher yield

C. Variety B has a larger mean

B. Variety A is more reliable; Variety B is unpredictable

D. Variety B is more consistent

4) A box of candies has 30 pieces: 10 red, 8 green, 7 yellow, and 5 blue. If one piece is selected at random, what is the probability it is yellow?

A. $\frac{1}{6}$

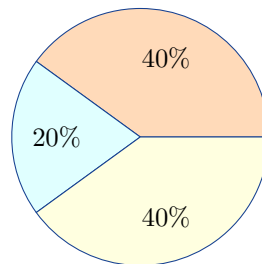
C. $\frac{1}{3}$

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

D. $\frac{7}{30}$



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5)

A circle graph shows 300 total items. How many items are in one of the 40% sections?

- A. 120 C. 80
 B. 100 D. 140

6) A science class recorded the heights of 50 plants in cm: 8, 12, 15, 18, 20, 21, 22, 23, 25, 26, 28, 30, 31, 33, 35, 38, 40, 42, 44, 46, 48, 50, 52, 54, 55, 57, 59, 61, 62, 64, 65, 67, 68, 70, 72, 74, 75, 77, 78, 80, 82, 84, 85, 87, 88, 90, 92, 94, 95, 98.

Which display would be BEST for showing the spread and frequency of plant heights?

- A. Bar graph showing each height C. Circle graph dividing by plant type
 B. Pictograph with plant symbols D. Histogram with intervals of 10 cm

7) Compute $-18 \div (-3)$.



1) A company's revenue was \$500,000 last year. This year, revenue increased by \$75,000. What is the percent increase?

- A. 10% C. 15%
 B. 20% D. 25%

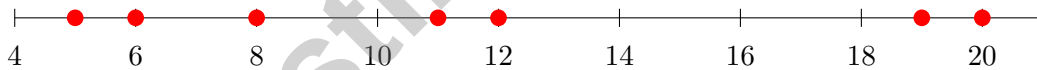
2) A student asks: "How tall are the students in my class?" Identify the population being sampled.

- A. The height measurement in inches C. All students in the school
 B. The students in the class who are measured D. The students in the class

3) What is the median of the data set: 3, 7, 9, 12, 15?

- A. 9 C. 12
 B. 7 D. 10.2

4) The data set 8, 12, 5, 19, 11, 6, 20 is displayed on a number line. What is the range?



- A. 5 C. 15
 B. 12 D. 20



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

Practice Test 1 Answers and Explanations

- Choice A is correct.** **(6.NS.B.4)** The rectangle has a common height of 4 with widths 7 and 4. The factored form is $4(7 + 4)$, which equals $28 + 16 = 44$.
- Choice C is correct.** **(6.EE.C.9)** Save allocation: 10% of $\$4000 = 0.10 \times 4000 = \400 .
- Choice B is correct.** **(6.RP.A.3d)** Total mL: $6 \times 500 = 3000$ mL. Convert: $3000 \div 1000 = 3$ liters.
- Choice C is correct.** **(6.RP.A.1)** The ratio $60 : 1$ (miles to hours) means 60 miles per 1 hour. For 5 hours, multiply: $60 \times 5 = 300$ miles.
- Choice A is correct.** **(6.RP.A.3)** Nuts have 6 parts. Dried fruit plus chocolate also has $4 + 2 = 6$ parts, so the ratio is $6 : 6$, which simplifies to $1 : 1$.
- Choice A is correct.** **(6.RP.A.3d)** Divide sugar by cookies: $\frac{1}{2} \div 12 = \frac{1}{2} \times \frac{1}{12} = \frac{1}{24}$ cup per cookie.
- Choice C is correct.** **(6.RP.A.3b)** 48-oz: $\$8.00 \div 48 \approx \$0.167/\text{oz}$. 64-oz: $\$9.60 \div 64 = \$0.15/\text{oz}$. The 64-oz bottle has the better (lower) unit price.
- Choice C is correct.** **(6.RP.A.3)** The rate is $5 : 2$ or 2.5 clients per week. In 6 weeks: $2.5 \times 6 = 15$ clients.
- Choice B is correct.** **(6.RP.A.3a)** With students on the x-axis and desks on the y-axis, the first row of the table (4 students, 2 desks) becomes the ordered pair (4, 2).
- The correct answer is 5.** **(6.SP.B.5)** Subtract the ranges: $15 - 10 = 5$.
- Choice A is correct.** **(6.RP.A.3c)** $\frac{150}{250} = \frac{3}{5} = \frac{60}{100} = 60\%$.
- The correct answer is 0.25.** **(6.NS.B.3)** One correct choice out of 4 possible choices. Probability = $\frac{1}{4} = 0.25$.
- Choice B is correct.** **(6.RP.A.3c)** 0.5% of $\$300,000 = 0.005 \times 300,000 = \$1,500$.
- The correct answer is 200.** **(6.NS.A.1)** $\frac{5}{12} \times 480 = 200$ people.
- Choice C is correct.** **(6.RP.A.3)** Unit price: $12 \div \frac{3}{4} = 12 \times \frac{4}{3} = 16$ dollars per pound.
- Choice B is correct.** **(6.NS.C.7d)** Total expenses: $\$45 + \$30 + \$20 = \95 . Remaining: $\$120 - \$95 = \$25$.
- Choice C is correct.** **(6.NS.C.7d)** The ratio of flour to sugar is $f/s = 2/3$, $4/6 = 2/3$, $6/9 = 2/3$, $8/12 = 2/3$. The ratio remains constant, so the relationship is proportional.
- Choice B is correct.** **(6.RP.A.3)** To find the actual length from a drawing length, multiply by the scale factor: 3 inches \times 4 feet per inch = 12 feet. The student divided ($3 \div 4 = \frac{3}{4}$) instead of multiplying.
- Choice B is correct.** **(6.NS.A.1)** $2\frac{1}{4} = \frac{9}{4}$ and $1\frac{1}{2} = \frac{3}{2}$, so $\frac{9}{4} \div \frac{3}{2} = \frac{9}{4} \times \frac{2}{3} = \frac{18}{12} = \frac{3}{2} = 1\frac{1}{2}$.
- Choice A is correct.** **(6.NS.B.2)** $2,856 \div 12 = 238$. The long division shows quotient 238 with no remainder.
- The correct answer is The center is the peak, and the mean, median, and mode are approximately equal.** **(6.SP.B.4)** For a symmetric, bell-shaped distribution, A is correct: the mean, median, and mode align at the center. B is correct: the classic bell curve peaks at the center and tails off symmetrically. C and D describe skewed distributions, and E would not be bell-shaped.
- Choice A is correct.** **(6.NS.B.3)** Subtract: $0.15 - 0.08 = 0.07$ meters. Align decimal points.
- Choice B is correct.** **(6.NS.B.4)** $36 = 4 \times 9 = (2 \times 2) \times (3 \times 3) = 2^2 \times 3^2$. Options A, C, and D contain composite numbers.
- Choice C is correct.** **(6.NS.C.5)** Zero is neither positive nor negative; it is the reference point. Statements A, B, and D are all true, but C is false because 0 is not classified as positive or negative.
- Choice D is correct.** **(6.NS.C.7c)** The absolute value $|-45| = 45$ feet represents the magnitude of depth below sea level.



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Hi, Math Champion!

◇ Look what you did! 5 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

PRACTICE MORE. ACHIEVE MORE.

This book provides **5 full-length Math practice tests** designed to help Grade 6 students strengthen their skills, build confidence, and excel on standardized assessments.

Each test is carefully crafted to reflect the latest standards and covers a wide range of math topics with realistic questions and detailed answer explanations.



BUILD CONFIDENCE

Practice builds familiarity and reduces test anxiety.



IMPROVE ACCURACY

Sharpen skills and avoid common mistakes.



ACHIEVE SUCCESS

Consistent practice leads to greater results.

WHAT'S INSIDE?



5 Full-Length Practice Tests

Realistic tests designed to mirror actual exam conditions.



Realistic Questions

A variety of question types to strengthen problem-solving skills.



Answer Keys & Explanations

Detailed solutions to help students learn and improve.



Performance Tracking

Track progress and identify areas that need improvement.



Comprehensive Coverage

All essential topics aligned with Grade 6 math standards.



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