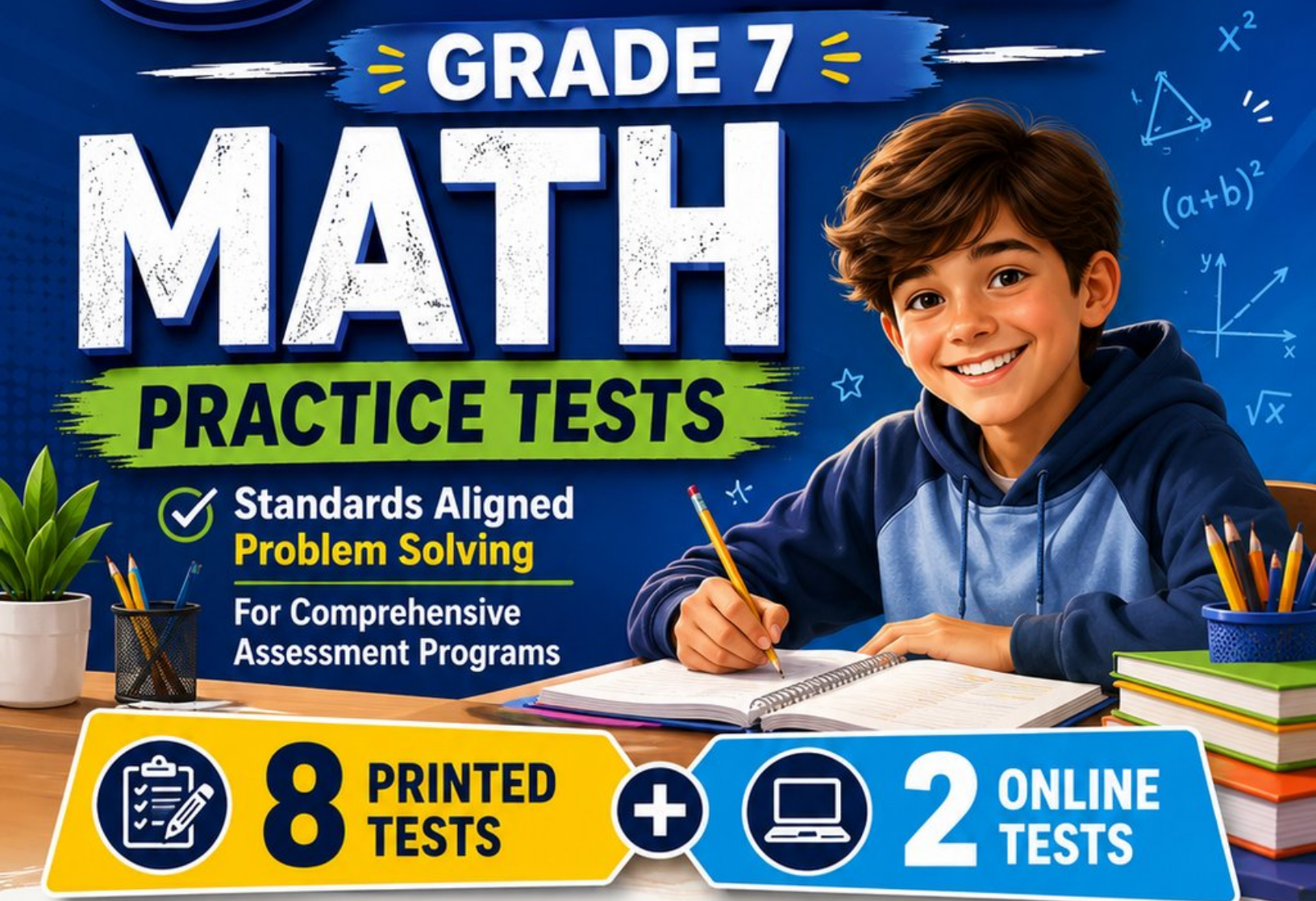
8 Kansas KAP

GRADE 7 MATH PRACTICE TESTS



Standards Aligned
Problem Solving

For Comprehensive Assessment Programs

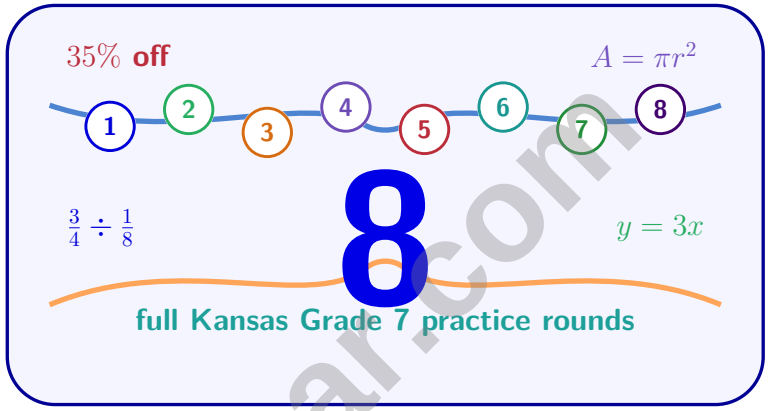
8 PRINTED TESTS + 2 ONLINE TESTS

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 Kansas KAP Grade 7 Math Practice Tests

Prepared practice for Kansas Grade 7 percents, algebraic expressions, two-step equations, geometry, and probability



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Eight complete 40-question Grade 7 KAP 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, Kansas Grade 7 Problem Solver!

Eight focused rounds for sharper KAP math thinking

This book gives you eight full Grade 7 KAP 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 Kansas 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.

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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.

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

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Scan me!
For more practice
& answers

What Is Inside?

Eight KAP 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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Table of Contents

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1) A phone case costs \$15 and is discounted by \$3. What is the percent discount?

☐ A. 10%
☐ B. 25%
☐ C. 15%
☐ D. 20%

2) For the inequality $x - 4 \geq 3$, which value is **not** a solution?

☐ A. $x = 7$
☐ B. $x = 10$
☐ C. $x = 6$
☐ D. $x = 100$

3) Which expression represents "the difference of 10 and a number w"?

☐ A. $10w$
☐ B. $w - 10$
☐ C. $10 - w$
☐ D. $10 + w$

4) Which expression is equivalent to $(5p + 3) + (2p - 9)$?

☐ A. $7p - 6$
☐ B. $3p - 6$
☐ C. $7p - 12$
☐ D. $7p + 6$

5) Which expression is equivalent to $\frac{k^7}{k^7}$?

☐ A. 0
☐ B. k
☐ C. 1
☐ D. k^{14}

6) A teenager receives \$200 per month. Their budget allocates 40% to savings, 35% to entertainment, 20% to clothing, and the rest to charitable donations. How much money do they allocate to charitable donations each month?

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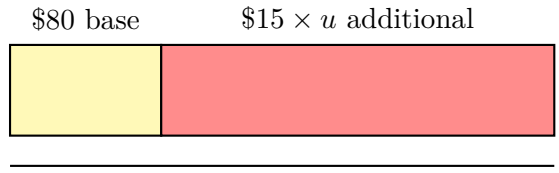

7) A coach needs to order uniforms. A base package costs \$80 and each additional uniform is \$15. Which equation finds u?

☐ A. $15u + 80 = 230$
☐ B. $80u + 15 = 230$
☐ C. $15 + 80u = 230$
☐ D. $80(u + 15) = 230$

8) A shirt costs \$35 and socks cost \$4 per pair. If you buy 1 shirt and p pairs of socks for a total of \$51, how many pairs of socks did you buy?

☐ A. 2 pairs
☐ B. 4 pairs
☐ C. 6 pairs
☐ D. 8 pairs

9) Two basketball teams' free-throw percentages over 10 games are shown below.

Team	Mean	MAD
Tigers	75%	8%
Sharks	72%	4%

Based on this data, which statement is most accurate?

☐ A. The Sharks are more reliable free-throw shooters
☐ B. The Tigers never miss a free throw
☐ C. The Sharks score more points overall
☐ D. Both teams have the same consistency

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10) A table shows a proportional relationship: when $x = 3$, $y = 21$; when $x = 5$, $y = 35$; when $x = 7$, $y = 49$. What is the unit rate?

☐ A. 3
☐ B. 5
☐ C. 7
☐ D. 21

11) Which expression is equivalent to $(-8) \div 2$?

☐ A. $(-4) \times 2$
☐ B. $(-8) \times \frac{1}{2}$
☐ C. $2 \times (-8)$
☐ D. $(-2) \times (-4)$

12) A climber ascends 150 feet then descends 210 feet. What is the net change in elevation?

☐ A. -360 ft
☐ B. -60 ft
☐ C. 60 ft
☐ D. 360 ft

13) An online store applies a 20% markup to all wholesale costs. If the wholesale cost is w, the selling price is $1.2w$. Which real-world scenario best uses this expression?

☐ A. Finding the sale price after a 20% off promotion
☐ B. Finding the price after a 20% surcharge is added
☐ C. Finding the original price if the marked-up price is known
☐ D. Finding the tax owed on the wholesale cost

14) Solve for x: $7(x + 1) = 49$

☐ A. $x = 5$
☐ B. $x = 6$
☐ C. $x = 7$
☐ D. $x = 8$

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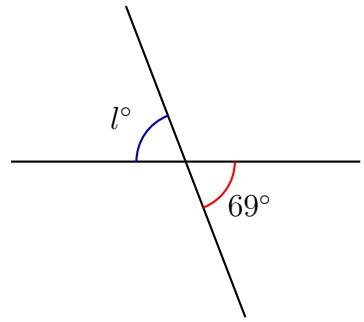
1)



Two intersecting lines form angles. One angle is 69°. The vertically opposite angle is l. What is the measure of l?

☐ A. 21°
☐ B. 69°
☐ C. 111°
☐ D. 159°

2) A floor plan uses a scale of $\frac{1}{2}$ inch : 1 foot. How many feet does 1 inch on the floor plan represent?

☐ A. 0.5
☐ B. 1
☐ C. 2
☐ D. 24

3) Which of the following is NOT a perfect square?

☐ A. 81
☐ B. 72
☐ C. 121
☐ D. 169

4) A student claims: "A negative times a positive is always larger than a positive times a positive." Which is the BEST counterexample?

☐ A. $(-1) \times 10 = -10$ and $2 \times 5 = 10$
☐ B. $(-5) \times 2 = -10$ and $3 \times 4 = 12$
☐ C. $(-100) \times 1 = -100$ and $1 \times 1 = 1$
☐ D. $(-1) \times 1 = -1$ and $1 \times 1 = 1$

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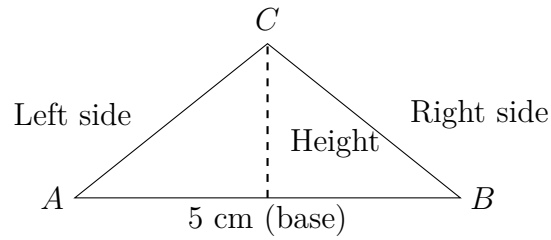
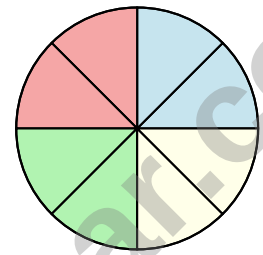
5)



The triangle has a base of 5 cm and the two other sides are equal. What type of triangle is this?

☐ A. Equilateral
☐ B. Isosceles
☐ C. Scalene
☐ D. Right

6)



A spinner has 8 equal sections: 2 blue, 2 red, 2 green, and 2 yellow. Which expression shows the complement rule for finding the probability of NOT spinning blue or red?

☐ A. $\frac{2}{8}$
☐ B. $\frac{3}{8}$
☐ C. $1 - \frac{1}{2}$
☐ D. $\frac{6}{8}$

7) A spinner with 4 equal sections (1, 2, 3, 4) is spun, and a coin is flipped. How many favorable outcomes result in spinning a number greater than 2 and flipping Heads?

☐ A. 1
☐ B. 2
☐ C. 4
☐ D. 8

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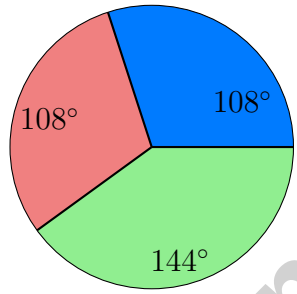
1) A real estate agent earns commissions on home sales. Last month, she earned $\$8,000$ in commission at a 2% rate. What was the total value of homes she sold?

☐ A. $\$160,000$
☐ B. $\$200,000$
☐ C. $\$240,000$
☐ D. $\$400,000$

2)



This spinner has sectors of 108°, 108°, and 144°. Which is the correct probability for the largest sector?

☐ A. $\frac{2}{5}$
☐ B. $\frac{1}{3}$
☐ C. $\frac{3}{5}$
☐ D. $\frac{2}{3}$

3) A worker is paid \$18 per hour. What are the earnings for 40 hours?

4) A poster is enlarged to 1.5 times its original size. If the original poster was 20 inches by 30 inches, what is the new area in square inches?

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5) A truck travels 350 miles and uses 25 gallons of gas. If gas costs \$3.50 per gallon, what is the cost per mile?

☐ A. \$0.20 per mile
☐ B. \$0.35 per mile
☐ C. \$0.30 per mile
☐ D. \$0.25 per mile

6) A jewelry box lid has a square face (8 cm × 8 cm) with a semicircular handle attached to the top (diameter 8 cm). Using $\pi \approx 3.14$, what is the total area?

☐ A. 64 cm^2
☐ B. 89.12 cm^2
☐ C. 100.48 cm^2
☐ D. 127.04 cm^2

7) A bag contains 8 red marbles and 12 blue marbles. If you pick one marble without looking, what is the probability of picking a red marble?

☐ A. $\frac{8}{20}$
☐ B. $\frac{12}{20}$
☐ C. $\frac{8}{12}$
☐ D. $\frac{20}{8}$

8) What is $3 - 7$?

☐ A. 4
☐ B. -10
☐ C. 10
☐ D. -4

9) Compare two stores selling the same item. Store X applies a 60% markup to a cost of \$80. Store Y applies a 50% markup to a cost of \$85. Which store has the lower selling price?

☐ A. Store X; \$128
☐ B. Store Y; \$135
☐ C. Both charge \$130
☐ D. Store Y; \$127.50

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Kansas KAP 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 Kansas KAP practice test.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

1) **Choice D is correct.** 7.RP.3 Discount percent $= \frac{3}{15} \times 100 = 20\%$.
2) **Choice C is correct.** 7.EE.4b Check $x = 6$: $6 - 4 = 2 \not\geq 3$. The other values give 3, 6, and 96, all ≥ 3.
3) **Choice C is correct.** 7.EE.1-7.EE.2 Difference of 10 and w means 10 minus w: $10 - w$.
4) **Choice A is correct.** 7.EE.1-7.EE.2 Combine: $(5p + 2p) + (3 - 9) = 7p - 6$.
5) **Choice C is correct.** 7.EE.1-7.EE.2 Using quotient rule: $\frac{k^7}{k^7} = k^{7-7} = k^0 = 1$. Any number divided by itself equals 1.
6) **The correct answer is** \$10 **.** 7.RP.3 Charitable donations $= (100\% - 40\% - 35\% - 20\%) \times \$200 = 5\% \times 200 = \$10$.
7) **Choice A is correct.** 7.EE.4a Bar model shows base \$80 plus additional uniforms at \$15 each. Equation: $15u + 80 = 230$.
8) **Choice B is correct.** 7.EE.3-7.EE.4 Set up: $35 + 4p = 51 \Rightarrow 4p = 16 \Rightarrow p = 4$.
9) **Choice A is correct.** 7.SP.1-7.SP.4 Although Tigers have a higher mean (75% vs. 72%), the Sharks have much lower MAD (4% vs. 8%), indicating more consistent free-throw shooting.
10) **Choice C is correct.** 7.RP.1-7.RP.3 The unit rate is found by dividing any y by its corresponding x: $21 \div 3 = 7$; $35 \div 5 = 7$; $49 \div 7 = 7$. Unit rate is 7.
11) **Choice B is correct.** 7.NS.1-7.NS.3 Division by a number equals multiplication by its reciprocal: $(-8) \div 2 = (-8) \times \frac{1}{2} = -4$.
12) **Choice B is correct.** 7.NS.1-7.NS.3 Net change: $150 - 210 = -60$ feet.
13) **Choice B is correct.** 7.EE.1-7.EE.2 A markup of 20% means adding 20% to the cost: $w + 0.2w = 1.2w$. This matches a surcharge or fee being added.
14) **Choice B is correct.** 7.EE.4a Distribute: $7x + 7 = 49$. Subtract 7: $7x = 42$. Divide by 7: $x = 6$.
15) **Choice B is correct.** 7.EE.3-7.EE.4 Divide by 5: $x - 2 = 6$. Add 2: $x = 8$. Check: $5(8 - 2) = 5(6) = 30$ ✓. Reasonable: five groups of 6 equals 30.
16) **Choice C is correct.** 7.NS.2 $6 \times 4.50 = 27.00$. Each burger is \$4.50, so 6 burgers cost \$27.00.
17) **Choice A is correct.** 7.SP.5-7.SP.8 In a uniform random selection, each of the 28 students has equal probability: $P(\text{student selected}) = \frac{1}{28}$.
18) **Choice D is correct.** 7.RP.3 Total haircut revenue $= 25 \times 8 = \$200$. Commission = commission rate $\times$ sales $= 0.40 \times 200 = \$80$.
19) **The correct answer is** \$1102.50 **.** 7.RP.3 Year 1: $1000 \times 1.05 = 1050$. Year 2: $1050 \times 1.05 = 1102.50$.
20) **The correct answer is** \$119.50 **.** 7.NS.1-7.NS.3 Total spent $= \$42.50 + \$18.25 + \$21.00 = \$81.75$. Balance after purchases: $\$125.75 - \$81.75 = \$44.00$. Final balance after deposit: $\$44.00 + \$75.50 = \$119.50$.
21) **Choice B is correct.** 7.SP.1-7.SP.4 Ordered: $51, 52, 53, 55, 56, 58, 59$. The 2nd value is 52.
22) **The correct answer is B,D.** 7.NS.1-7.NS.3 B: $-33 + 33 = 0$ (opposites sum to zero). D: $-100 + 100 = 0$ (opposites sum to zero). A: $20 + (-10) = 10$ (not zero). C: $14 + (-7) = 7$ (not zero).
23) **Choice D is correct.** 7.RP.1-7.RP.3 The unit rate is 0.85 euros per US dollar. For \$100: $100 \times 0.85 = 85$ euros.
24) **Choice D is correct.** 7.G.4-7.G.6 Decompose into two rectangles: First rectangle $7 \times 2 = 14$ sq units. Second rectangle $7 \times 2 = 14$ sq units. Add them: $14 + 14 = 28$ sq units.
25) **Choice A is correct.** 7.G.4-7.G.6 Base area $= 12^2 = 144$ in^2. Height $= \frac{V}{B} = \frac{720}{144} = 5$ in.
26) **Choice B is correct.** 7.G.1-7.G.5 When two sides and the angle between them are given, exactly one triangle can be constructed (up to congruence).
27) **Choice C is correct.** 7.G.4-7.G.6 Concentric circles share the same center. M is at the center of both circles.
28) **Choice D is correct.** 7.G.1-7.G.5 With two known angles, the third angle is $180° - 38° - 67° = 75°$ (fixed). However, varying the side opposite any angle creates infinitely many similar but non-congruent triangles.
29) **Choice B is correct.** 7.SP.1-7.SP.4 Larger random samples produce more stable and reliable estimates because they reduce the effect of random variability. Increasing sample size is the proper way to improve the reliability of a sample estimate. Options A (biased region), C (leading questions), and D (discarding data) are not valid approaches.

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Author's Note

A Math Hero Moment

Hi, Math Hero!

◇ This wide-ranging book gave you eight serious 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

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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!

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FOR MORE PRACTICE TESTS

PRACTICE REGULARLY | STAY FOCUSED | SOLVE CONFIDENTLY | SUCCEED BRIGHTLY