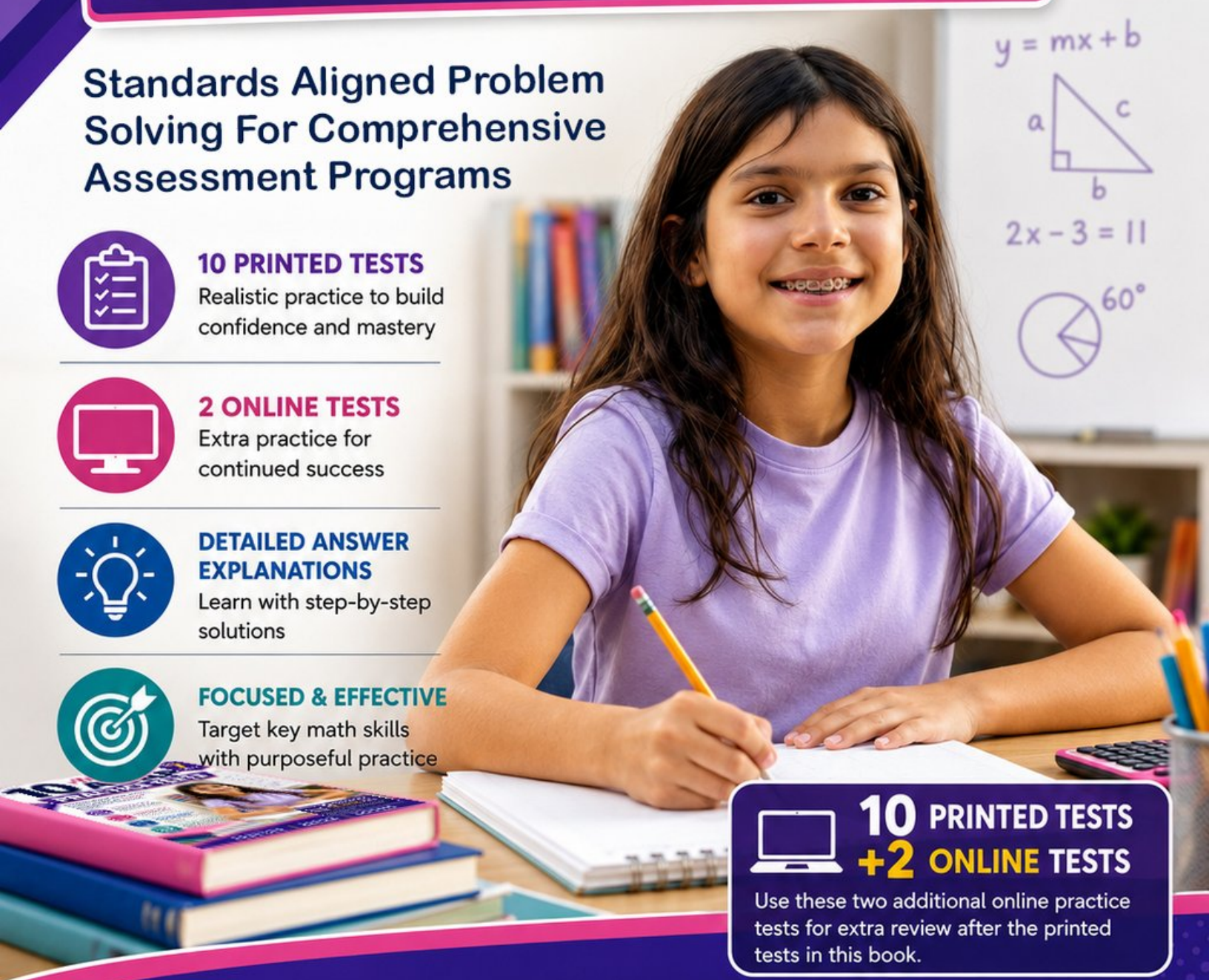
10 Arkansas ATLAS

GRADE 7 MATH

PRACTICE TESTS

Standards Aligned Problem Solving For Comprehensive Assessment Programs



10 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

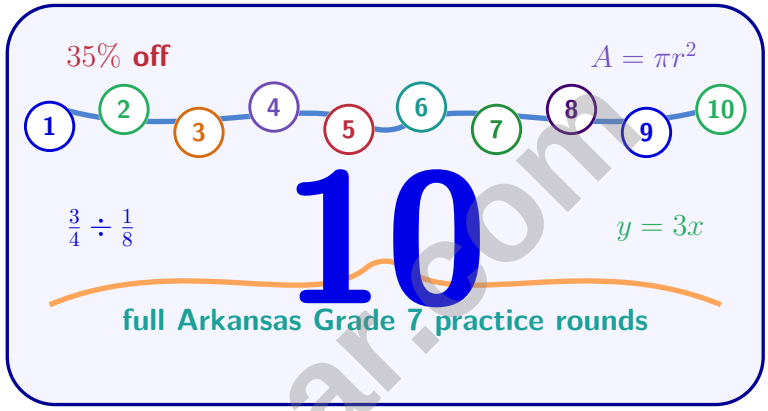
10 PRINTED TESTS +2 ONLINE TESTS

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

PRACTICE ★ REVIEW ★ SUCCEED

10 Arkansas ATLAS Grade 7 Math Practice Tests

Arkansas Grade 7 ATLAS Practice for steady skill-building through proportional thinking, rational numbers, expressions, measurement, and data



Ten complete 40-question Grade 7 ATLAS 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, Arkansas Grade 7 Problem Solver!

Ten focused rounds for sharper Arkansas ATLAS math thinking

This book gives you ten full Grade 7 ATLAS 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 Arkansas 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.

How to Use This Book

A ten-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.

Arkansas 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?

Ten Arkansas ATLAS tests, 400 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 7–9	Statistics, probability, mixed review, stamina, and choosing efficient strategies.
Test 10	A final Arkansas round to show growth across the whole book.
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.

Table of Contents

1) What is $-2\frac{1}{3} \times (-3)$?

☐ A. -7
☐ B. 7
☐ C. $-6\frac{2}{3}$
☐ D. $6\frac{2}{3}$

2) A square garden has an area of 100 square meters. What is the length of one side of the garden?

☐ A. 8 meters
☐ B. 9 meters
☐ C. 10 meters
☐ D. 11 meters

3) A taxi charges \$3 per mile plus a \$2 fee. If a trip costs \$17, how many miles was the trip? Check your answer is reasonable.

☐ A. 3 miles
☐ B. 5 miles
☐ C. 6 miles
☐ D. 8 miles

4) Which expression is equivalent to $2(4y - 1) + 3y$?

☐ A. $8y - 2 + 3y = 11y - 2$
☐ B. $8y + 1$
☐ C. $11y - 1$
☐ D. $4y + 2$

5) Two datasets: Dataset 1: 10, 15, 20, 25, 30 Dataset 2: 15, 18, 20, 22, 25 Both have a median of 20. Which has lower variability?

☐ A. Dataset 1 (larger range)
☐ B. Dataset 2 (more compact)
☐ C. Both have equal variability
☐ D. Cannot compare with medians

6) Express π using the two common Grade 7 approximations.

7) A bag contains 35 marbles. The probability of drawing a specific color is $\frac{5}{7}$. How many marbles of that color are in the bag?

☐ A. 5
☐ B. 15
☐ C. 25
☐ D. 30

8) A restaurant has 3 appetizers, 5 main courses, and 2 desserts. If a diner chooses one of each, how many complete meals are possible?

☐ A. 10
☐ B. 15
☐ C. 20
☐ D. 30

9) A histogram displays the age distribution of members at two gyms. Gym Alpha: ages 20–35 have the most members. Gym Beta: ages evenly distributed across 18–65. Which gym best serves a targeted demographic?

☐ A. Gym Alpha (serves a specific younger demographic)
☐ B. Gym Beta (more diverse membership)
☐ C. Both gyms serve identical demographics
☐ D. Gym Beta (younger members on average)

10) A bag contains 4 red, 3 blue, and 2 green marbles. If one marble is drawn at random, what is the probability it is NOT blue?

☐ A. $\frac{3}{9}$
☐ B. $\frac{6}{9}$
☐ C. $\frac{4}{9}$
☐ D. $\frac{2}{9}$

11) A data set from a random sampling of 300 high school students shows:

Transport Mode	Count
Bus	120
Car	145
Walk/Bike	35

Based on this experimental data, if a school has 2400 students, how many are expected to use a car?

☐ A. 145
☐ B. 380
☐ C. 960
☐ D. 1160

12) A student estimated a test to have 48 questions, but it actually had 60 questions. What is the percent error?

☐ A. 25%
☐ B. 75%
☐ C. 12%
☐ D. 20%

13) A bicycle wheel has diameter 0.6 meters. If the bike travels 30 meters, how many complete rotations did the wheel make? Use $\pi \approx 3.14$, round to the nearest whole number.

14) Expand: $-4(3b + 2)$

☐ A. $-12b - 8$
☐ B. $-12b + 8$
☐ C. $12b - 8$
☐ D. $-12b + 2$

1) A recipe requires $\frac{2}{3}$ cup of sugar. If you make half the recipe, then add $\frac{1}{4}$ cup extra, how much sugar do you use?

☐ A. $\frac{3}{7}$ cup
☐ B. $\frac{7}{12}$ cup
☐ C. $1\frac{1}{12}$ cups
☐ D. $\frac{5}{12}$ cup

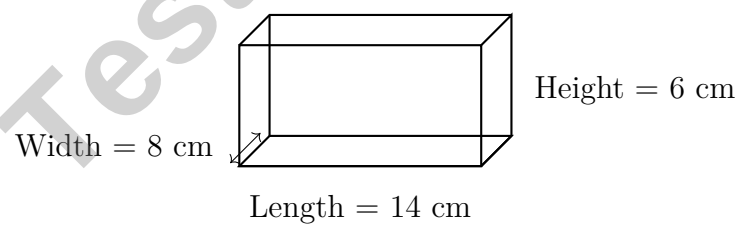
2) A box plot compares the test scores of two tutoring methods. Traditional Method: Median = 75, Range = 25. New Method: Median = 78, Range = 35. Which method is better?

☐ A. New Method (higher median, but less consistent)
☐ B. Traditional Method (consistent with reasonable performance)
☐ C. Both methods produce identical results
☐ D. New Method is clearly superior

3) A rectangular garden is 10 m wide and 8 m tall. A triangular section is removed from the bottom, with the triangle's base being 10 m and height 2 m. What is the remaining area?

☐ A. 70 m^2
☐ B. 80 m^2
☐ C. 90 m^2
☐ D. 100 m^2

4)



A rectangular prism has the dimensions shown. What is its volume?

☐ A. 28 cm^3
☐ B. 224 cm^3
☐ C. 504 cm^3
☐ D. 672 cm^3

5) Which expression is NOT equivalent to $8(x + 2)$?

☐ A. $8x + 16$
☐ B. $4(2x + 4)$
☐ C. $8x + 2$
☐ D. $2(4x + 8)$

6) A rectangular prism has length 8 m, width 5 m, and height 2 m. Find the surface area.

☐ A. 80 m^2
☐ B. 112 m^2
☐ C. 132 m^2
☐ D. 176 m^2

7) A pie shop keeps track of sales by flavor. Apple pie is 26% of sales, pumpkin is 19%, cherry is 31%, and pecan is 24%. If they sold 400 pies total, how many were cherry?

☐ A. 76
☐ B. 96
☐ C. 124
☐ D. 186

8) Evaluate $3x - 2y$ when $x = 4$ and $y = -3$.

☐ A. 6
☐ B. 14
☐ C. 18
☐ D. 20

9) What is the coefficient of x in the simplified form of $9x - 4x + 2y$?

☐ A. 9
☐ B. 5
☐ C. 4
☐ D. 13

10) Solve: $-2(x + 1) < 10$

☐ A. $x > -6$
☐ B. $x < -6$
☐ C. $x < 6$
☐ D. $x > 6$

1) Simplify: $8x + 5y - 3x - 2y + x$

☐ A. $6x + 3y$
☐ B. $12x + 3y$
☐ C. $4x + 3y$
☐ D. $8x + 5y$

2)

Outcome	Red	Blue	Green
Probability	0.35	0.25	?

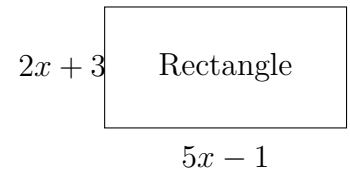
A probability model is shown. Find the probability of Green.

3) In a survey of 500 people, 75 prefer online shopping while the rest prefer in-store shopping. What percent prefer online shopping?

☐ A. 15%
☐ B. 25%
☐ C. 30%
☐ D. 75%

4) If $\frac{7}{x} = \frac{35}{100}$, what is x?

5) A rectangle has width $(2x + 3)$ cm and length $(5x - 1)$ cm. What is the perimeter expression?



☐ A. $14x + 4$
☐ B. $7x + 2$
☐ C. $10x - 2$
☐ D. $14x + 2$

6) A data company offers cloud storage at \$9.99 per month with a one-time activation fee of \$29.99. Which expression shows the total cost C for n months?

☐ A. $C = 29.99n + 9.99$
☐ B. $C = 9.99n + 29.99$
☐ C. $C = 9.99 + 29.99n$
☐ D. $C = (9.99 + 29.99)n$

7) Which value of x satisfies $4x + 2 = 18$?

☐ A. $x = 2$
☐ B. $x = 4$
☐ C. $x = 5$
☐ D. $x = 8$

8) Solve for x: $2(x + 6) = 20$

☐ A. $x = 2$
☐ B. $x = 4$
☐ C. $x = 6$
☐ D. $x = 8$

9) Solve: $\frac{1}{2}x - 3 = 5$ and check that your answer is reasonable.

☐ A. $x = 6$
☐ B. $x = 10$
☐ C. $x = 16$
☐ D. $x = 24$

Arkansas ATLAS 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 Arkansas ATLAS practice test.

Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

1) **Choice B is correct.** 7.NS.2 $-2\frac{1}{3} = -\frac{7}{3}$. So $-\frac{7}{3} \times (-3) = \frac{7\times 3}{3} = 7$. Negative times negative is positive.

2) **Choice C is correct.** 7.NS.1-7.NS.3 The area of a square is s^2. If the area is 100, then $s^2 = 100$, so $s = \sqrt{100} = 10$ meters.

3) **Choice B is correct.** 7.EE.3-7.EE.4 Set up: $3m + 2 = 17$. Subtract 2: $3m = 15$. Divide by 3: $m = 5$ miles. Check: $3(5) + 2 = 15 + 2 = 17$ ✓. Reasonable: 5 miles at \$3/mile plus \$2 fee totals \$17.

4) **Choice A is correct.** 7.EE.1-7.EE.2 Distribute 2: $2(4y) - 2(1) + 3y = 8y - 2 + 3y$. Combine: $8y + 3y - 2 = 11y - 2$.

5) **Choice B is correct.** 7.SP.1-7.SP.4 Dataset 1 ranges 10–30 (range = 20). Dataset 2 ranges 15–25 (range = 10). Dataset 2 has lower variability and is more compact around the median.

6) **The correct answer is** 3.14, 22/7 **.** 7.G.4-7.G.6 The two standard approximations are the decimal 3.14 and the fraction $\frac{22}{7}$ (which equals approximately 3.143).

7) **Choice C is correct.** 7.SP.5-7.SP.8 $\frac{5}{7} \times 35 = \frac{5\times 35}{7} = \frac{175}{7} = 25$.

8) **Choice D is correct.** 7.SP.5-7.SP.8 By the counting principle: $3 \times 5 \times 2 = 30$ complete meals.

9) **Choice A is correct.** 7.SP.3 Gym Alpha's concentration at 20–35 shows it serves a targeted young adult demographic well. Gym Beta's even distribution shows it serves all age groups without targeting a specific age.

10) **Choice B is correct.** 7.SP.5-7.SP.8 Total marbles: 9. Blue marbles: 3. Not blue: $9 - 3 = 6$. Probability: $\frac{6}{9} = \frac{2}{3}$.

11) **Choice D is correct.** 7.SP.6 Experimental probability of car use $= \frac{145}{300} \approx 0.483$. Expected in 2400 students: $0.483 \times 2400 \approx 1160$.

12) **Choice D is correct.** 7.RP.3 Percent error $= \frac{|48-60|}{60} \times 100\% = \frac{12}{60} \times 100\% = 20\%$.

13) **The correct answer is** 16 **.** 7.G.4-7.G.6 Circumference $= \pi d = 3.14 \times 0.6 = 1.884$ m. Rotations $= 30 \div 1.884 \approx 16$.

14) **Choice A is correct.** 7.EE.1-7.EE.2 Distribute -4: $-4(3b) - 4(2) = -12b - 8$.

15) **Choice D is correct.** 7.RP.3 Loan 1 rate: $240 = 3000 \times r \times 2 \Rightarrow r = 0.04 = 4\%$. Loan 2 rate: $360 = 3000 \times r \times 2 \Rightarrow r = 0.06 = 6\%$. Difference: $6\% - 4\% = 2\%$.

16) **Choice D is correct.** 7.RP.1-7.RP.3 Multiply each dimension by 0.75: $8 \times 0.75 = 6$ inches; $10 \times 0.75 = 7.5$ inches.

17) **Choice D is correct.** 7.RP.3 70% of 80 is $0.70 \times 80 = 56$ students.

18) **Choice D is correct.** 7.NS.1b Adding zero to any number leaves it unchanged (additive identity). $-7 + 0 = -7$.

19) **Choice D is correct.** 7.NS.1-7.NS.3 $-2 - (-8) = -2 + 8 = 6$. The opposite of -8 is 8, and $-2 + 8 = 6$.

20) **Choice C is correct.** 7.EE.1-7.EE.2 Check A: $-3(x + 3) = -3x - 9$. Correct. Check B: $2(-y + 4) = -2y + 8$. Correct. Check D: $-4(m + 5) = -4m - 20$. Correct. Check C: $-5(a + 3) = -5a - 15 \neq -5a + 15$. Incorrect. The correct factorization is $-5(a - 3) = -5a + 15$.

21) **The correct answer is A,D.** 7.G.4-7.G.6 Choice A gives the correct formula. Choice D is verified: $3.14 \times 5^2 = 78.5$ cm^2. B confuses formula with circumference. C forgets that area scales with the square of the radius. E mistakes semicircle (half) for one-third.

22) **Choice A is correct.** 7.SP.1-7.SP.4 $108° \div 360° \times 100 = 30\%$.

23) **Choice D is correct.** 7.RP.3 Discount $= \frac{1}{3} \times 150 = \$50$. Final price $= 150 - 50 = \$100$.

24) **Choice A is correct.** 7.EE.1 x terms: $3x + 5x - 2x = (3 + 5 - 2)x = 6x$. y terms: $4y + y - 3y = (4 + 1 - 3)y = 2y$. Result: $6x + 2y$.

25) **Choice A is correct.** 7.EE.4b Multiply both sides by -4 and flip the sign: $x < -12$.

26) **Choice C is correct.** 7.RP.1-7.RP.3 With unit rate $k = 2.5$, the equation is $y = 2.5x$. When $x = 6$, $y = 2.5 \times 6 = 15$.

27) **Choice A is correct.** 7.NS.1-7.NS.3 $x = 9 \times \dfrac{2}{3} = 6$.

28) **Choice D is correct.** 7.NS.2d Divide $3 \div 4 = 0.75$. The denominator is 2^2, which divides evenly.

29) **Choice A is correct.** 7.NS.1-7.NS.3 Average $= \frac{450+520+485}{3} = \frac{1455}{3} = 485$ calories.

30) **Choice A is correct.** 7.NS.1-7.NS.3 $2.75 \times 10^{-6} = 0.00000275$. Move decimal 6 places left.

Author's Note

A Math Hero Moment

Hi, Math Hero!

◇ This full-length book gave you ten complete Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. You showed up for Grade 7 practice again and again. That is what real growth looks like: steady effort, honest review, and a willingness to try. ◇

⋆ **Remember this:** A math hero is not someone who never misses a question. A math hero learns from the miss and comes back stronger. ⋆

Hero Habits

- **Courage:** You try problems that are not automatic.
- **Honesty:** You review what needs work.
- **Patience:** You let skills grow over time.
- **Pride:** You recognize the effort you gave.

Grade 7 test-day tip: Save one solved problem you are proud of. Looking back at progress helps motivation stay strong.

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

Jay Daie

Your Math Hero Guide

PRACTICE TODAY.
SUCCEED TOMORROW!

This book includes 10 full-length Math practice tests and 2 extra 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:

- **10** 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
- Fractions & Decimals
- Percents
- Statistics & Probability
- Data Analysis
- Measurement & Conversions
- And More!

2 EXTRA 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!

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FOR MORE PRACTICE TESTS AND LEARNING RESOURCES.

PRACTICE REGULARLY | STAY FOCUSED | SOLVE CONFIDENTLY | SUCCEED BRIGHTLY

PRACTICE ★ REVIEW ★ SUCCEED