

8

Maine

Through Year Assessment

GRADE 7

MATH

PRACTICE TESTS



**Standards Aligned
Problem Solving**

For Comprehensive
Assessment Programs



**8 PRINTED
TESTS**



**2 ONLINE
TESTS**



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



BUILD CONFIDENCE



STRENGTHEN SKILLS



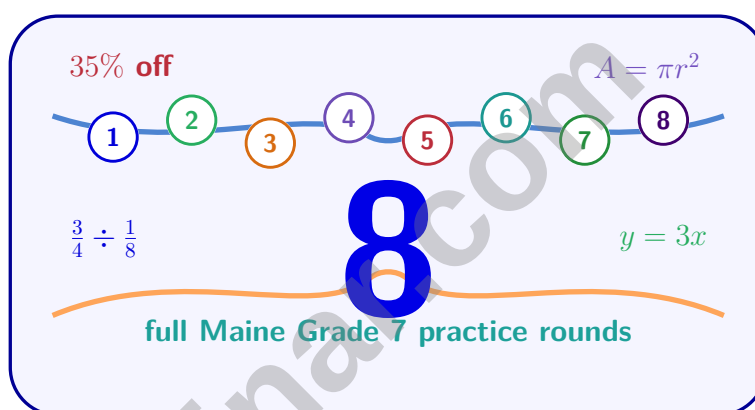
THINK SMARTER



BE TEST-READY

8 Maine Through Year Assessment Grade 7 Math Practice Tests

A student-friendly path through Maine Grade 7 unit rates, expressions, inequalities, scale figures, data displays, and simulations



Eight complete 40-question Grade 7 Through Year Assessment practice rounds with proportional relationships, percents, rational numbers, expressions, equations, geometry, statistics, probability, answer keys, and clear explanations for every item.

Jay Daie and Reza Nazari



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Welcome, Maine Grade 7 Problem Solver!

Eight focused rounds for sharper Through Year Assessment math thinking

This book gives you eight full Grade 7 Through Year Assessment math practice tests. Each round is built to help you notice structure, compare quantities, use proportional reasoning, handle rational numbers, and explain your thinking with care.

Your Maine Practice Promise

I will read every question carefully, choose a strategy that fits, write enough work to prove my answer, and use corrections as training for the next test.

Read

Model

Verify

How to Use This Book

An eight-session plan for confident Grade 7 review

1. **Warm up with the review pages.** Notice the big ideas before starting the tests.
2. **Complete one test at a time.** Treat each 40-question round like a real practice session.
3. **Show your reasoning.** Jot a proportion, equation, diagram, number line, or quick estimate when it helps.
4. **Correct actively.** Rework missed items before reading the explanation.
5. **Choose the next target.** After each test, name one skill and one habit to improve.

Maine review rhythm: Work a test, score it, study your misses, then come back ready for the next round with one clear goal.



What Is Inside?

Eight Through Year Assessment tests, 320 questions, and a complete review path

Part	What You Will Practice
Tests 1–3	Proportional relationships, unit rates, percents, rational-number operations, and careful reading.
Tests 4–6	Expressions, equations, inequalities, scale drawings, geometry, and multi-step problem solving.
Tests 7–8	Statistics, probability, mixed review, stamina, and choosing efficient strategies.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Grade 7 success means recognizing which idea is being tested even when the next question changes format.



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For more practice
& answers

Table of Contents

★ Practice Test 1	_____	17
★ Practice Test 2	_____	31
★ Practice Test 3	_____	45
★ Practice Test 4	_____	59
★ Practice Test 5	_____	73
★ Practice Test 6	_____	87
★ Practice Test 7	_____	100
★ Practice Test 8	_____	115
Practice Test Answer Keys	_____	129
Practice Test Answers and Explanations	_____	134

- 1) A circular rug has a radius of 2.5 meters. What is the approximate area of the rug?
Use $\pi \approx 3.14$.

☐ A. 7.85 m^2

☐ C. 19.625 m^2

☐ B. 15.7 m^2

☐ D. 39.25 m^2

- 2) An investment grows from \$900 to \$1,059.48 in 2 years with annual compound interest.
Find the interest rate as a decimal.

- 3) What is $\frac{2}{25}$ as a decimal?

☐ A. 0.08

☐ C. 0.52

☐ B. 0.25

☐ D. 0.92

- 4) A bakery divides $\frac{5}{8}$ pound of flour equally among 4 batches. How much flour is in each batch?

☐ A. $\frac{5}{32}$ pound

☐ C. $\frac{1}{8}$ pound

☐ B. $\frac{5}{12}$ pound

☐ D. $\frac{5}{4}$ pounds

- 5) Evaluate $\frac{2(a+b)}{4}$ when $a = 5$ and $b = 3$.

☐ A. 4

☐ C. 8

☐ B. 2

☐ D. $\frac{1}{4}$



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6) Simplify: $(x^3)^7$

☐ A. x^{10}

☐ B. x^{21}

☐ C. x^{49}

☐ D. x^{343}

7) Solve: $\frac{x}{6} + 1 = 3$

☐ A. $x = 4$

☐ B. $x = 12$

☐ C. $x = 18$

☐ D. $x = 24$

8) Solve for x : $-2(3x + 1) = 10$

☐ A. $x = -2$

☐ B. $x = -1$

☐ C. $x = 1$

☐ D. $x = 2$

9) Compute $\frac{7}{10} \div \frac{7}{15}$.

☐ A. $\frac{49}{150}$

☐ B. $\frac{3}{2}$

☐ C. $\frac{10}{15}$

☐ D. $\frac{15}{7}$

10) A hiker travels $4\frac{1}{2}$ miles on one trail, then $3\frac{3}{4}$ miles on another trail. What is the total distance (in miles)?



11) What is $\sqrt{64}$?

☐ A. 6

☐ B. 8

☐ C. 9

☐ D. 7

12) Convert 0.000156 to scientific notation.

13) Simplify: $(-2b + 6) + (5b - 1)$

☐ A. $3b + 5$

☐ B. $3b - 5$

☐ C. $7b + 7$

☐ D. $-7b + 5$

14) A concert ticket costs \$85. With a 15% service fee, the total is $85(1 + 0.15)$. What is the total cost?

☐ A. \$97.75

☐ B. \$70

☐ C. \$100

☐ D. \$12.75

15) A phone company's annual revenue comes from \$100 in fixed service charges and \$50 per month. Which equation represents total annual revenue R in dollars?

☐ A. $R = 50(12) + 100$

☐ B. $R = 100 + 50(12)$

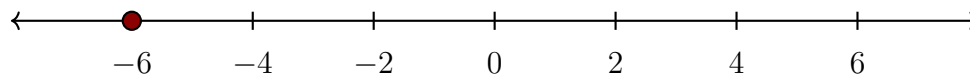
☐ C. $R = 50m + 100$ where $m = 12$ months

☐ D. $R = 100(12) + 50$

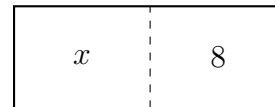


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- 1) On a number line, if $x \div 2 = -3$, what is x ?



- ☐ A. -6 ☐ C. 3
☐ B. -3 ☐ D. 6



Multiply each part by 2:

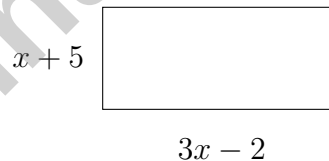
$$2(x + 8) = 2x + 16$$

2)

Which equation is equivalent to $2(x + 8) = 30$?

- ☐ A. $2x + 8 = 30$ ☐ C. $x + 16 = 30$
☐ B. $2x + 16 = 30$ ☐ D. $2x = 38$

- 3) A rectangle's sides are $(x + 5)$ and $(3x - 2)$. What is the perimeter?



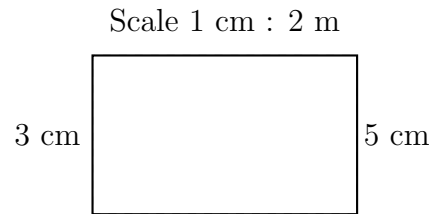
- ☐ A. $8x + 6$ ☐ C. $8x + 3$
☐ B. $4x + 3$ ☐ D. $8x - 6$

- 4) A meal costs \$40. The tax and tip together add 25%. What is the total?

- ☐ A. $40(1.25) = \$50$ ☐ C. $40 + 25 = \$65$
☐ B. $40(0.25) = \$10$ ☐ D. $40 \div 1.25 = \$32$



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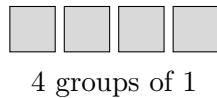


5)

What is the perimeter of the actual rectangle?

☐ A. 16 m☐ C. 64 m☐ B. 32 m☐ D. 128 m

6) The image shows repeated groups of chips. How many chips in total?



What multiplication does this represent?

☐ A. $4 \times 1 = 4$ ☐ C. $1 \times 4 = 4$ ☐ B. $4 \times 2 = 8$ ☐ D. $2 \times 4 = 8$

7) A pizza place offers 3 types of crust, 6 sauce options, and 8 toppings. How many single-topping pizzas can be made?

☐ A. 17☐ C. 72☐ B. 42☐ D. 144

- 1) A charity conducted a phone survey calling 500 households. 340 people answered and agreed to participate. Based on this experimental data, what is the probability that a randomly called household will answer and agree?

☐ A. $\frac{340}{500}$
☐ B. $\frac{17}{50}$

☐ C. 0.32
☐ D. $\frac{160}{500}$

- 2) A living room measures 18 feet by 14 feet. On a floor plan with scale $\frac{1}{2}$ inch to 4 feet, what is the area of the room on the floor plan in square inches?

- 3) What is $\frac{3}{4}$ of 200?

- 4) A printing company charges \$25 for the first 100 copies and \$0.10 for each additional copy. Which equation represents the total cost C for x copies beyond 100?

☐ A. $C = 0.10x + 25$
☐ B. $C = 25x + 0.10$

☐ C. $C = 0.10 + 25x$
☐ D. $C = 25(x + 0.10)$



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& answers

- 5) A survey uses a probability model with outcomes {Agree, Neutral, Disagree}. The model shows $P(\text{Agree}) = \frac{7}{20}$ and $P(\text{Disagree}) = \frac{1}{4}$. Find $P(\text{Neutral})$.

☐ A. $\frac{6}{20}$
☐ B. $\frac{8}{20}$

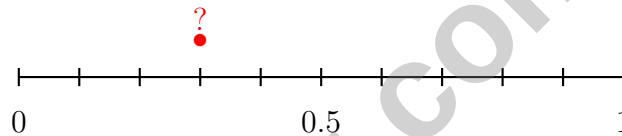
☐ C. $\frac{9}{20}$
☐ D. $\frac{12}{20}$

- 6) The ordered data is: 15, 18, 21, 24, 27, 30, 33. In the stem-and-leaf plot, what is the position of the median in the ordered list?

☐ A. 3rd position
☐ B. 4th position

☐ C. 5th position
☐ D. 6th position

- 7) A probability number line is shown below.



Which probability is marked on the number line?

☐ A. 0.1
☐ B. 0.2

☐ C. 0.3
☐ D. 0.4

- 8) A dress is on sale for \$36 after a 40% markdown. What was the original selling price?

☐ A. \$56.40
☐ B. \$86.40

☐ C. \$50
☐ D. \$60

- 9) A retirement fund has \$50,000 that earns 3.2% simple interest per year. What will be the total value of the fund after 10 years?

☐ A. \$51,600
☐ B. \$56,000

☐ C. \$66,000
☐ D. \$66,400



Maine Through Year Assessment Grade 7 Practice Test Answer Keys

How to use this section with a Grade 7 student:

1. check the answer first and circle any item that needs another look
2. retry the problem with fresh work before reading the explanation
3. write one short lesson learned from each missed or guessed item

A strong review routine turns every correction into a sharper plan for the next Maine Through Year Assessment practice test.



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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice C is correct.** (7.G.4-7.G.6) $A = 3.14 \times (2.5)^2 = 3.14 \times 6.25 = 19.625 \text{ m}^2$.
- 2) **The correct answer is 0.08.** (7.RP.3) $900(1+r)^2 = 1059.48 \Rightarrow (1+r)^2 = 1.1772 \Rightarrow 1+r = 1.08 \Rightarrow r = 0.08$.
- 3) **Choice A is correct.** (7.NS.2d) Divide $2 \div 25 = 0.08$. Since $25 = 5^2$, this terminates.
- 4) **Choice A is correct.** (7.NS.1-7.NS.3) Divide: $\frac{5}{8} \div 4 = \frac{5}{8} \times \frac{1}{4} = \frac{5}{32}$ pound.
- 5) **Choice A is correct.** (7.EE.1-7.EE.2) Substitute: $\frac{2(5+3)}{4} = \frac{2(8)}{4} = \frac{16}{4} = 4$.
- 6) **Choice B is correct.** (7.EE.1-7.EE.2) Power rule: $(x^3)^7 = x^{3 \times 7} = x^{21}$.
- 7) **Choice B is correct.** (7.EE.3-7.EE.4) Subtract 1: $\frac{x}{6} = 2$. Multiply by 6: $x = 12$.
- 8) **Choice A is correct.** (7.EE.4a) Distribute: $-6x - 2 = 10$. Add 2: $-6x = 12$. Divide by -6 : $x = -2$.
- 9) **Choice B is correct.** (7.NS.1-7.NS.3) $\frac{7}{10} \div \frac{7}{15} = \frac{7}{10} \times \frac{15}{7} = \frac{105}{70} = \frac{3}{2}$.
- 10) **The correct answer is $8\frac{1}{4}$.** (7.NS.1-7.NS.3) Total distance $= 4\frac{1}{2} + 3\frac{3}{4} = \frac{9}{2} + \frac{15}{4} = \frac{18}{4} + \frac{15}{4} = \frac{33}{4} = 8\frac{1}{4}$ miles.
- 11) **Choice B is correct.** (7.NS.1-7.NS.3) $8 \times 8 = 64$, therefore $\sqrt{64} = 8$.
- 12) **The correct answer is 1.56×10^{-4} .** (7.NS.1-7.NS.3) Move the decimal 4 places to the right to get the coefficient 1.56. The exponent is -4 .
- 13) **Choice A is correct.** (7.EE.1-7.EE.2) Combine like terms: $(-2b + 5b) + (6 - 1) = 3b + 5$.
- 14) **Choice A is correct.** (7.EE.1-7.EE.2) $85(1.15) = 85 + 0.15(85) = 85 + 12.75 = 97.75$.
- 15) **Choice B is correct.** (7.EE.4a) Fixed charges (\$100) plus monthly revenue ($\$50 \times 12$ months) gives total. Both A and B are equivalent; B shows the form $q + px$ most clearly.
- 16) **Choice C is correct.** (7.EE.3-7.EE.4) Multiply by 2: $x - 3 = 10$. Add 3: $x = 13$.
- 17) **Choice C is correct.** (7.SP.5-7.SP.8) Prime numbers on a die: 2, 3, 5 (three primes). $P(\text{prime}) = \frac{3}{6} = \frac{1}{2}$.
- 18) **The correct answer is A,D.** (7.NS.1-7.NS.3) Statement A is true: the opposite of -5 is 5 (positive). Statement D is true: -5 and 5 are each 5 units from zero. Statement B is false because opposites have the same absolute value. Statement C is false: $5 + (-5) = 0$, not 10.
- 19) **Choice D is correct.** (7.NS.2) Negative times negative equals positive. $-7 \times (-3) = 21$.
- 20) **Choice A is correct.** (7.SP.3) Store 2's upper IQR ($45 - 35 = 10$) is larger than Store 1's ($40 - 35 = 5$). Both have the same median (35), but Store 2's upper half is more spread out.
- 21) **Choice D is correct.** (7.RP.3) Commission = commission rate $\times$ base price $= 0.03 \times 22000 = \$660$. The documentation fee does not affect the commission base.
- 22) **The correct answer is 14.** (7.EE.1-7.EE.2) The expression simplifies to $5a + 4$. With $a = 2$, the value is $10 + 4 = 14$.
- 23) **Choice C is correct.** (7.G.4-7.G.6) Rectangle: $10 \times 6 = 60 \text{ m}^2$. Two semicircles = 1 full circle with radius 3 m: $\pi r^2 = 3.14 \times 9 = 28.26 \text{ m}^2$. Total: $60 + 28.26 = 88.26 \text{ m}^2$.
- 24) **Choice B is correct.** (7.SP.1-7.SP.4) Sum: $148 + 149 + 150 + 152 + 154 + 156 + 158 + 161 + 163 + 165 + 167 + 169 + 170 + 172 + 174 = 2388$. Mean $= 2388/15 = 159.2 \approx 159$.
- 25) **Choice D is correct.** (7.RP.1-7.RP.3) Set up: $\frac{1 \text{ CAD}}{0.75 \text{ USD}} = \frac{x \text{ CAD}}{100 \text{ USD}}$. So $x = \frac{100}{0.75} \approx 133.33 \text{ CAD}$.
- 26) **Choice C is correct.** (7.G.4-7.G.6) Base area $= \frac{1}{2} \times 4 \times 3 = 6 \text{ m}^2$. Volume $= 6 \times 11 = 66 \text{ m}^3$.
- 27) **Choice C is correct.** (7.G.1-7.G.5) The angles in a quadrilateral sum to 360° . Since $28 + 76 + 108 = 212$, the missing angle is $360 - 212 = 148^\circ$.
- 28) **Choice A is correct.** (7.G.4-7.G.6) Circle X has radius 6 cm. Circle Y has diameter 6 cm, so its radius is 3 cm. Circle X has the larger radius.
- 29) **Choice B is correct.** (7.G.1-7.G.5) The Triangle Inequality states the sum of any two sides must exceed the third. Check: $4 + 6 = 10$ is not greater than 9, so this fails.
- 30) **Choice C is correct.** (7.SP.1-7.SP.4) $\frac{90}{300} = \frac{x}{15000}$. Reduce: $\frac{3}{10} = \frac{x}{15000} \Rightarrow x = 4500$.
- 31) **Choice D is correct.** (7.RP.1-7.RP.3) Ratios: $12/3 = 4$, $24/6 = 4$, $36/9 = 4$. Constant ratio $k = 4$, so proportional.



You Know More Than You Think

Hi, Skilled Learner!

◇ After working through Grade 7 practice, you now have more tools than you may realize: models, formulas, graphs, equations, and reasoning habits. ◇

★ **Remember this:** The next step is learning when to use each tool. That comes from practice, review, and the courage to try a method even when you are unsure. This version gave you 8 opportunities to rehearse test-day habits. ★

Tools You Can Use

- **Models:** Make relationships visible.
- **Equations:** Represent unknowns clearly.
- **Graphs:** Show change and location.
- **Formulas:** Organize measurement problems.

Grade 7 test-day tip: Before solving, name the tool you plan to use. That small choice makes your work more intentional.

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

Jay Daie

Your Skill-Building Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **8** full-length Math practice tests and **2** online tests to help Grade 7 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:

8 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 & Proportions
- ✓ The Number System
- ✓ Expressions & Equations
- ✓ Geometry
- ✓ Percents & Decimals
- ✓ Statistics & Probability
- ✓ Data Analysis
- ✓ Measurement & Conversions
- ✓ Algebraic Thinking
- ✓ And More!



2 ONLINE TESTS

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



2 EXTRA ONLINE TEST ACCESS CODE IS INSIDE THE BOOK!

Don't lose it—your extra practice and success start here!



VISIT **TESTINAR.COM/MATH7** FOR MORE PRACTICE TESTS



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FOCUSED



SOLVE
CONFIDENTLY



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BRIGHTLY