

10 Idaho ISAT

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

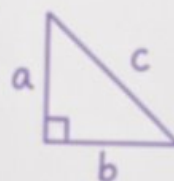
Learn with step-by-step
solutions



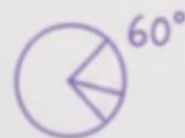
FOCUSED & EFFECTIVE

Target key math skills
with purposeful practice

$$y = mx + b$$



$$2x - 3 = 11$$



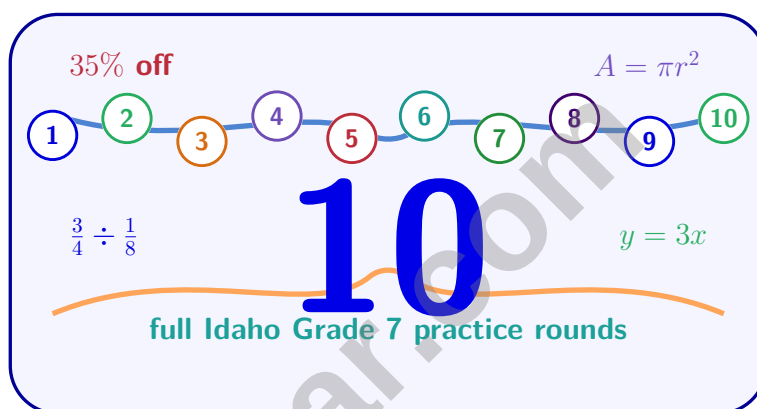
10 PRINTED TESTS
+2 ONLINE TESTS

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

PRACTICE ★ REVIEW ★ SUCCEED

10 Idaho ISAT Grade 7 Math Practice Tests

Idaho Grade 7 ISAT Practice for careful practice in unit rates, expressions, equations, scale, surface area, and data analysis



Ten 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!

Ten focused rounds for sharper Idaho ISAT math thinking

This book gives you ten 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 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.

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?

Ten Idaho ISAT 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 Idaho 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.



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& answers

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1) Simplify: $(6n + 4) - (3n - 2)$

☐ A. $3n + 6$

☐ C. $9n + 2$

☐ B. $3n + 2$

☐ D. $3n - 6$

2) A scale drawing shows a rectangular plot 4 in by 7 in with scale 1 in : 15 ft. A new drawing uses scale 1 in : 30 ft. Which are the new dimensions?

☐ A. 2 in by 3.5 in

☐ C. 8 in by 14 in

☐ B. 4 in by 7 in

☐ D. 60 in by 105 in

3) A credit score ranges from 300 to 850. A score above 700 is considered good. Jamie's score is 680. By how many points does her score fall short of the good credit threshold?

☐ A. 15 points

☐ C. 25 points

☐ B. 30 points

☐ D. 20 points

4) A spinner with 5 equal sections is spun twice. How many total outcomes are possible?

☐ A. 5

☐ C. 20

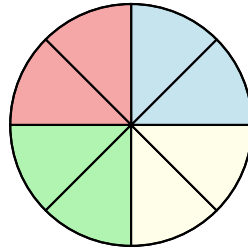
☐ B. 10

☐ D. 25

5) 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.



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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) Two box plots show salaries (in thousands of dollars) for two companies. Company P: Min 30, Q1 40, Median 50, Q3 65, Max 90; Company Q: Min 35, Q1 42, Median 48, Q3 60, Max 85. Which company has higher salaries overall?

- ☐ A. Company P (higher median and Q3)
☐ B. Company Q (higher minimum)
☐ C. Both companies pay equally
☐ D. Company Q (higher maximum)

8) A bag contains 6 blue marbles and 4 yellow marbles. Two marbles are drawn WITHOUT replacement. What is the probability the first is blue and the second is yellow?

☐ A. $\frac{24}{80}$
☐ B. $\frac{6}{10} \cdot \frac{4}{8}$

☐ C. $\frac{24}{100}$
☐ D. $\frac{4}{15}$



9) Students were surveyed about after-school activities. The data:

Activity	Sports	Music	Art	Drama
Count	72	48	36	24

Based on this data, what is the experimental probability that a randomly selected student participates in either music or art?

- ☐ A. $\frac{48}{180}$
☐ B. $\frac{84}{180}$

- ☐ C. $\frac{48}{84}$
☐ D. $\frac{60}{180}$

10) Which value is NOT a valid probability?

- ☐ A. 0
☐ B. 0.5

- ☐ C. 1
☐ D. 1.01

11) Compare two estimates for the same actual value of 80 units. Estimate 1 is 72 units; Estimate 2 is 88 units. Which has less percent error?

- ☐ A. Estimate 1
☐ B. Estimate 2

- ☐ C. Equal percent error
☐ D. Estimate 1 is double

12) Expand: $5(3y - 2)$

- ☐ A. $15y - 2$
☐ B. $8y - 7$

- ☐ C. $15y - 10$
☐ D. $3y - 10$

13) A bank offers two savings accounts. Account A: \$1000 at 6% for 3 years. Account B: \$1500 at 2% for 3 years. Which account earns more interest?

- ☐ A. Need the bank's name to determine
☐ B. Account B
☐ C. Both earn the same
☐ D. Account A



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- 1) A car travels 120 miles in 2 hours at a constant speed. What is the constant of proportionality (miles per hour)?

☐ A. 240 mph ☐ C. 100 mph
☐ B. 90 mph ☐ D. 60 mph

- 2) The stem-and-leaf plot shows rainfall (mm) over two weeks:

Stem	Leaves
1	2, 5, 8
2	1, 4, 6
3	0, 2, 3, 5, 7
4	1, 8

How many days had rainfall of at least 30 mm?

☐ A. 5 ☐ C. 8
☐ B. 7 ☐ D. 10

- 3) A game has a $\frac{1}{3}$ chance of winning and a $\frac{2}{3}$ chance of losing. What is the probability of winning as a decimal (rounded to the nearest hundredth)?

☐ A. 0.33 ☐ C. 0.5
☐ B. 0.67 ☐ D. 0.2

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

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



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5) Simplify: $5p + 2q + 3p - q + 4q$

☐ A. $8p + 5q$

☐ C. $5p + 2q$

☐ B. $8p + 6q$

☐ D. $12pq$

6) A rope of length $8x + 12$ feet is cut into two pieces. If one piece has length $4x + 6$ feet, what is the length of the other piece?

☐ A. $4x + 6$

☐ C. $12x + 18$

☐ B. $4x - 6$

☐ D. $4x$

7) A square pyramid has a square base with side 5 cm and slant height 6.5 cm. Find the total surface area.

☐ A. 25 cm^2

☐ C. 90 cm^2

☐ B. 50 cm^2

☐ D. 115 cm^2

8) A sector in a circle graph has a central angle of 54° . What percent does it represent?

☐ A. 12%

☐ C. 18%

☐ B. 15%

☐ D. 20%

9) A student evaluates $2x + 3y$ when $x = -4$ and $y = 2$, and writes: " $2(-4) + 3(2) = -8 + 6 = -2$." Is this correct?

☐ A. No, the error is in the multiplication of $2x$

☐ C. No, negative times positive is positive

☐ B. No, the error is in the addition step

☐ D. Yes, the answer is -2



- 1) A store buys T-shirts for \$12 each and sells them for \$18 each. What is the percent markup?
- ☐ A. 40% ☐ C. 33%
- ☐ B. 66% ☐ D. 50%
- 2) In a circle graph of sports preferences, 20% of the 180 surveyed students prefer soccer. How many students prefer soccer?
- ☐ A. 20 ☐ C. 72
- ☐ B. 36 ☐ D. 144
- 3) A student writes $3^5 \cdot 3^2 = 3^{10}$ (multiplying exponents instead of adding). What error did they make?
- ☐ A. They multiplied the exponents instead of adding them. ☐ C. They ignored the product rule; the correct answer is 3^7 .
- ☐ B. They multiplied the bases instead of keeping them the same. ☐ D. They forgot to use the exponent of 1 on the base.
- 4) Which situation matches the equation $2x + 7 = 21$?
- ☐ A. Two items costing \$2 each and a \$7 item total \$21. ☐ C. x is increased by 2, then by 7, to get 21.
- ☐ B. Seven items costing \$2 each and a \$7 tax total \$21. ☐ D. A number is doubled, then 7 is added, resulting in 21.
- 5) Which equation matches the description: "A number is multiplied by 5, then 12 is subtracted, and the result is 28"?
- ☐ A. $5x - 12 = 28$ ☐ C. $12 - 5x = 28$
- ☐ B. $5x + 12 = 28$ ☐ D. $\frac{x}{5} - 12 = 28$



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- 6) A bag contains 9 yellow beads, 6 purple beads, and 15 white beads. A bead is drawn at random. What is the probability of drawing a yellow or purple bead? Express your answer as a simplified fraction.

- 7) A shop charges \$5 per pizza and then adds a delivery fee. If 4 pizzas plus delivery cost \$28 total, what is the delivery fee?

☐ A. \$3☐ C. \$8☐ B. \$5☐ D. \$12

- 8) A savings account has a balance of $-\$15$ (overdraft). After depositing \$50, what is the new balance? Write and solve an equation.

☐ A. \$25☐ C. \$50☐ B. \$35☐ D. \$65

- 9) A scale drawing uses a scale of 5 mm : 1 cm. What is the scale factor?

☐ A. 0.5☐ C. 2☐ B. 1☐ D. 5

- 10) A map shows a rectangular park with scale 1 in : 500 ft. An error causes the scale to be doubled (widening the drawing). If the park measures 6 inches by 8 inches on the original map, what are the dimensions on the incorrectly scaled map?

☐ A. 3 in by 4 in☐ C. 12 in by 16 in☐ B. 6 in by 8 in☐ D. 24 in by 32 in

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.EE.1-7.EE.2) Distribute the negative: $6n + 4 - 3n + 2 = (6n - 3n) + (4 + 2) = 3n + 6$.
- 2) **Choice A is correct.** (7.G.1-7.G.5) Doubling the real scale (15 ft to 30 ft) halves the drawing: $4 \div 2 = 2$ in and $7 \div 2 = 3.5$ in.
- 3) **Choice D is correct.** (7.RP.3) Difference: $700 - 680 = 20$ points below the good credit threshold.
- 4) **Choice D is correct.** (7.SP.5-7.SP.8) First spin: 5 outcomes; second spin: 5 outcomes. Total: $5 \times 5 = 25$ outcomes.
- 5) **The correct answer is 16.** (7.G.4-7.G.6) Circumference = $\pi d = 3.14 \times 0.6 = 1.884$ m. Rotations = $30 \div 1.884 \approx 16$.
- 6) **Choice C is correct.** (7.SP.5-7.SP.8) Blue or red: $\frac{4}{8} = \frac{1}{2}$. Complement: $1 - \frac{1}{2} = \frac{1}{2} = \frac{4}{8}$.
- 7) **Choice A is correct.** (7.SP.3) Company P's median (50) and Q3 (65) are both higher than Company Q's (48 and 60). These measures indicate Company P's typical and upper-quartile salaries are higher.
- 8) **Choice D is correct.** (7.SP.5-7.SP.8) Without replacement: $P(\text{blue first}) = \frac{6}{10}$; after removing it, 9 remain. $P(\text{yellow second}) = \frac{4}{9}$. Product: $\frac{6}{10} \cdot \frac{4}{9} = \frac{24}{90} = \frac{4}{15}$.
- 9) **Choice B is correct.** (7.SP.6) Total students: $72 + 48 + 36 + 24 = 180$. Music or Art: $48 + 36 = 84$. Experimental probability = $\frac{84}{180} = \frac{7}{15}$.
- 10) **Choice D is correct.** (7.SP.5-7.SP.8) Probability must be between 0 and 1 (inclusive). $1.01 > 1$, so it is invalid.
- 11) **Choice C is correct.** (7.RP.3) Estimate 1: $\frac{|72-80|}{80} \times 100\% = 10\%$. Estimate 2: $\frac{|88-80|}{80} \times 100\% = 10\%$. Both estimates are equally far from the actual value (8 units away).
- 12) **Choice C is correct.** (7.EE.1-7.EE.2) Distribute 5: $5(3y) - 5(2) = 15y - 10$.
- 13) **Choice D is correct.** (7.RP.3) Account A: $1000 \times 0.06 \times 3 = \180 . Account B: $1500 \times 0.02 \times 3 = \90 . Account A earns more interest.
- 14) **Choice D is correct.** (7.RP.1-7.RP.3) Multiply each dimension by the scale factor: $3 \times 8 = 24$ feet and $2.5 \times 8 = 20$ feet.
- 15) **Choice C is correct.** (7.RP.3) $\frac{15}{50} = \frac{3}{10} = 0.30 = 30\%$.
- 16) **Choice D is correct.** (7.NS.1b) Adding zero to any number leaves it unchanged (additive identity). $-7 + 0 = -7$.
- 17) **Choice A is correct.** (7.EE.1) All terms have the same variables and exponents. Combine: $(6 + 3 - 2)x^2y = 7x^2y$.
- 18) **Choice A is correct.** (7.EE.1-7.EE.2) GCF is 3. Factor out the negative: $-6x - 9 = -3(2x + 3)$. Check: $-3(2x + 3) = -6x - 9$.
- 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 = $3.14 \times 6^2 = 113.04 \text{ m}^2$ 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) **The correct answer is 216.** (7.G.4-7.G.6) $V = l \times w \times h = 9 \times 4 \times 6 = 216 \text{ in}^3$.
- 21) **Choice C is correct.** (7.SP.1-7.SP.4) 37.5% of $800 = 0.375 \times 800 = 300$ students.
- 22) **Choice B is correct.** (7.EE.1-7.EE.2) Substitute: $(3)^2 + 3(3) - 5 = 9 + 9 - 5 = 13$.
- 23) **The correct answer is 20.** (7.G.4-7.G.6) $V = \pi r^2 h \Rightarrow 565.2 = 3.14 \times 9 \times h \Rightarrow 565.2 = 28.26h \Rightarrow h = 20$ feet.
- 24) **Choice A is correct.** (7.EE.4b) Total spending (book + pen) must not exceed \$50, so $12 + p \leq 50$.
- 25) **Choice D is correct.** (7.RP.1-7.RP.3) From the point (3, 18), the unit rate is $18 \div 3 = 6$ miles per hour.
- 26) **Choice C is correct.** (7.RP.3) Wants = $30\% \times \$2,400 = 0.30 \times 2400 = \720 .
- 27) **Choice B is correct.** (7.NS.1-7.NS.3) Start at 0. Descend (go down) 3.5 m: $0 - 3.5 = -3.5$ m. Ascend (go up) 1.2 m: $-3.5 + 1.2 = -2.3$ m.
- 28) **Choice C is correct.** (7.NS.1-7.NS.3) $3\frac{1}{3} = \frac{10}{3}$. Then $\frac{10}{3} \div \frac{2}{3} = \frac{10}{3} \times \frac{3}{2} = \frac{10}{2} = 5$.
- 29) **The correct answer is 120.** (7.SP.1-7.SP.4) The sample size is the number of individuals surveyed. In this case, 120 adults were randomly selected and surveyed, so the sample size is 120.
- 30) **Choice B is correct.** (7.NS.2d) Divide $1 \div 8 = 0.125$. The denominator $8 = 2^3$ gives a terminating decimal.
- 31) **Choice C is correct.** (7.NS.1-7.NS.3) Loss of 7 yards is -7 ; gain of 13 is $+13$: $-7 + 13 = 6$ yards.



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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.



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