

# 6

# Maine

## Through Year Assessment

GRADE

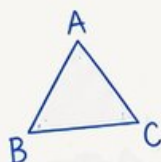
# 6

MATH

# PRACTICE TESTS

Standards-Aligned  
Steady Southern  
Problem Solving for  
Comprehensive  
Assessment Program

$$2x + 3 = 11$$



$$7^2 = 49$$

BUILD SKILLS.  
GAIN CONFIDENCE.  
**SUCCEED!**



### 6 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



### 6 PRINTED TESTS + 2 ONLINE TESTS

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



### PRACTICE

Sharpen skills with targeted practice tests



### REVIEW

Understand concepts and strengthen skills

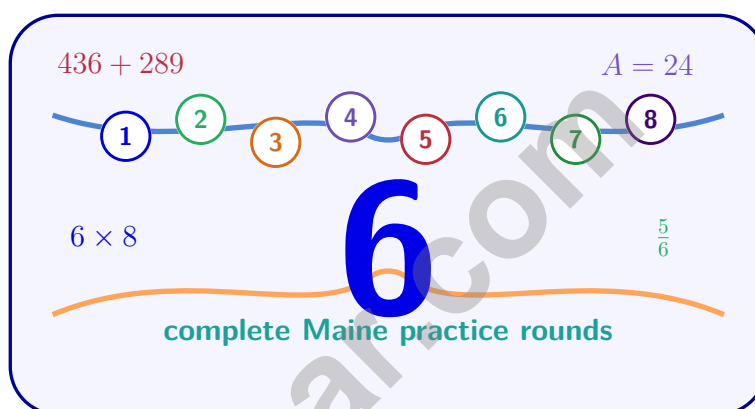


### SUCCEED

Build confidence and achieve your best

# 6 Maine Through Year Assessment Grade 6 Math Practice Tests

*Standards-Aligned Through-Year Coastal Clarity for Maine Through Year Assessment*



Six complete 40-question Grade 6 practice rounds for Through Year Assessment, built for through-year coastal clarity 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, Maine Math Explorer!

Eight focused rounds using through-year coastal clarity

This book gives you six full Grade 6 practice tests for Through Year Assessment. Each round uses rocky coastlines, forest roads, and careful year-round review as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

## Your Maine Practice Promise

Anchor each answer in evidence: read labels, build the model, and verify the result.

Read

Plan

Check

## How to Use This Book

A six-session routine for through-year coastal clarity

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.

**Maine review rhythm:** Use each test as a check-in, then let corrections guide the next review session.



## What Is Inside?

Eight Through Year Assessment 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 3–5	Skill-building rounds with expressions, equations, geometry, data, and problem models.
Test 6	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. Through-year coastal clarity means recognizing the skill even when the next question changes topic, changes format, or asks for an explanation.



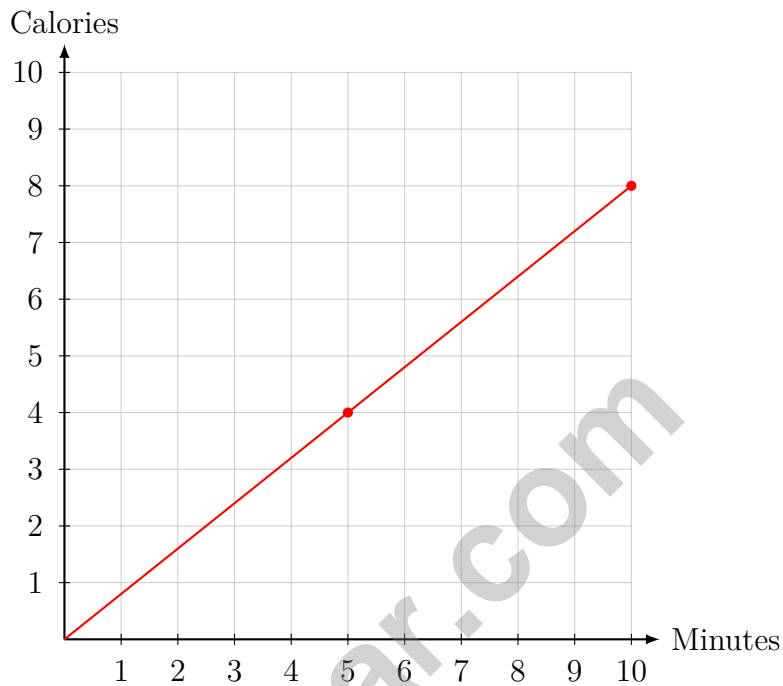
Scan me!  
For more practice  
& answers

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- 5) The graph below shows the relationship between minutes exercised and calories burned.



How many calories are burned per minute?

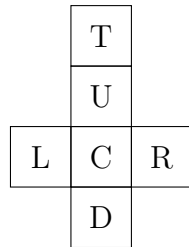
- 6) Which statement is true?

- A.  $|-7| < |7|$                        C.  $|-7| > |7|$   
 B.  $|-7|$  is undefined               D.  $|-7| = |7|$

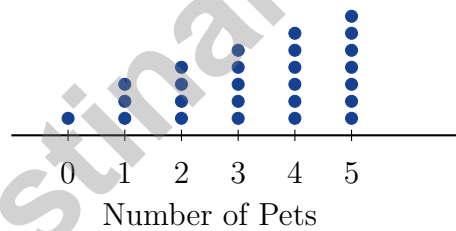




- 1) A cube net is shown in a cross pattern. The center square is labeled  $C$ , the four adjacent squares are labeled  $L$  (left),  $R$  (right),  $U$  (up),  $D$  (down). If there is one more square attached above  $U$ , which square is opposite to  $L$ ?



- A.  $C$ 
 C.  $D$   
 B.  $U$ 
 D.  $R$
- 2) A dot plot shows the number of pets owned by families in a neighborhood. The data displays a left-skewed pattern. This means:

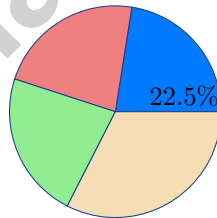


- A. Most families have fewer pets, with fewer families having more pets
  C. The data is evenly distributed  
 B. Most families have many pets, with fewer families having fewer pets
  D. All families have the same number of pets



- 3) A five-number summary is:  $\min = 6$ ,  $Q_1 = 12$ ,  $\text{median} = 18$ ,  $Q_3 = 24$ ,  $\max = 32$ . Calculate the IQR.

- 4) If the probability of success is 0.85, what is the probability of failure?
- A. 0.15                       C. 0.35  
 B. 0.25                       D. 0.50
- 5) A stem-and-leaf plot of test scores has stem 7 with leaves 2, 5, 8. Which values are represented?
- A. 27, 57, 87                       C. 70, 71, 72  
 B. 72, 75, 78                       D. 7.2, 7.5, 7.8



- 6) A company surveys 800 employees about work location. The circle graph shows 22.5% work from home. How many employees work from home?
- A. 180                       C. 200  
 B. 160                       D. 220



Scan me!  
For more practice  
& answers

1) In the expression  $2a + 5b + 10 + 3c$ , how many constant terms are there?

A. 0

C. 2

B. 1

D. 3

2) Write 0.15 as a percent.

3) A bakery uses 15 kilograms of flour. Of this, 60% is used for bread. How many kilograms are used for bread?

A. 6 kg

C. 12 kg

B. 15 kg

D. 9 kg

4) A container holds 2 gallons of water. How many pints are in the container? (Use 1 gallon = 8 pints.)

A. 10 pints

C. 24 pints

B. 16 pints

D. 8 pints

5) Emma wants to save for a bike that costs \$200. She saves \$25 per month. How many months will it take her to save enough for the bike?

A. 6 months

C. 10 months

B. 12 months

D. 8 months



Scan me!  
For more practice  
& answers

6) On a number line, which comparison is true?

A.  $-0.9 > -0.1$

C.  $-0.5 > 0.5$

B.  $-0.1 > -0.9$

D.  $0.1 < -0.1$

7) Simplify the expression with mixed operations:  $3(2y) + 4y - y$ .

A.  $8y$

C.  $6y$

B.  $10y$

D.  $9y$

8) Compare two box plots: Dataset A has median 50 and IQR 15; Dataset B has median 45 and IQR 20. Which statement is true?

 A. Dataset A has a higher center and less spread. C. Both datasets have the same center. B. Dataset A has a lower center and more spread. D. Dataset B is more skewed.

9) A class is making necklaces. For each necklace, they use 8 red beads and 12 blue beads. What is the simplified ratio of red to blue?

A.  $2 : 3$

C.  $8 : 12$

B.  $3 : 2$

D.  $4 : 6$

10) A student reads 156 pages in 6 days. At this rate, how many pages does the student read per day?

A. 24 pages/day

C. 30 pages/day

B. 26 pages/day

D. 36 pages/day



## Maine Through Year Assessment Practice Test Answer Keys

**How to use this Maine Through Year Assessment 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 through-year coastal clarity
3. rework the problem before reading the full explanation, using this reminder:  
Anchor each answer in evidence: read labels, build the model, and verify the result.

**A calm Maine correction routine turns every missed item into useful practice. Use each test as a check-in, then let corrections guide the next review session.**



## Maine Practice Test Answers and Explanations

Review the six printed Through Year Assessment tests with anchored, observant, and ready for the next checkpoint habits.

### Practice Test 1 Answers and Explanations

- Choice D is correct.** **(6.NS.C.6c)** Point Q is located at the half-tick between  $-2$  and  $-1$ , which is  $-1\frac{1}{2}$ .
- The correct answer is 11.** **(6.EE.A.3)** Combine  $y$  terms:  $8y - 2y + 5y = 11y$ .
- Choice D is correct.** **(6.EE.B.6)** "Twice as much" means multiply by 2.
- Choice B is correct.** **(6.EE.B.8)** "Must not exceed" means at most 50:  $w \leq 50$ .
- The correct answer is 0.8.** **(6.EE.C.9)** The graph shows the line passes through  $(5, 4)$  and  $(10, 8)$ . The slope (rate of change) is  $\frac{8-4}{10-5} = \frac{4}{5} = 0.8$  calories per minute.
- Choice D is correct.** **(6.NS.C.7c)** Both  $|-7|$  and  $|7|$  equal 7, so they are equal.
- Choice D is correct.** **(6.NS.C.8)** The point  $(4, -3)$  has a positive  $x$ -coordinate and negative  $y$ -coordinate, placing it in Quadrant IV (lower right). The student likely confused the quadrants.
- Choice B is correct.** **(6.NS.C.8)** The bottom side goes from  $(0, 0)$  to  $(4, 0)$ :  $|4 - 0| = 4$  units.
- Choice A is correct.** **(6.NS.B.3)**  $-6 + 14 = 8^\circ\text{F}$ .
- Choice C is correct.** **(6.NS.B.3)** Earning \$15 per month for 8 months:  $15 \times 8 = 120$ . The account gains \$120.
- Choice A is correct.** **(6.QR.EA.3)** Net change is gain plus loss:  $12 + (-8) = 4$  yards gained.
- Choice D is correct.** **(6.EE.A.2b)** Combine like terms:  $4x + 3x = 7x$ . The constant 8 does not combine. Final:  $7x + 8$ .
- Choice D is correct.** **(6.EE.A.2c)** Simplify:  $9 + 3n - n = 9 + 2n$ . Substitute  $n = 2$ :  $9 + 2(2) = 9 + 4 = 13$ .
- Choice C is correct.** **(6.EE.B.5)** Multiply both sides by 4:  $x = 6 \times 4 = 24$ .
- Choice B is correct.** **(6.EE.B.8)** "Younger than 65" means strictly less than 65, so the inequality is  $a < 65$ .
- Choice C is correct.** **(6.G.A.2)** Using  $V = L \times W \times H$ , we have  $V = 5 \times 2 \times 3 = 30 \text{ cm}^3$ .
- Choice B is correct.** **(6.G.A.1)** Width:  $8 - 1 = 7$  units. Height:  $5 - 1 = 4$  units. Ratio of width to height:  $7 : 4$ .
- The correct answer is GCF of 16 and 24 is 8; prime factorization of 40 is  $2^3 \times 5$ .** **(6.NS.B.4)** Statement A: Factors of 16 are 1, 2, 4, 8, 16 and factors of 24 are 1, 2, 3, 4, 6, 8, 12, 24; the GCF is 8 (TRUE). Statement B: LCM of 5 and 7 is 35, not 12 (FALSE). Statement C:  $40 = 8 \times 5 = 2^3 \times 5$  (TRUE). Statement D is missing factor 10. Statement E is false because the LCM of 6 and 10 is 30.
- The correct answer is 24.** **(6.G.A.1)** Solving:  $84 = \frac{1}{2} \times b \times 7 \Rightarrow b = 24 \text{ m}$ .
- Choice C is correct.** **(6.G.A.4)** Two triangular bases:  $2 \times 30 = 60 \text{ cm}^2$ . Three rectangular faces:  $(5 \times 10) + (12 \times 10) + (13 \times 10) = 50 + 120 + 130 = 300 \text{ cm}^2$ . Total =  $60 + 300 = 360 \text{ cm}^2$ .
- Choice C is correct.** **(6.NS.C.8)** Reflection over the  $y$ -axis negates the  $x$ -coordinate:  $-5 \rightarrow 5$ .
- Choice C is correct.** **(6.QR.EA.1)** From  $A = \pi r^2$ , we get  $314 \approx 3.14 \times r^2$ , so  $r^2 \approx 100$ , thus  $r = 10 \text{ cm}$ . Diameter  $d = 2 \times 10 = 20 \text{ cm}$ .
- Choice B is correct.** **(6.SP.A.1)** This has a single fixed answer: 2. The other questions all involve variability and require collecting data from multiple sources or people.
- Choice D is correct.** **(6.SP.A.2)** IQR =  $Q_3 - Q_1 = 20 - 10 = 10$ .
- Choice B is correct.** **(6.SP.B.5c)** Distances from mean 7.625:  $|6 - 7.625| = 1.625$ ,  $|6 - 7.625| = 1.625$ ,  $|7 - 7.625| = 0.625$ ,  $|7 - 7.625| = 0.625$ ,  $|8 - 7.625| = 0.375$ ,  $|8 - 7.625| = 0.375$ ,  $|9 - 7.625| = 1.375$ ,  $|10 - 7.625| = 2.375$ . Sum = 8.5. MAD =  $8.5/8 = 1.0625$ .
- Choice B is correct.** **(6.SP.B.4)** The frequency of 15 messages is 8, and the frequency of 20 messages is 4. Since  $8 = 2 \times 4$ , 15 has double the frequency of 20.
- Choice A is correct.** **(6.NS.C.7b)** Coin flip: 2 outcomes (H or T). Die roll: 6 outcomes. Total =  $2 \times 6 = 12$  outcomes.
- The correct answer is 50.** **(6.G.A.1)** Area =  $\frac{1}{2}(12 + 8) \times 5 = \frac{1}{2}(20)(5) = 50 \text{ cm}^2$ .



## Hi, Math Inventor!

◇ 6 practice tests. 6 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](mailto:jay@testinar.com).

**Jay Daie**

Your Math Inventor

# PRACTICE 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 6 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.

6  
PRINTED  
TESTS

+  
2  
ONLINE  
TESTS

## PERFECT FOR:

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

★ BUILD SKILLS.  
GAIN CONFIDENCE.  
SUCCEED!

## 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.



6 FULL-LENGTH  
PRINTED TESTS



2 ONLINE  
PRACTICE TESTS



DETAILED ANSWER  
EXPLANATIONS