

5

Idaho ISAT

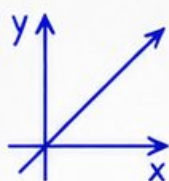
GRADE

7

MATH

PRACTICE TESTS

Standards Aligned
Problem Solving
For Comprehensive
Assessment Programs



$$y = mx + b$$

$$\frac{2}{3} + \frac{1}{6} = \frac{5}{6}$$



$$V = \pi r^2 h$$



5 PRINTED
TESTS



2 ONLINE
TESTS

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



Build
Confidence



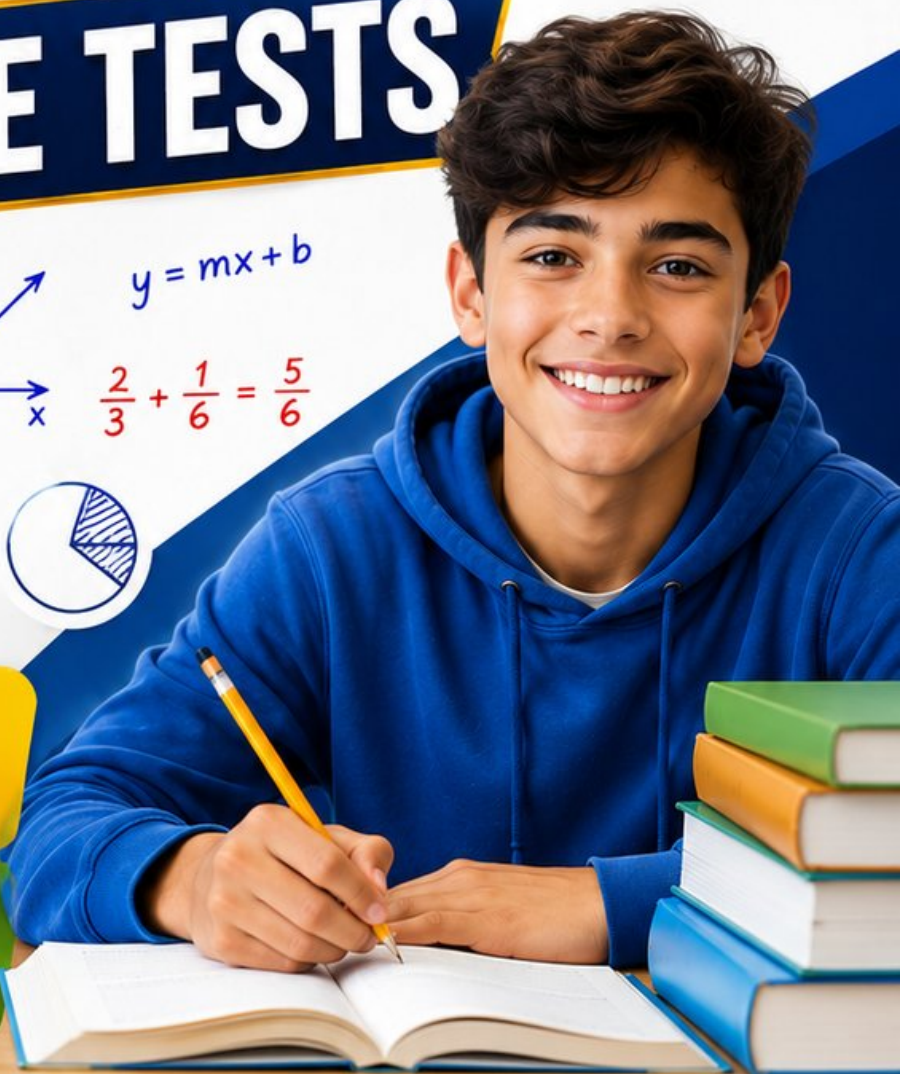
Strengthen
Math Skills



Detailed Answers
& Explanations

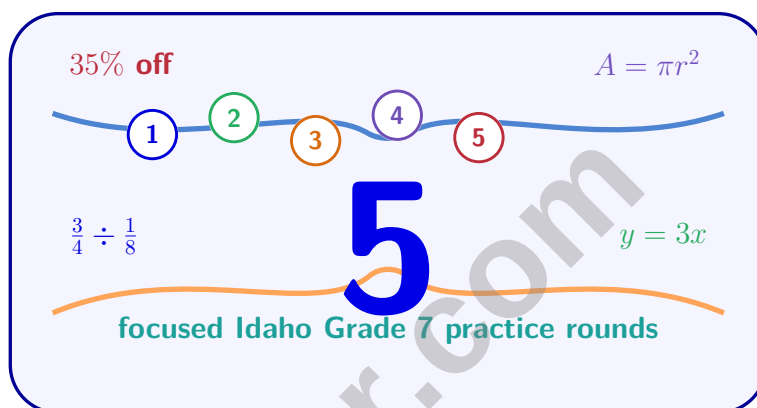


Improve Test
Performance



5 Idaho ISAT Grade 7 Math Practice Tests

Five-Test Math Review with Standards Practice and Clear Explanations



Five 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!

Five focused rounds for sharper ISAT math thinking

This book gives you five 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 five-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?

Five ISAT tests, 200 questions, and a focused review path

Part	What You Will Practice
Tests 1–2	Proportional relationships, unit rates, percents, rational-number operations, and careful reading.
Tests 3–5	Expressions, equations, inequalities, scale drawings, geometry, data, probability, 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.



Scan me!
For more practice
& answers

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1) Which equation is equivalent to finding the distance between -12 and 3 on a number line?

☐ A. $|-12 - 3|$

☐ B. $-12 - 3$

☐ C. $3 - 12$

☐ D. $|-12 - (-3)|$

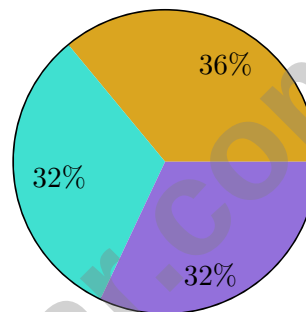
2) What is the coefficient of y in the simplified form of $-8y + 12y - 3y$?

☐ A. -8

☐ B. y

☐ C. 1

☐ D. 12



3)

The circle graph shows subscription type preferences. Gold is premium (36%), turquoise is standard (32%), and purple is basic (32%). If 2500 customers subscribe, how many have premium subscriptions?

☐ A. 700

☐ B. 800

☐ C. 900

☐ D. 1000

4) A river is 50 meters wide. On a map with scale $1 \text{ cm} : 10 \text{ m}$, how wide does the river appear?

☐ A. 0.5 cm

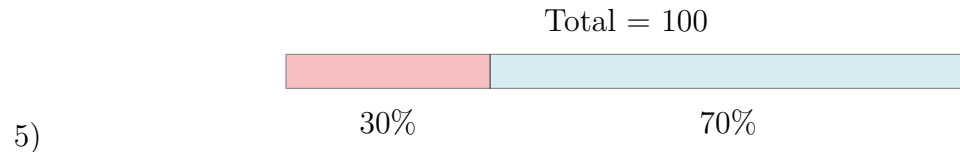
☐ B. 500 cm

☐ C. 50 cm

☐ D. 5 cm



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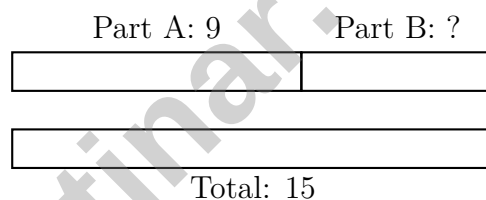
The bar model shows 30% and 70% of a total. If the total is 100, how much is 30%?

- ☐ A. 25 ☐ C. 35
- ☐ B. 40 ☐ D. 30

- 6) A restaurant gained 48 customers on Monday and lost 30 customers on Tuesday (compared to Sunday). What was the net change in customers over the two days?

- ☐ A. -78 ☐ C. 18
- ☐ B. -18 ☐ D. 78

- 7) A bar model is shown. Find the missing length.



- ☐ A. 6 ☐ C. -6
- ☐ B. 24 ☐ D. 5

- 8) A charity collects \$150.50 on Monday, \$225.75 on Tuesday, and spends \$180.25 on supplies. How much is left?

- ☐ A. \$196.00 ☐ C. \$195.50
- ☐ B. \$405.75 ☐ D. \$195.00



9)

Input-Output Table

x	y
1	5
2	8
3	11

What is y in terms of x ?

☐ A. $y = 3x - 2$

☐ C. $y = 3x + 2$

☐ B. $y = 2x + 3$

☐ D. $y = x + 4$

- 10) A tailor cuts 4 identical outfits using $\frac{8}{3}$ yards of fabric. How many yards of fabric per outfit?

☐ A. $\frac{1}{3}$ yard per outfit

☐ C. 2 yards per outfit

☐ B. $\frac{3}{2}$ yards per outfit

☐ D. $\frac{2}{3}$ yard per outfit

- 11) Look at the table. Is y proportional to x ?

x	3	6	9
y	12	24	36

☐ A. Yes, $k = 12$

☐ C. No

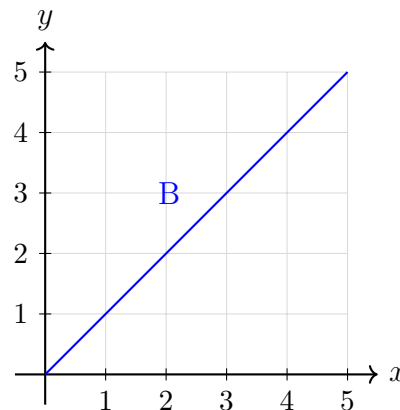
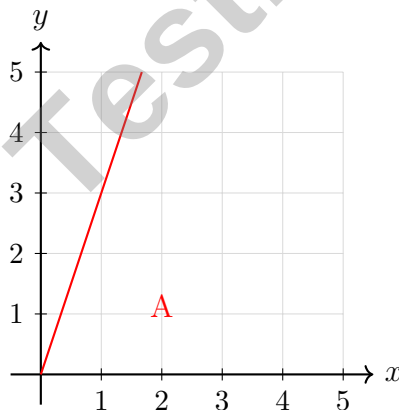
☐ B. Yes, $k = 3$

☐ D. Yes, $k = 4$



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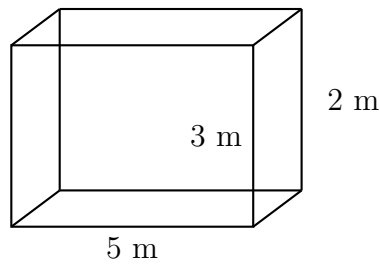
- 1) Two friends compare investments: — Friend A: invests \$400 at 10% compound interest for 2 years. — Friend B: invests \$400 at 10% simple interest for 2 years. How much more does Friend A earn?
- ☐ A. \$0 (equal) ☐ C. \$20
☐ B. \$80 ☐ D. \$4
- 2) In a sample of 100 apps on a phone, 16 are gaming apps. A mobile device company has 8000 app downloads tracked. About how many are gaming apps?
- ☐ A. 800 ☐ C. 1280
☐ B. 1000 ☐ D. 1600
- 3) A store owner reads an advertisement incorrectly. The ad says “25% off all winter coats!” Instead, she marks coats down by \$25 each. A coat originally priced at \$125 is marked at \$100. What is the actual percent discount she gave?
- ☐ A. 25% ☐ C. 20%
☐ B. \$25 ☐ D. 50%
- 4) Which graph shows the relationship $y = 3x$?



- ☐ A. Both lines ☐ C. Neither line
☐ B. Blue line ☐ D. Red line



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5)

A rectangular prism with dimensions $5\text{ m} \times 3\text{ m} \times 2\text{ m}$ is shown above. Calculate its surface area.

☐ A. 30 m^2 ☐ C. 84 m^2 ☐ B. 62 m^2 ☐ D. 120 m^2

6)

Spin Result	Heads	Tails	Total
Frequency	156	144	300

A coin is flipped 300 times. Based on the simulation, what is the estimated probability of getting tails?

☐ A. 0.44☐ C. 0.50☐ B. 0.48☐ D. 0.527) Solve: $4x < 20$ ☐ A. $x > 5$ ☐ C. $x \geq 5$ ☐ B. $x < 5$ ☐ D. $x < 80$ 8) What decimal is equivalent to $\frac{3}{20}$?


1) Simplify: $(d^2)^5$

☐ A. d^{10}

☐ C. d^{32}

☐ B. d^7

☐ D. $2d^{10}$

2) Solve: $\frac{2x-1}{3} \leq 5$

☐ A. $x \leq 8$

☐ C. $x \leq 7$

☐ B. $x \leq \frac{16}{2}$

☐ D. $x > 8$

3) A baker measures flour in 1-cup scoops. She needs 3 times the number of scoops of flour for dough, plus 2 additional cups for dusting. If she uses 11 cups of flour total, how many scoops s did she use for dough?

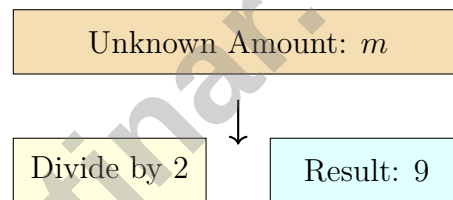
☐ A. $3s + 2 = 11$

☐ C. $2s + 3 = 11$

☐ B. $3s = 11$

☐ D. $s + 3 + 2 = 11$

4)



What is the unknown amount m ?

☐ A. 4.5

☐ C. 18

☐ B. 11

☐ D. 36

5) A rectangle on a map is 5 cm by 8 cm. The scale is 1 cm : 10 km. If the scale changes to 1 cm : 5 km, what are the new dimensions?

☐ A. 5 cm by 8 cm

☐ C. 2.5 cm by 4 cm

☐ B. 10 cm by 16 cm

☐ D. 50 cm by 80 cm



6) The graph of which equation is a straight line passing through the origin?

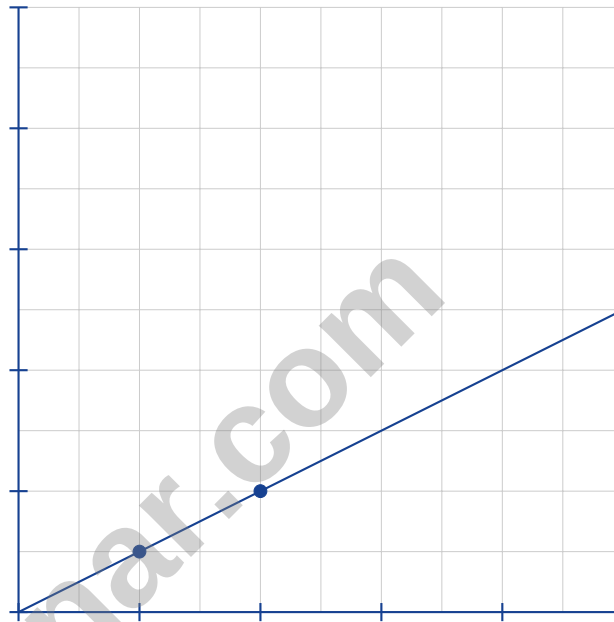
☐ A. $y = 2x - 3$

☐ C. $y = x + 1$

☐ B. $y = 0.5x + 2$

☐ D. $y = -5x$

Unit price (\$)



Quantity

7)

Two points are marked on this proportional relationship. What is the constant of proportionality?

☐ A. 4

☐ C. 2

☐ B. 1

☐ D. 0.5



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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 A is correct.** (7.NS.1-7.NS.3) Distance is found using absolute value: $|-12 - 3| = |-15| = 15$ or equivalently $|3 - (-12)| = 15$. Only choice A gives the correct distance.
- 2) **Choice C is correct.** (7.EE.1) Simplify: $(-8 + 12 - 3)y = 1y = y$. The coefficient of y is 1.
- 3) **Choice C is correct.** (7.SP.1-7.SP.4) 36% of 2500 = $0.36 \times 2500 = 900$ customers.
- 4) **Choice D is correct.** (7.RP.1-7.RP.3) Divide actual width by scale: $50 \text{ m} \div 10 \text{ m per cm} = 5 \text{ cm}$.
- 5) **Choice D is correct.** (7.RP.3) 30% of 100 is $0.30 \times 100 = 30$.
- 6) **Choice C is correct.** (7.NS.1b) Net change = $48 + (-30) = 18$. There was a net gain of 18 customers.
- 7) **Choice A is correct.** (7.NS.1-7.NS.3) Part B = Total - Part A: $15 - 9 = 6$.
- 8) **Choice A is correct.** (7.NS.1-7.NS.3) Collected: $150.50 + 225.75 = 376.25$. Left: $376.25 - 180.25 = 196.00$ dollars.
- 9) **Choice C is correct.** (7.EE.1-7.EE.2) Pattern: when $x = 1$, $y = 5$; when $x = 2$, $y = 8$; when $x = 3$, $y = 11$. Each increase of 1 in x adds 3 to y . Check: $3(1) + 2 = 5$ ✓.
- 10) **Choice D is correct.** (7.RP.1-7.RP.3) Unit rate: $\frac{8/3}{4} = \frac{8}{3} \times \frac{1}{4} = \frac{8}{12} = \frac{2}{3}$ yard per outfit.
- 11) **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.
- 12) **Choice D is correct.** (7.RP.1-7.RP.3) Unit rate = $\$84 \div 12 = \7 per photo.
- 13) **Choice C is correct.** (7.RP.3) Emergency savings = $8\% \times \$48,000 = 0.08 \times 48000 = \$3,840$.
- 14) **Choice C is correct.** (7.NS.1-7.NS.3) $\frac{4}{7} \div \frac{2}{7} = \frac{4}{7} \times \frac{7}{2} = \frac{4}{2} = 2$.
- 15) **Choice B is correct.** (7.NS.1-7.NS.3) Debt: $-150 \div 5 = -30$ dollars per person.
- 16) **Choice B is correct.** (7.NS.1-7.NS.3) Moving the decimal 4 places right: $0.000789 \rightarrow 7.89$. Correct answer is 7.89×10^{-4} , not -3 .
- 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 C is correct.** (7.NS.1-7.NS.3) $10^2 = 100$ and $11^2 = 121$. Since 120 is very close to 121, $\sqrt{120} \approx 10.95$, which is closest to 11.
- 19) **Choice A is correct.** (7.EE.1-7.EE.2) $\gcd(6, 9) = 3$, so $6x - 9 = 3(2x - 3)$ by factoring out the GCF.
- 20) **Choice D is correct.** (7.RP.3) Tip percentage = $\frac{18}{120} = 0.15 = 15\%$.
- 21) **Choice A is correct.** (7.NS.2) Multiplication is commutative. $7 \times (-2) = -14$ and $(-2) \times 7 = -14$.
- 22) **The correct answer is A,C.** (7.SP.1-7.SP.4) Sample 1: $\frac{36}{120} = 0.30$; Sample 2: $\frac{27}{90} = 0.30$. Both show 30%, so A is true. Equal proportions allow reliable population estimates (C is true). B and D is false (Sample 1 is larger at 120 vs 90).
- 23) **Choice B is correct.** (7.SP.3) The IQR (from Q1 to Q3) represents the spread of the middle 50% of data. A larger IQR (8 vs. 3) indicates more variability in the central portion of the distribution.
- 24) **Choice A is correct.** (7.G.4-7.G.6) Start with the large rectangle: $20 \times 15 = 300 \text{ yd}^2$. Subtract the two removed corner sections: $2 \times (4 \times 3) = 24 \text{ yd}^2$. Remaining area: $300 - 24 = 276 \text{ yd}^2$.
- 25) **The correct answer is $\frac{1}{3}$.** (7.RP.1-7.RP.3) The constant is $k = \frac{y}{x} = \frac{2}{6} = \frac{1}{3}$.
- 26) **Choice C is correct.** (7.RP.1-7.RP.3) Set up: $\frac{25}{100} = \frac{18}{x}$. Cross multiply: $25x = 1800$, so $x = 72$.
- 27) **Choice C is correct.** (7.RP.3) Savings: $\$2500 - \$1950 = \$550$ remaining after expenses.
- 28) **The correct answer is \$51.** (7.RP.3) Discount amount = $0.32 \times 75 = \$24$. Sale price = $75 - 24 = \$51$.
- 29) **Choice D is correct.** (7.RP.3) Simple interest: $I = Prt = 500 \times 0.06 \times 3 = 90$.
- 30) **Choice B is correct.** (7.G.4-7.G.6) $h = \frac{V}{l \times w} = \frac{360}{10 \times 6} = \frac{360}{60} = 6$ inches.
- 31) **Choice D is correct.** (7.RP.1-7.RP.3) $k = 18/2 = 9$ dollars per hour. Verify: $36/4 = 9$ and $63/7 = 9$.
- 32) **Choice A is correct.** (7.G.1-7.G.5) Hypotenuse = $\sqrt{6^2 + 8^2} = \sqrt{36 + 64} = \sqrt{100} = 10$ cm. This is the 6-8-10 Pythagorean triple.



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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 5 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 **5** 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:

5 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.

WHAT YOU'LL GAIN



Build Confidence

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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