

# 3

# Connecticut

## Smarter Balanced

GRADE

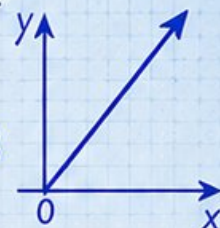
# 6

MATH

# PRACTICE TESTS

Standards Aligned Problem Solving  
For Comprehensive Assessment Programs

$$y = 2x + 3$$



$$\frac{3}{5} + \frac{2}{10} = \frac{8}{10} = \frac{4}{5}$$

$$36\% \text{ of } 150 = ?$$



## 3 | PRINTED TESTS



## 2 | ONLINE TESTS



Build Confidence



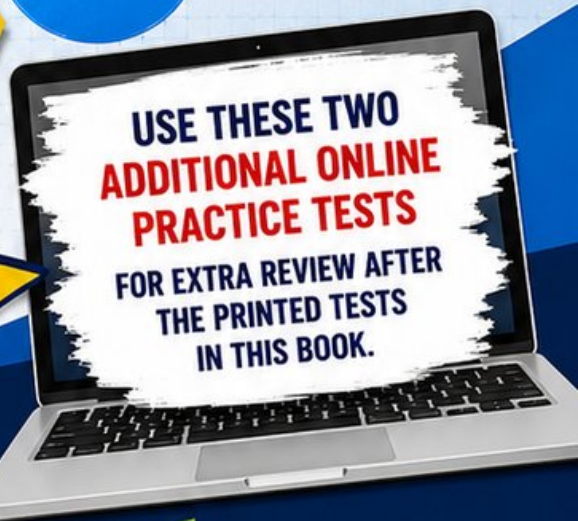
Master Key Math Skills



Answer Explanations for Every Question

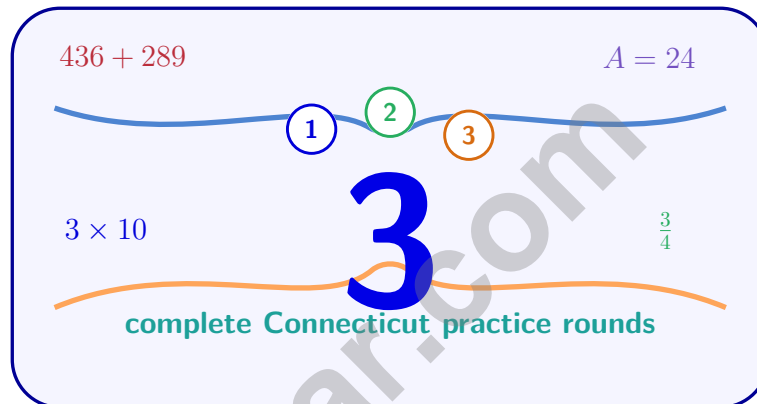


Test-Taking Strategies That Work



# 3 Connecticut Smarter Balanced Grade 6 Math Practice Tests

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



Three 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**



# Copyright ©

## Testinar Inc



Published by Testinar Inc

[Testinar.com](http://Testinar.com)

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of the author, except in the case of brief quotations embodied in critical reviews and certain other noncommercial uses permitted by copyright law, including Section 107 or 108 of the 1976 United States Copyright Act.

This publication is independently produced and has no official connection to any state, district, or national testing program.

Test names and organizational names used herein are the property of their respective trademark holders.



*Copyright ©*

# Welcome, Connecticut Math Explorer!

Three focused rounds using careful New England review

This book gives you three 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 three-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?

Three Smarter Balanced tests, 120 questions, and a full review path

Part	What You Will Practice
Tests 1–2	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Test 3	Final stamina round for expressions, equations, geometry, data, problem models, and mixed review.
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

# Table of Contents

★ Practice Test 1	_____	14
★ Practice Test 2	_____	28
★ Practice Test 3	_____	45
Practice Test Answer Keys	_____	62
Practice Test Answers and Explanations	_____	65

1) Evaluate  $-3y$  when  $y = -4$ .

A.  $-12$

C.  $12$

B.  $-7$

D.  $-1$

2) A student found the volume of a rectangular prism with dimensions  $\frac{5}{2}$  m, 3 m, and 4 m. They calculated  $\frac{5}{2} \times 3 = 7.5$  and then stopped. What is the correct volume?

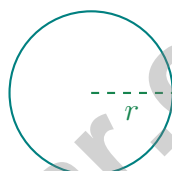
A.  $7.5 \text{ m}^3$

C.  $22.5 \text{ m}^3$

B.  $15 \text{ m}^3$

D.  $30 \text{ m}^3$

Circle:  $r = 9$  ft



3)

A circle has a radius of 9 feet. Using  $\pi \approx 3.14$ , which is closest to the area?

A.  $56.52 \text{ ft}^2$

C.  $254.34 \text{ ft}^2$

B.  $113.04 \text{ ft}^2$

D.  $508.68 \text{ ft}^2$

4) A data set of hourly temperatures is displayed in a stem-and-leaf plot. If we remove all data points from stem 8, which statistic would definitely change?

Stem	Leaf
7	2, 5, 8
8	1, 4, 6, 9
9	0, 3

A. The mode

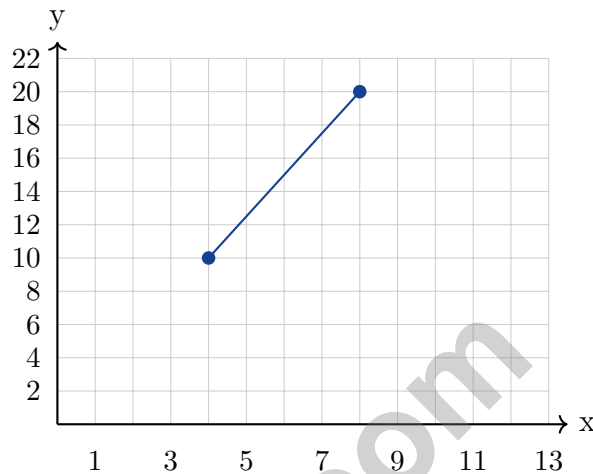
C. The range

B. The mean

D. The minimum



- 5) A graph shows a proportional relationship with the equation  $y = 2.5x$ . Two points on the line are  $(4, 10)$  and  $(8, 20)$ .  
If a new point is  $(12, k)$  on the same line, what is the value of  $k$ ?



- A. 25                       C. 32  
 B. 27                       D. 30
- 6) In a student club, the ratio of 6th graders to 7th graders is  $4 : 6$ . If there are 12 sixth graders, how many seventh graders are in the club?

- 7) A recipe calls for  $\frac{2}{5}$  cup of sugar. What percent is this of 1 cup?
- A. 25%                       C. 60%  
 B. 50%                       D. 40%



Scan me!  
For more practice  
& answers

8) What is 8% of \$500?

A. \$20

C. \$80

B. \$40

D. \$100

9) A bus travels at an average speed of 45 miles per hour for 3 hours. How far does it travel?

A. 120 miles

C. 150 miles

B. 135 miles

D. 165 miles

10)

Yards	1	3
Feet	3	?

Complete the ratio table. How many feet are in 3 yards?

A. 6 feet

C. 12 feet

B. 15 feet

D. 9 feet

11) In a family's budget, rent is \$1200 and total income is \$4000. Food is \$800 and total income is \$4000. What is the ratio of Rent to Food?

A. 1 : 2

C. 4 : 3

B. 2 : 1

D. 3 : 2

12) A factory packages 480 items in 8 boxes. What is the unit rate in items per box?



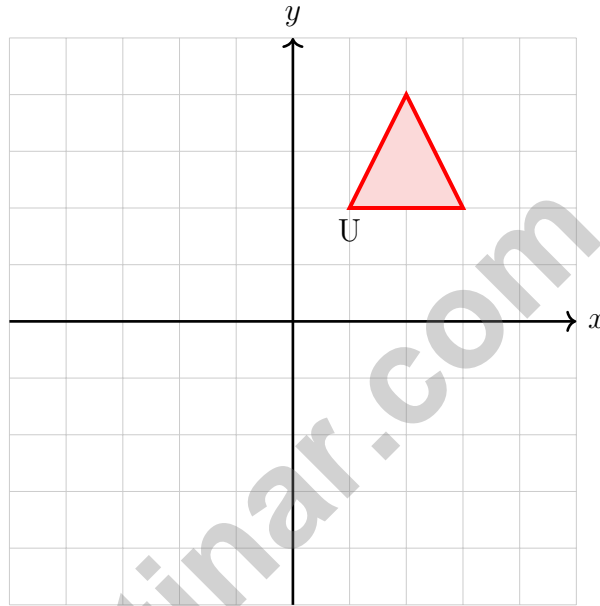
1) A parallelogram has a base of 8 m and a height of 5 m. What is its area?

A.  $13 \text{ m}^2$

C.  $40 \text{ m}^2$

B.  $26 \text{ m}^2$

D.  $80 \text{ m}^2$



2)

A triangle has vertices at  $(1, 2)$ ,  $(3, 2)$ , and  $(2, 4)$ . If it is reflected over the  $x$ -axis, what will be the image of  $(1, 2)$ ?

A.  $(1, -2)$

C.  $(1, 2)$

B.  $(-1, 2)$

D.  $(-1, -2)$



3) Which question BEST represents the core concept of a statistical question?

**A statistical question expects variability  
and is answered by collecting data  
from multiple sources.**

Which example matches this definition?

- A. What time does the bus arrive at school?  
 B. What is the name of my best friend?  
 C. How many days are in a week?  
 D. How many siblings do students in my grade have?
- 4) A teacher reports: “Most students scored between 75–85. A few students scored in the 60s, and one scored 95.” Which shape best describes this distribution?

- A. Symmetric  
 B. Bimodal  
 C. Skewed left  
 D. Skewed right
- 5) The stem-and-leaf plot shows test scores. What is the median?

Stem	Leaf
6	5, 7
7	2, 4, 8
8	1, 9

- A. 74  
 B. 75  
 C. 78  
 D. 76
- 6) What is the range of the data set 15, 22, 9, 30, 18?
- A. 21  
 B. 18  
 C. 9  
 D. 30



Scan me!  
For more practice  
& answers



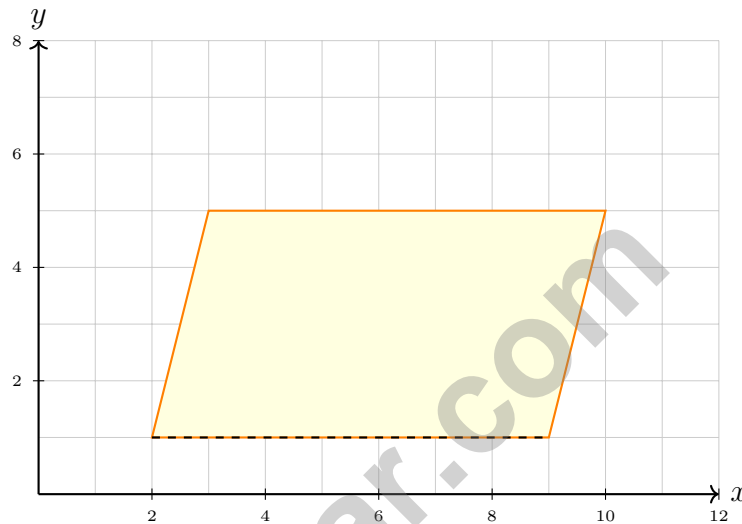
4) A rectangle has area 35 square units. One dimension is 7 units. What is the perimeter?

A. 18 units

B. 32 units

C. 28 units

D. 24 units



5)

A parallelogram has vertices at  $(2, 1)$ ,  $(9, 1)$ ,  $(10, 5)$ , and  $(3, 5)$ . If the base is 7 units and the height is 4 units, what is the area?

A. 20 square units

B. 24 square units

C. 28 square units

D. 32 square units

6) A rectangular prism has dimensions 12 cm, 8 cm, and 4 cm. What is its lateral surface area (the 4 vertical faces, not including top and bottom)?

A.  $96 \text{ cm}^2$

B.  $128 \text{ cm}^2$

C.  $160 \text{ cm}^2$

D.  $192 \text{ cm}^2$



**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.**



## Connecticut Practice Test Answers and Explanations

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

### Practice Test 1 Answers and Explanations

- 1) **Choice C is correct.** **(6.EE.A.2c)** Substitute  $y = -4$ :  $-3(-4) = 12$  (negative times negative equals positive).
- 2) **Choice D is correct.** **(6.G.A.2)** The correct volume is  $V = 2.5 \times 3 \times 4 = 7.5 \times 4 = 30 \text{ m}^3$ . The student forgot to multiply by the height.
- 3) **Choice C is correct.** **(6.RP.A.1)** Area =  $\pi r^2 \approx 3.14 \times 9^2 = 3.14 \times 81 = 254.34 \text{ ft}^2$ .
- 4) **Choice B is correct.** **(6.SP.B.4)** Removing data points changes the sum and count, which directly affects the mean. Range, minimum, and mode depend on specific values, not all points.
- 5) **Choice D is correct.** **(6.RP.A.3a)** Using the equation  $y = 2.5x$ , when  $x = 12$ :  $y = 2.5(12) = 30$ . So  $k = 30$ .
- 6) **The correct answer is 18.** **(6.RP.A.3)** The ratio of sixth graders to seventh graders is  $4 : 6$ , which simplifies to  $2 : 3$ . If 2 parts are 12 students, each part is 6, so seventh graders are  $3 \times 6 = 18$ .
- 7) **Choice D is correct.** **(6.RP.A.3c)**  $\frac{2}{5} = \frac{40}{100} = 40\%$ , since  $2 \times 20 = 40$  and  $5 \times 20 = 100$ .
- 8) **Choice B is correct.** **(6.RP.A.3c)**  $8\% \times \$500 = 0.08 \times 500 = \$40$ .
- 9) **Choice B is correct.** **(6.RP.A.3)** Distance = Rate  $\times$  Time =  $45 \times 3 = 135$  miles.
- 10) **Choice D is correct.** **(6.RP.A.3d)** The ratio is 1 yard = 3 feet. Multiply both sides by 3: 3 yards = 9 feet.
- 11) **Choice D is correct.** **(6.NS.C.7d)** Rent to Food:  $\$1200 : \$800 = 12 : 8 = 3 : 2$  (dividing both by 400).
- 12) **The correct answer is 60 items per box.** **(6.RP.A.3d)** Divide total items by number of boxes:  $480 \div 8 = 60$  items per box.
- 13) **Choice B is correct.** **(6.NS.C.7d)** From the double number line: 2 meters = 6.56 feet, so  $k = 6.56/2 = 3.28$  feet per meter. This is consistent with 4 meters = 13.12 feet:  $13.12/4 = 3.28$ .
- 14) **Choice C is correct.** **(6.EE.C.9)** Rent is \$500 out of \$1000:  $\frac{500}{1000} = 0.50 = 50\%$ .
- 15) **Choice A is correct.** **(6.RP.A.3)** If 2 cm on the map represents 15 km, then 1 cm represents  $15 \div 2 = 7.5$  km.
- 16) **Choice B is correct.** **(6.NS.A.1)**  $2\frac{1}{2} \div \frac{5}{8} = \frac{5}{2} \times \frac{8}{5} = \frac{40}{10} = 4$ .
- 17) **Choice D is correct.** **(6.NS.B.2)**  $4,536 \div 19 = 238$  remainder 14. Rounding up gives 239 boxes per warehouse.
- 18) **The correct answer is Girls to boys is  $10 : 15 = 2 : 3$  (Choice A is correct). Boys to total is  $15 : 25 = 3 : 5$  (Choice B is correct).** **(6.RP.A.1)** Choice A is correct because girls to boys is  $10 : 15$ , which simplifies to  $2 : 3$ . Choice B is correct because boys to total is  $15 : 25$ , which simplifies to  $3 : 5$ . The other choices either flip the order, swap which group is named first, or use the wrong total (10 girls out of 25 students is  $2 : 5$ , not  $1 : 3$ ).
- 19) **Choice A is correct.** **(6.NS.B.3)** Multiply both by 10:  $8.4 \div 7 = 1.2$ .
- 20) **Choice B is correct.** **(6.NS.B.4)** For option B: factors of 8 are 1, 2, 4, 8 and factors of 15 are 1, 3, 5, 15. They share only 1. For A, GCF is 6; for C, GCF is 10; for D, GCF is 3.
- 21) **The correct answer is 0.25 cup.** **(6.RP.A.3b)**  $8 \div 32 = 0.25$  cups (or  $\frac{1}{4}$  cup) per serving.
- 22) **Choice D is correct.** **(6.NS.B.4)**  $24 + 36 = 60$ . Choice A:  $6(4 + 6) = 60$  ✓. Choice B:  $12(2 + 3) = 60$  ✓. Choice C:  $4(6 + 9) = 60$  ✓. Choice D:  $3(7 + 12) = 57$  ✗. Only Choice D is not equivalent to 60.
- 23) **Choice D is correct.** **(6.NS.C.5)** Absolute value represents distance from zero. Both 6 and  $-6$  are exactly 6 units away from zero, so  $|6| = |-6| = 6$ .
- 24) **The correct answer is 10.** **(6.RP.A.3)** The ratio is  $2.5 : 1$ . For 4 batches:  $2.5 \times 4 = 10$  cups of flour.
- 25) **Choice D is correct.** **(6.NS.C.7c)**  $|-1| = 1$  and  $|1| = 1$ , so  $1 + 1 = 2$ .
- 26) **Choice C is correct.** **(6.NS.C.6c)** Distance from  $-4$  to 2 is  $2 - (-4) = 6$ . Distance from 0 to 6 is also 6.



Scan me!  
For more practice  
& answers

## Hi, Math Pilot!

◇ 3 flights done in your math airplane. You have flown through smooth skies and bumpy clouds. You are a real pilot now. ◇

★ **Pilots know:** a good check before takeoff makes a smooth flight. Before each problem, do your check: read, plan, solve, verify. ★

### Pilot Skills

- **Pre-Flight:** You read the question carefully.
- **Steering:** You pick the right strategy.
- **Smooth Flight:** You stay calm in long tests.
- **Landing:** You always check your final answer.

**Pilot tip:** on test day, take off one problem at a time. Trust your training. You earned your wings!

If you want to share something or ask a question, please email me at [jay@testinar.com](mailto:jay@testinar.com).

**Jay Daie**

Your Math Pilot

# PRACTICE TODAY. SUCCEED TOMORROW!

This book includes 3 full-length Math practice tests and 2 online tests to help Grade 6 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:

- 3 Full-Length Printed Tests
  - 2 Online Practice Tests
-  Detailed Answer 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



### 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 with clear explanations and meaningful practice.



### Test Confidence

Familiarize 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

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



**VISIT [TESTINAR.COM/MATH6](https://www.testinar.com/math6)**  
FOR MORE PRACTICE TESTS  
AND LEARNING RESOURCES



PRACTICE  
REGULARLY



STAY  
FOCUSED



SOLVE  
CONFIDENTLY



SUCCEED  
BRIGHTLY

PREPARE TODAY. **SUCCEED TOMORROW!**