

6 IDAHO ISAT

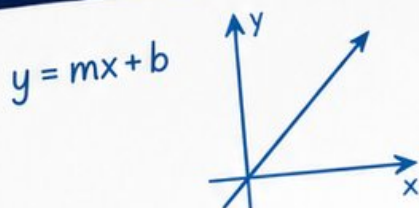
GRADE

7

MATH

PRACTICE TESTS

Standards Aligned
Problem Solving For
Comprehensive
Assessment Programs



$$2(x - 3) = 4x + 6$$



6 PRINTED TESTS



2 ONLINE TESTS



USE THESE TWO
**ADDITIONAL ONLINE
PRACTICE TESTS**
FOR EXTRA REVIEW AFTER
THE PRINTED TESTS
IN THIS BOOK.



Build
Confidence



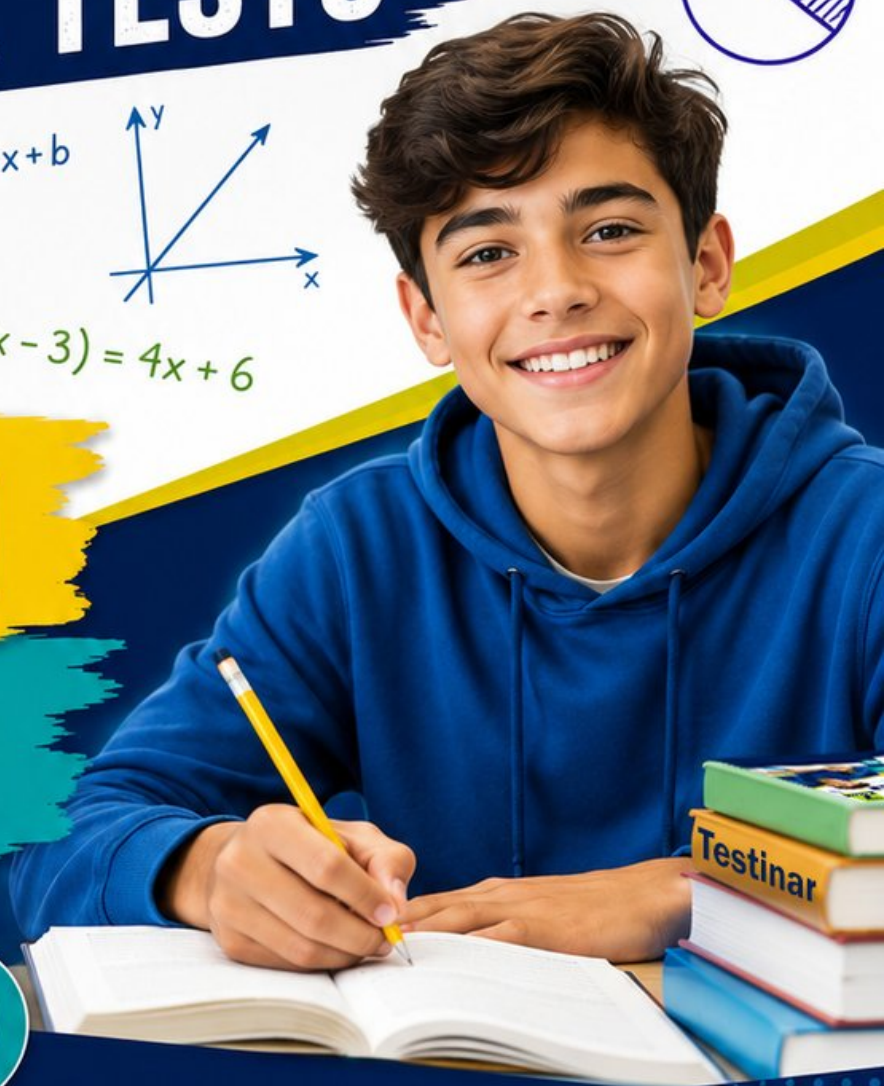
Strengthen
Math Skills



Detailed Answers
& Explanations

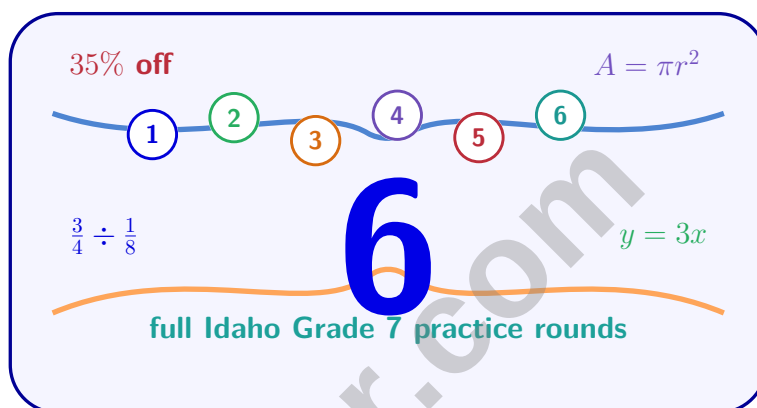


Improve Test
Performance



6 Idaho ISAT Grade 7 Math Practice Tests

Standards-Aligned Practice with Review, Answer Keys, and Explanations



Six complete 40-question Grade 7 ISAT 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, Idaho Grade 7 Problem Solver!

Six focused rounds for sharper ISAT math thinking

This book gives you six full Grade 7 ISAT 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 Idaho 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

A six-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.

Idaho 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?

Six ISAT tests, 240 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.
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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& answers

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1) Find x : $-2x + 5 = 1$

☐ A. $x = -2$

☐ C. $x = 2$

☐ B. $x = 1$

☐ D. $x = 3$

2) A paint mixture uses $\frac{2}{5}$ can of white paint and $\frac{3}{5}$ can of blue paint. What is the ratio of white to blue?

☐ A. 5 to 3

☐ C. 2 to 5

☐ B. 3 to 2

☐ D. 2 to 3

3) Solve for x : $-4(x - 5) = 4$

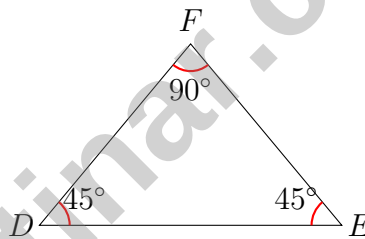
☐ A. $x = 3$

☐ C. $x = 5$

☐ B. $x = 4$

☐ D. $x = 6$

4)



A right isosceles triangle has two legs of length 6 cm each. Its angle measures can be:

☐ A. $45^\circ, 45^\circ, 90^\circ$

☐ C. $30^\circ, 60^\circ, 90^\circ$

☐ B. $60^\circ, 60^\circ, 60^\circ$

☐ D. $50^\circ, 50^\circ, 80^\circ$

5) A point is translated from $(-2, 3)$ to $(4, -1)$. Write the translation vector (a, b) in the form (a, b) .



6) A school wants to estimate the average amount of time students spend on homework per night. Which sample size is best?

☐ A. 10 students

☐ C. 100 students

☐ B. 25 students

☐ D. 1000 students

7) A back-to-back stem-and-leaf plot compares the heights of two basketball teams. The stem represents tens of inches. For Team A, stem 7 has leaves 0, 2, 4, 6 (on the left). For Team B, stem 7 has leaves 1, 3, 5, 8 (on the right). How many players are in the 70–79 inch range in total?

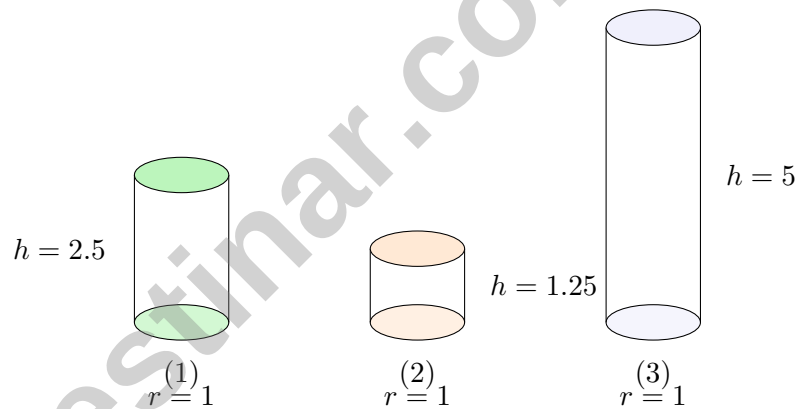
☐ A. 4 players

☐ C. 12 players

☐ B. 8 players

☐ D. 16 players

8)



Three cylinders all have $r = 1$ cm and different heights: $h = 2.5, 1.25, 5$ cm. If you order them by volume from smallest to largest, which is correct? Use $\pi \approx 3.14$.

☐ A. (1), (2), (3)

☐ C. (3), (1), (2)

☐ B. (2), (1), (3)

☐ D. (1), (3), (2)



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9) Two sales reps' weekly commission earnings (in dollars):

Rep	Mean	Median
Rep A	\$1200	\$1400
Rep B	\$1200	\$1000

Which statement best describes their earnings?

- ☐ A. Both reps earn identical amounts weekly
☐ B. Rep A has low-earning weeks pulling the mean down; Rep B has high-earning weeks
☐ C. Rep A's median exceeds the mean (low outliers); Rep B's mean exceeds median (high outliers)
☐ D. Rep B earns more on average
- 10) A fair six-sided die is rolled once. What is the probability of rolling a number greater than 4?
- ☐ A. $\frac{1}{6}$
☐ B. $\frac{1}{3}$
☐ C. $\frac{1}{2}$
☐ D. $\frac{2}{3}$
- 11) A spinner is divided into 3 equal sections (Red, Blue, Yellow), and a fair coin is flipped. How many total outcomes are possible?
- ☐ A. 3
☐ B. 5
☐ C. 6
☐ D. 9
- 12) What is the error in the following reasoning? A student says: "The probability of getting heads on a coin flip is $\frac{1}{2}$. I just flipped heads, so the next flip is more likely to be tails."
- ☐ A. Coin flips are mutually exclusive, not independent
☐ B. Each coin flip is independent; prior outcomes do not affect future ones
☐ C. The probability should be $\frac{1}{4}$ after getting heads once
☐ D. Tails becomes impossible after getting heads



1) What is 3×0.5 ?

☐ A. 0.5

☐ C. 3.5

☐ B. 1.5

☐ D. 6

2) A book costs \$15. After a 40% price increase, what is the new cost?

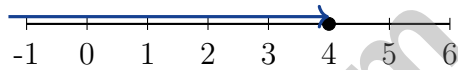
☐ A. \$6

☐ C. \$21

☐ B. \$9

☐ D. \$25

3) Solve $2x - 1 \leq 7$ and select the correct graph.



☐ A. Closed circle at 4 pointing left

☐ C. Closed circle at 4 pointing right

☐ B. Open circle at 4 pointing left

☐ D. Open circle at 4 pointing right

4) A simulation is designed to estimate the probability of getting exactly two tails in three coin flips. What is the theoretical probability that the simulation should approach?

☐ A. $\frac{1}{8}$

☐ C. $\frac{3}{8}$

☐ B. $\frac{2}{8}$

☐ D. $\frac{4}{8}$

5) A fair six-sided die is rolled twice. What is the probability of rolling a 3 on the first roll AND a 5 on the second roll?

☐ A. $\frac{1}{6}$

☐ C. $\frac{1}{36}$

☐ B. $\frac{1}{12}$

☐ D. $\frac{1}{18}$



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- 6) A chef estimated 3.5 cups of sugar were needed, but the recipe called for 4 cups. What is the percent error?

☐ A. 87.5% ☐ C. 0.5%
☐ B. 14.3% ☐ D. 12.5%

- 7) Expand: $-6(2 - 3p)$

☐ A. $-12 + 18p$ ☐ C. $12 + 18p$
☐ B. $-12 - 18p$ ☐ D. $-12 - 3p$

- 8) A teacher invests \$5000 in a savings bond at 2.5% simple interest per year. What is the total amount (principal plus interest) after 8 years?

☐ A. \$5625 ☐ C. \$6000
☐ B. \$5750 ☐ D. \$6250

- 9) What is $0 - 5$?

☐ A. 5 ☐ C. 0
☐ B. 10 ☐ D. -5

- 10) Identify the unlike terms in this expression: $4a + 3b + 2a + 5c$

☐ A. $4a$ and $2a$ ☐ C. $4a$ and $3b$
☐ B. $3b$ and $5c$ ☐ D. $2a$ and $5c$

- 11) A jar contains 5 green marbles and 15 red marbles. You pick one without looking. Express the probability of picking a green marble as a fraction in simplest form.



Sample (60 drawn):

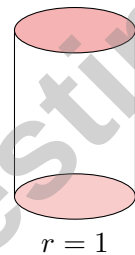
Proportion of success: $\frac{40}{60} = \frac{2}{3} \approx 66.7\%$

1)

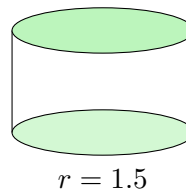
If the above sample is representative, and the population has 3000 individuals, how many successes are expected in the population?

☐ A. 1500☐ C. 2000☐ B. 1800☐ D. 2200

2) A student found the area of a circle with radius 5 cm and got 31.4 cm^2 . What error did the student make? Use $\pi \approx 3.14$.

☐ A. Used the diameter instead of radius☐ C. Used πd instead of πr^2 ☐ B. Used circumference formula $2\pi r$ instead of area☐ D. Computed 3.14×5 instead of 3.14×5^2 

Cylinder 1



Cylinder 2

3)

Which cylinder has the greater volume?

☐ A. Cylinder 1☐ C. They are equal☐ B. Cylinder 2☐ D. Cannot be determined

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- 4) A manufacturing plant tracks defect rates for two product lines over 10 batches:

Line	Mean Defect Rate	IQR
Product X	2.5%	1.0%
Product Y	2.3%	2.5%

Which product line is better for consistent quality control?

- ☐ A. Product X (slightly higher defect rate is offset by consistency)
☐ B. Product Y (lower mean defect rate)
- ☐ C. Both are identical
☐ D. Cannot determine without knowing minimum defect rates
- 5) A spinner is divided into 8 equal sections. 2 sections are labeled “Win”, 3 are labeled “Lose”, and 3 are labeled “Try Again”. What is the probability of spinning “Win”?
- ☐ A. $\frac{1}{8}$
☐ B. $\frac{1}{4}$
☐ C. $\frac{3}{8}$
☐ D. $\frac{1}{2}$
- 6) A die is rolled and a letter from the set {A, B, C, D, E} is drawn. How many outcomes are in the sample space?
- ☐ A. 11
☐ B. 18
☐ C. 25
☐ D. 30
- 7) A recipe calls for $2\frac{1}{2}$ cups of flour, written as $(2 + 0.5)$ cups. A baker triples the recipe. Which expression best shows the distributive property being applied?
- ☐ A. $3 \times 2.5 = 7.5$
☐ B. $3(2 + 0.5)$
☐ C. $3(2) + 3(0.5)$
☐ D. 7.5 cups total



Idaho ISAT 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 Idaho ISAT practice test.



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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice C is correct.** (7.EE.3-7.EE.4) Subtract 5: $-2x = -4$. Divide by -2 : $x = 2$.
- 2) **Choice D is correct.** (7.RP.1-7.RP.3) The ratio is $\frac{2}{5} : \frac{3}{5} = 2 : 3$.
- 3) **Choice B is correct.** (7.EE.4a) Distribute: $-4x + 20 = 4$. Subtract 20: $-4x = -16$. Divide by -4 : $x = 4$.
- 4) **Choice A is correct.** (7.G.1-7.G.5) A right isosceles triangle has a 90° angle and two equal legs. The two acute angles are each $(180 - 90)/2 = 45^\circ$.
- 5) **The correct answer is (6, -4).** (7.G.1-7.G.5) The translation vector is found by subtracting the starting point from the ending point: $(4, -1) - (-2, 3) = (4 - (-2), -1 - 3) = (4 + 2, -4) = (6, -4)$.
- 6) **Choice C is correct.** (7.SP.1-7.SP.4) A sample of 100 students balances accuracy with practicality. Samples of 10 and 25 are too small to reliably represent the whole school; 1000 would give similar accuracy but be costly and time-consuming to conduct.
- 7) **Choice B is correct.** (7.SP.1-7.SP.4) Team A has 4 players (70, 72, 74, 76). Team B has 4 players (71, 73, 75, 78). Total = $4 + 4 = 8$.
- 8) **Choice B is correct.** (7.G.4-7.G.6) (1): $V = \pi r^2 h = 3.14 \times (1)^2 \times 2.5 = 7.85 \text{ cm}^3$. (2): $V = 3.14 \times (1)^2 \times 1.25 = 3.925 \text{ cm}^3$. (3): $V = 3.14 \times (1)^2 \times 5 = 15.7 \text{ cm}^3$. Order: (2) < (1) < (3).
- 9) **Choice C is correct.** (7.SP.1-7.SP.4) Mean < Median indicates low outliers pulling the mean down. Mean > Median indicates high outliers pulling the mean up. Rep A: $1200 < 1400$ (low outliers). Rep B: $1200 > 1000$ (high outliers).
- 10) **Choice B is correct.** (7.SP.5-7.SP.8) Favorable outcomes: 5, 6 (two outcomes). Total outcomes: 6. $P(>4) = \frac{2}{6} = \frac{1}{3}$.
- 11) **Choice C is correct.** (7.SP.5-7.SP.8) The spinner has 3 outcomes and the coin has 2 outcomes. Using the counting principle: $3 \times 2 = 6$ total outcomes.
- 12) **Choice B is correct.** (7.SP.5-7.SP.8) This is the "gambler's fallacy." Each coin flip is independent, so the probability of tails on the next flip remains $\frac{1}{2}$ regardless of previous outcomes.
- 13) **Choice B is correct.** (7.SP.6) Correct probability: $\frac{32}{200} = 0.16$. Student's error: $\frac{200}{32} = 6.25$. The student inverted the fraction.
- 14) **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 = $2388/15 = 159.2 \approx 159$.
- 15) **Choice A is correct.** (7.SP.5-7.SP.8) Blue sections = 2 out of 8 total. Probability = $\frac{2}{8} = \frac{1}{4}$.
- 16) **Choice D is correct.** (7.RP.3) Percent error = $\frac{|240-200|}{200} \times 100\% = \frac{40}{200} \times 100\% = 20\%$.
- 17) **Choice A is correct.** (7.EE.1-7.EE.2) Expand: $12k + 6 + 3k - 6 = 15k$. Combine like terms.
- 18) **Choice C is correct.** (7.RP.3) First find interest: $I = 5000 \times 0.06 \times 4 = \1200 . Then $A = P + I = 5000 + 1200 = \6200 .
- 19) **Choice D is correct.** (7.NS.1-7.NS.3) $3 - (-3) = 3 + 3 = 6$.
- 20) **Choice D is correct.** (7.EE.1) $3x^2$ has exponent 2, while $3x$ has exponent 1. They are not like terms.
- 21) **The correct answer is A, C.** (7.G.1-7.G.5) A: Two triangles with the same three side lengths are congruent by SSS. C: Two triangles with two equal sides and an equal included angle are congruent by SAS. B is incorrect because AAA determines similarity, not congruence (triangles can be different sizes). D is incorrect because two angles and two separate sides (not necessarily properly positioned) do not guarantee congruence.
- 22) **Choice A is correct.** (7.EE.1-7.EE.2) Factor out -7 : $-14p + 35q = -7(2p - 5q)$. Check: $-7(2p - 5q) = -14p + 35q$.
- 23) **Choice C is correct.** (7.SP.1-7.SP.4) 45% of 500 = $0.45 \times 500 = 225 \text{ kWh}$.
- 24) **Choice D is correct.** (7.RP.1-7.RP.3) Multiply map distance by scale: $4.5 \times 25 = 112.5$ miles.
- 25) **Choice D is correct.** (7.RP.3) The original price is \$40 (since 75% of it is \$30). 25% of \$40 is $0.25 \times 40 = 10$ dollars.
- 26) **Choice C is correct.** (7.NS.1b) The temperature change is modeled by $-7 + 15 = 8$. A rise of 15° means we add 15 to the initial temperature of -7° .
- 27) **Choice A is correct.** (7.EE.4b) Subtract 3: $\frac{x}{2} > 6$. Multiply by 2: $x > 12$.
- 28) **Choice D is correct.** (7.RP.3) Using the proportion $\frac{60}{100} = \frac{x}{50}$, cross-multiply: $x = 30$ items.
- 29) **Choice B is correct.** (7.NS.1-7.NS.3) Common denominator 4: $-2\frac{2}{4} + 5\frac{3}{4} = 3\frac{1}{4}$.



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Hi, Persistent Problem Solver!

◇ Some Grade 7 questions ask you to hold several ideas in your mind at once. That can feel hard, and that is exactly why practice matters. ◇

★ **Remember this:** You showed persistence by continuing through the set. That habit is powerful because difficult problems often open after one more good attempt. You practiced across 6 full Grade 7 practice tests, and that repeated effort matters. ★

Persistence Tools

- **Try a Smaller Case:** Use an easier number to see the pattern.
- **Draw It:** Make the situation visible.
- **Restate It:** Say the question in your own words.
- **Check One Step:** Fix the first unclear place.

Grade 7 test-day tip: When stuck, do not restart everything. Find the first step you trust, then rebuild from there.

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

Jay Daie

Your Persistence Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **6** 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:

6 Full-Length Printed Tests

2 Online Practice Tests

 Detailed Answers & Explanations



MORE PRACTICE. GREATER RESULTS.

Give your child the tools to build strong math skills, confidence, and a positive attitude toward learning.

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Practice regularly to feel prepared and test-ready.



Strengthen Math Skills

Develop key math concepts and problem solving abilities.



Improve Understanding

Learn with clear explanations and step-by-step solutions.



Test Confidence

Familiarize with test formats and improve accuracy and speed.



Boost Performance

Apply your knowledge and achieve your best score!

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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