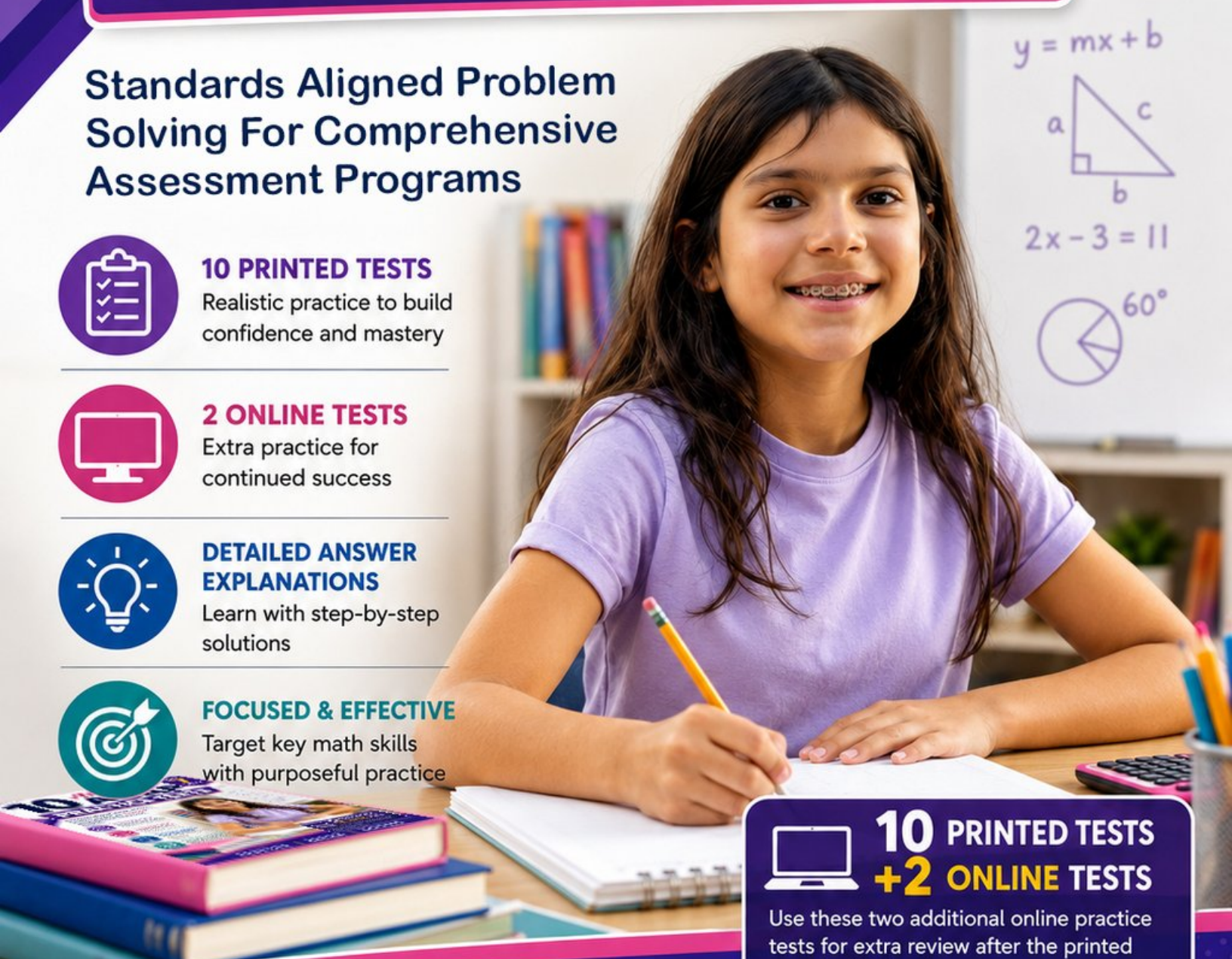
10 Kansas KAP PRACTICE TESTS

GRADE 7 MATH

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

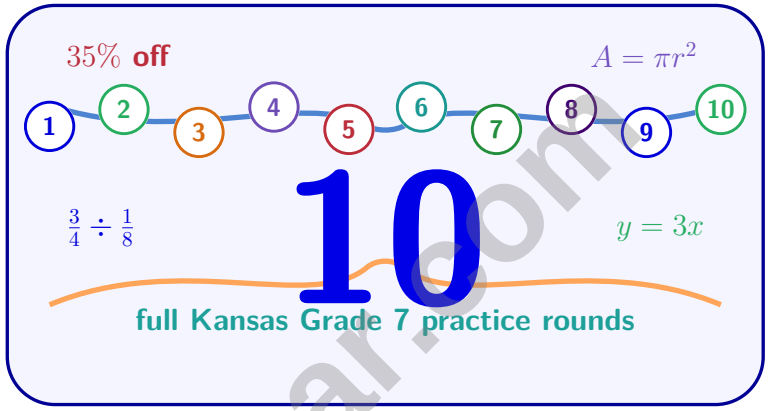
10 PRINTED TESTS +2 ONLINE TESTS

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

PRACTICE ★ REVIEW ★ SUCCEED

10 Kansas KAP Grade 7 Math Practice Tests

Kansas Grade 7 KAP Practice for wide-open practice for ratios, equations, scale drawings, angle reasoning, statistics, and chance



Ten 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!

Ten focused rounds for sharper Kansas KAP math thinking

This book gives you ten 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.

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.

Kansas 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 Kansas KAP 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 Kansas 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) A proportional relationship has the equation $y = 4x$. Which of the following points lies on this line?

☐ A. $(4, 15)$
☐ B. $(2, 6)$
☐ C. $(3, 10)$
☐ D. $(1, 4)$

2) Solve for x: $5(x - 4) = 45$

☐ A. $x = 5$
☐ B. $x = 9$
☐ C. $x = 13$
☐ D. $x = 17$

3) The distance from Earth to the Sun is approximately 1.5×10^8 kilometers. Express this in standard form.

☐ A. 15,000,000 km
☐ B. 150,000,000 km
☐ C. 1,500,000,000 km
☐ D. 15,000,000,000 km

4) The circumference of a circle is 50.24 meters. Using $\pi \approx 3.14$, find the diameter.

5) A jar contains 10 marbles: 3 red, 2 blue, and 5 green. What is the probability of drawing a marble that is not blue?

☐ A. $\frac{3}{10}$
☐ B. $\frac{4}{5}$
☐ C. $\frac{1}{5}$
☐ D. $\frac{3}{5}$

6) Two spinners are spun. The first spinner has sections labeled 1, 2, and 3. The second spinner has sections labeled A and B. How many outcomes are in the sample space?

☐ A. 5
☐ B. 6
☐ C. 8
☐ D. 9

7) A pictograph uses one star symbol to represent 50 students. If there are 12 stars shown for 7th grade, how many seventh-grade students are there?

☐ A. 12 students
☐ B. 50 students
☐ C. 62 students
☐ D. 600 students

8) A marble bag contains 5 green, 3 purple, and 2 orange marbles. If drawing without replacement, which compound event is MOST likely?

☐ A. Green then purple
☐ B. Orange then green
☐ C. Purple then purple
☐ D. Green then green

9) A cylindrical glass has a diameter of 6 cm and a height of 10 cm. What is the lateral surface area of the glass? Use $\pi \approx 3.14$.

10) A restaurant manager surveys 40 customers and finds that 32 of them would recommend the restaurant to a friend. What proportion of customers in the sample would recommend the restaurant?

11) A dot plot shows sit-ups completed by two classes. Class 1 values cluster at 28–32 sit-ups. Class 2 values spread from 15 to 45 sit-ups. Which class is more consistent?

12) A six-sided die was rolled 120 times. The results are shown below.

Face	1	2	3	4	5	6
Frequency	18	22	19	21	25	15

What is the experimental probability of rolling a 5?

☐ A. $\frac{25}{120}$
☐ B. $\frac{7}{24}$
☐ C. $\frac{1}{6}$
☐ D. $\frac{15}{120}$

13) A teacher records reading test scores in a stem-and-leaf plot but forgets to order the leaves. The plot shows: Stem 8 with leaves $5, 2, 7, 2$. What should the ordered leaves be?

☐ A. $5, 2, 7, 2$
☐ B. $2, 2, 5, 7$
☐ C. $2, 5, 7, 2$
☐ D. $7, 5, 2, 2$

14) A clock was estimated to cost \$18 but actually cost \$24. What is the percent error?

☐ A. 25%
☐ B. 33.3%
☐ C. 75%
☐ D. 6%

1) What is $12 + (-5)$?

☐ A. 7
☐ B. -7
☐ C. 17
☐ D. -17

2) Two dot plots show the number of push-ups completed in a fitness test by two grades. Grade 6: 12, 14, 15, 15, 16, 16, 16, 17, 18. Grade 7: 8, 10, 16, 18, 20, 22. As a coach building group improvement, which grade has the most room for collective advancement?

☐ A. Grade 6 (concentrated performance leaves room for collective improvement)
☐ B. Grade 7 (already achieving higher maximum of 22)
☐ C. Both grades have equal potential
☐ D. Grade 6 (higher median of 16)

3) A stem-and-leaf plot shows:

Stem	Leaves
22	0, 3, 7
23	1, 4, 6, 9
24	2, 5, 8

What is the sum of the minimum and maximum values?

☐ A. 470
☐ B. 471
☐ C. 468
☐ D. 473

4) A rectangular prism has a base area of 24 square inches and a height of 6 inches. Find the volume.

☐ A. 288 in^3
☐ B. 144 in^3
☐ C. 72 in^3
☐ D. 30 in^3

5) A survey shows that the probability a student likes pizza is $\frac{7}{8}$. How many students out of 80 would you expect to NOT like pizza?

☐ A. 7
☐ B. 10
☐ C. 70
☐ D. 73

6) Simplify: $11a - 6a + 2a$

☐ A. $7a$
☐ B. $19a$
☐ C. $9a$
☐ D. $5a$

7) Which pair of expressions are equivalent?

☐ A. $2(x + 7)$ and $2x + 7$
☐ B. $3(2y - 4)$ and $6y - 12$
☐ C. $5(a + 2)$ and $5a + 2$
☐ D. $4(3m - 1)$ and $12m - 1$

8) A cube has edge length 5 mm. What is its surface area?

☐ A. 25 mm^2
☐ B. 50 mm^2
☐ C. 125 mm^2
☐ D. 150 mm^2

9) A store offers a 32% discount on a pair of jeans originally priced at \$75. What is the sale price?

1) A cone is cut by a plane that passes through the apex and the base circle. What is the shape of the cross-section?

☐ A. Circle
☐ B. Isosceles triangle
☐ C. Ellipse
☐ D. Semicircle

2)

Outcome	Red	Blue	Green
Probability	0.35	0.25	?

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

3) A garden bed is 8 meters long and 4 meters wide. If you scale all dimensions by a factor of $\frac{1}{2}$, what is the new length?

4) A supermarket sold 1200 items during a sale. The circle graph shows 19% were on clearance. How many clearance items were sold?

☐ A. 19
☐ B. 76
☐ C. 228
☐ D. 972

5) Simplify: $(9r + 4) - (6r + 1)$

- ☐ A. $3r + 3$
- ☐ B. $3r + 5$
- ☐ C. $15r + 3$
- ☐ D. $3r - 3$

6) Simplify using the laws of exponents: $x^3 \cdot x^5$

- ☐ A. x^2
- ☐ B. x^8
- ☐ C. x^{15}
- ☐ D. x^{35}

7) A store owner ordered boxes of inventory. Each box costs \$7, and there is a \$23 shipping fee. If the total cost is \$114, which equation represents b, the number of boxes ordered?

- ☐ A. $7b + 23 = 114$
- ☐ B. $23b + 7 = 114$
- ☐ C. $b + 7 + 23 = 114$
- ☐ D. $7(b + 23) = 114$

8) Solve for y: $5y - 3 = 22$

- ☐ A. $y = 3$
- ☐ B. $y = 5$
- ☐ C. $y = 19$
- ☐ D. $y = 25$

9) Solve for x: $3(x - 7) = 18$

- ☐ A. $x = 7$
- ☐ B. $x = 9$
- ☐ C. $x = 11$
- ☐ D. $x = 13$

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.

Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

1) **Choice D is correct.** 7.RP.1-7.RP.3 For $y = 4x$: when $x = 1$, $y = 4 \times 1 = 4$. So $(1, 4)$ lies on the line. This is the unit-rate point where the constant of proportionality $k = 4$ is visually represented. The other points do not satisfy $y = 4x$.
2) **Choice C is correct.** 7.EE.4a Distribute: $5x - 20 = 45$. Add 20: $5x = 65$. Divide by 5: $x = 13$.
3) **Choice B is correct.** 7.NS.1-7.NS.3 $1.5 \times 10^8 = 1.5 \times 100{,}000{,}000 = 150{,}000{,}000$.
4) **The correct answer is 16 m .** 7.G.4-7.G.6 $C = \pi d \Rightarrow 50.24 = 3.14d \Rightarrow d = 50.24 \div 3.14 = 16$ m.
5) **Choice B is correct.** 7.SP.5-7.SP.8 Non-blue marbles $= 3 + 5 = 8$. $P(\text{not blue}) = \frac{8}{10} = \frac{4}{5}$.
6) **Choice B is correct.** 7.SP.5-7.SP.8 First spinner: 3 outcomes; second spinner: 2 outcomes. Total: $3 \times 2 = 6$ outcomes.
7) **Choice D is correct.** 7.SP.1-7.SP.4 12 stars $\times$ 50 students/star $= 600$ students.
8) **Choice D is correct.** 7.SP.5-7.SP.8 $P(\text{GG}) = \frac{5}{10} \cdot \frac{4}{9} = \frac{20}{90}$. $P(\text{GP}) = \frac{5}{10} \cdot \frac{3}{9} = \frac{15}{90}$. $P(\text{OG}) = \frac{2}{10} \cdot \frac{5}{9} = \frac{10}{90}$. $P(\text{PP}) = \frac{3}{10} \cdot \frac{2}{9} = \frac{6}{90}$. Green-green is largest.
9) **The correct answer is 188.4 .** 7.G.4-7.G.6 Radius is half the diameter: $r = 3$ cm. Lateral area $= 2\pi rh \approx 2 \times 3.14 \times 3 \times 10 = 188.4$ cm^2.
10) **The correct answer is 4/5 .** 7.SP.1-7.SP.4 Simplify the fraction: $\frac{32}{40} = \frac{4}{5} = 0.8 = 80\%$. This sample statistic ($\frac{4}{5}$) is the point estimate used to predict the proportion of all customers who would recommend the restaurant.
11) **The correct answer is Class 1 .** 7.SP.3 Both classes may have the same median of 30 sit-ups, but the distribution shape matters. Class 1's tight clustering (small range) means less variability and easier group improvement. Class 2's spread (large range) indicates inconsistency within the group.
12) **Choice A is correct.** 7.SP.6 The face 5 appeared 25 times out of 120 total rolls. Experimental probability $= \frac{25}{120}$. Note: this is slightly higher than the theoretical probability of $\frac{1}{6}$.
13) **Choice B is correct.** 7.SP.1-7.SP.4 Leaves must be arranged in ascending order. The values are $82, 82, 85, 87$, so leaves in order are $2, 2, 5, 7$.
14) **Choice A is correct.** 7.RP.3 Percent error $= \frac{|18-24|}{24} \times 100\% = \frac{6}{24} \times 100\% = 25\%$.
15) **Choice A is correct.** 7.EE.1-7.EE.2 Distribute 6: $6(m) - 6(1) = 6m - 6$.
16) **Choice C is correct.** 7.RP.3 $A = P + I \Rightarrow 2480 = P + P(0.06)(4) \Rightarrow 2480 = P + 0.24P = 1.24P \Rightarrow P = \$2000$.
17) **Choice D is correct.** 7.NS.1-7.NS.3 $12 - (-3) = 12 + 3 = 15$.
18) **Choice C is correct.** 7.RP.1-7.RP.3 Divide actual dimensions by scale: $15 \div 5 = 3$ inches; $10 \div 5 = 2$ inches.
19) **The correct answer is A,B.** 7.G.4-7.G.6 Choice A: Diameter $= 2r = 2 \times 6 = 12$ m is correct. Choice B: Area $= 3.14 \times 6^2 = 113.04$ m^2 is correct. C confuses circumference with area (37.68 m vs m^2). D fails because square area is 36 m^2, much less than circle's 113.04 m^2.
20) **Choice C is correct.** 7.RP.3 20% of 250 is $0.20 \times 250 = 50$.
21) **Choice D is correct.** 7.RP.3 Tax $= 0.08 \times 20 = \$1.60$. Final price $= 20 + 1.60 = \$21.60$.
22) **Choice B is correct.** 7.EE.1 Group like terms: $(7 + 2)m^2 + (3 - 1)n + 4 = 9m^2 + 2n + 4$. The constant 4 has no like terms.
23) **Choice A is correct.** 7.EE.1-7.EE.2 The GCF of 6 and 18 is 6. $6x + 18 = 6(x + 3)$.
24) **Choice C is correct.** 7.SP.1-7.SP.4 50% of $10,000 = 0.50 \times 10{,}000 = 5000$ visitors.
25) **Choice D is correct.** 7.NS.1b Position $= -15 + 8 = -7$. She is still 7 feet below sea level (represented as -7).
26) **Choice B is correct.** 7.EE.4b Add 4: $3x \leq 15$. Divide by 3: $x \leq 5$.
27) **Choice A is correct.** 7.RP.3 Interest rate $= (\$1{,}650 - \$1{,}500) \div \$1{,}500 = \$150 \div \$1{,}500 = 0.10 = 10\%$.
28) **Choice C is correct.** 7.NS.1-7.NS.3 $-75 + 120 = 45$ dollars.
29) **Choice B is correct.** 7.NS.2d Divide $11 \div 50 = 0.22$. Since $50 = 2 \times 5^2$, the result is terminating.
30) **Choice B is correct.** 7.NS.1-7.NS.3 Change per hour is $-1.5°$F. After 5 hours: $-1.5 \times 5 = -7.5°$F.

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