

8

Idaho ISAT

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



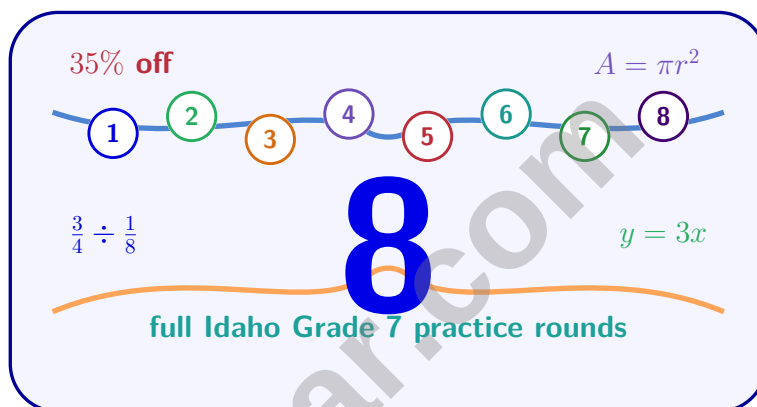
THINK SMARTER



BE TEST-READY

8 Idaho ISAT Grade 7 Math Practice Tests

Guided preparation for Idaho Grade 7 scale drawings, rational numbers, equations, geometry, statistics, and probability



Eight 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!

Eight focused rounds for sharper ISAT math thinking

This book gives you eight 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

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.

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?

Eight ISAT 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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1) An online store charges a flat \$5.99 for shipping plus \$2.50 per item. Is the total cost proportional to the number of items?

- ☐ A. Yes, the equation is $C = 2.50n + 5.99$
- ☐ B. No, because the equation $C = 2.50n + 5.99$ includes both multiplication and addition
- ☐ C. Yes, the constant is 2.50
- ☐ D. No, because there is a constant term (\$5.99)

2) Evaluate $3x - 2y$ when $x = 4$ and $y = -3$.

- ☐ A. 6
- ☐ B. 14
- ☐ C. 18
- ☐ D. 20

3) Simplify: $v^{12} \div v^8$

- ☐ A. v^4
- ☐ B. v^{20}
- ☐ C. v^{96}
- ☐ D. v^0

4) A concert ticket costs \$35 and a service fee is \$6.50 per ticket. If someone buys 3 tickets, what is the total cost?

- ☐ A. $3(35 + 6.50) = \$124.50$
- ☐ B. $3(35) + 3(6.50) = \$124.50$
- ☐ C. $35 + 3 + 6.50 = \$44.50$
- ☐ D. $35(3) + 6.50 = \$111.50$

5) Solve: $6x - 8 = 28$

- ☐ A. $x = 4$
- ☐ B. $x = 5$
- ☐ C. $x = 6$
- ☐ D. $x = 8$



- 6) Solve: $4x + 5 = 21$
- ☐ A. $x = 2$ ☐ C. $x = 6$
☐ B. $x = 4$ ☐ D. $x = 8$
- 7) A line plot shows the number of hours a student practices violin each week over 10 weeks: 1, 2, 2, 2, 3, 3, 3, 3, 4, 5. Which measure best describes the typical practice time?
- ☐ A. The mean (average) ☐ C. The median
☐ B. The mode ☐ D. The range
- 8) Which of the following does NOT represent a proportional relationship?
- ☐ A. $y = 6x$ ☐ C. $y = x + 2$
☐ B. $y = 0.5x$ ☐ D. $y = \frac{3}{4}x$
- 9) Compare: Which is *larger*, $(-56) \div (-8)$ or $(-56) \div 8$?
- ☐ A. They are equal ☐ C. The second is larger
☐ B. The first is larger ☐ D. Cannot be compared
- 10) A contractor charges \$12.50 per hour. For a job that takes 7.5 hours, what is the total cost?
- ☐ A. \$25.00 ☐ C. \$93.75
☐ B. \$87.50 ☐ D. \$96.25
- 11) A scientist records a measurement: 4.06×10^4 meters. What is this in standard form?
- ☐ A. 40,600 ☐ C. 4,060
☐ B. 406,000 ☐ D. 40,600,000



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- 12) A hiker starts at an elevation of 500 feet and descends 750 feet. What is the hiker's final elevation? (Represent descent as a negative change.)

- 13) Simplify $(4y + 7) + (3y - 2) - (2y + 1)$

☐ A. $5y + 4$

☐ C. $5y + 6$

☐ B. $9y + 4$

☐ D. $9y - 4$

- 14) A teacher buys 5 notebooks at $\$x$ each and spends a total of \$45 (including a \$5 coupon discount). What is the price per notebook?

☐ A. \$8

☐ C. \$10

☐ B. \$9

☐ D. \$12

- 15) What is $\sqrt{25} + \sqrt{36}$?



1) A car travels $\frac{5}{4}$ miles using $\frac{1}{8}$ gallon of gas. How many miles can it travel on 1 gallon?

☐ A. $\frac{32}{5}$ miles

☐ B. $\frac{5}{32}$ miles

☐ C. 5 miles

☐ D. 10 miles

2) Combine like terms: $(7a + 9) - (3a - 4)$

☐ A. $4a + 13$

☐ B. $4a + 5$

☐ C. $10a + 5$

☐ D. $4a - 13$

3) Expand: $4(x + 2) - (x - 5)$.

☐ A. $4x + 8 - x + 5 = 3x + 13$

☐ B. $3x + 3$

☐ C. $5x + 13$

☐ D. $3x + 8$

4) Solve for x : $2(x + 6) = 20$

☐ A. $x = 2$

☐ B. $x = 4$

☐ C. $x = 6$

☐ D. $x = 8$

5) Which model correctly shows $5 + (-5) = 0$ using a chip diagram where red = positive and blue = negative?

Model A:



5 red + 2 blue

Model B:



5 red + 5 blue

☐ A. Model A

☐ B. Both models show the same thing

☐ C. Neither model

☐ D. Model B

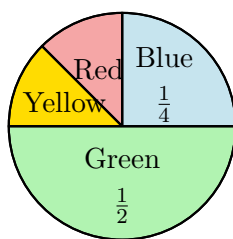


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- 6) A student rolls a die labeled 1 to 6 and picks a fruit from {Apple, Orange, Banana}. The student claims there are 18 outcomes in the sample space. Is this correct?

- ☐ A. Yes, $6 \times 3 = 18$
☐ C. No, there are 24 outcomes
☐ B. No, there are only 9 outcomes
 ☐ D. No, there are 36 outcomes



7)

A spinner labeled with probability regions shows: $P(\text{blue}) = \frac{1}{4}$, $P(\text{green}) = \frac{1}{2}$. If red and yellow split the remaining space equally, what is $P(\text{red})$?

- ☐ A. $\frac{1}{8}$
☐ C. $\frac{1}{2}$
☐ B. $\frac{1}{4}$
☐ D. $\frac{3}{8}$
- 8) A spinner with 8 equal sections is spun twice. The first spin lands on section 3. Does the probability of landing on section 5 on the second spin change?
- ☐ A. Yes, it decreases to $\frac{1}{7}$
☐ D. No, but now it is 0 because 3 was spun
☐ B. Yes, it increases to $\frac{1}{7}$
☐ C. No, it remains $\frac{1}{8}$
- 9) A toss of two dice together was repeated 360 times. The number of times the sum was 7 was recorded as 58 times. What is the experimental probability of rolling a sum of 7?

Outcomes that make a sum of 7					
16	25	34	43	52	61
(1, 6)	(2, 5)	(3, 4)	(4, 3)	(5, 2)	(6, 1)

- ☐ A. $\frac{1}{6}$
☐ C. 0.16
☐ B. $\frac{58}{360}$
☐ D. $\frac{7}{360}$



- 1) A gardener plants flowers in rows at a density of $\frac{3}{4}$ flower per inch. How many flowers are planted across a row that is 16 inches long?
- ☐ A. 9 flowers ☐ C. 16 flowers
☐ B. 12 flowers ☐ D. 21.3 flowers
- 2) Two angles are supplementary. If the first angle is twice the second angle, what is the measure of the smaller angle?
- ☐ A. 60° ☐ C. 30°
☐ B. 90° ☐ D. 120°
- 3) A spinner has 12 equal sections colored: 4 green, 5 blue, 3 red. Find $P(\text{blue or red})$.
- ☐ A. $\frac{3}{12}$ ☐ C. $\frac{2}{3}$
☐ B. $\frac{5}{12}$ ☐ D. $\frac{7}{12}$
- 4) A stem-and-leaf plot is created from test scores. Stem 8 has leaves 1, 2, 4, 5, 6, 7, 9. Stem 9 has leaves 0, 1, 3. Which score appears most frequently in the dataset?
- ☐ A. 81 ☐ C. 90
☐ B. 89 ☐ D. No mode (each score appears once)
- 5) A student claims that $4xy + 2xy = 6x^2y^2$. What is the error?
- ☐ A. There is no error. ☐ C. The exponents should not have been increased.
☐ B. The answer should be negative. ☐ D. The coefficients were not added.

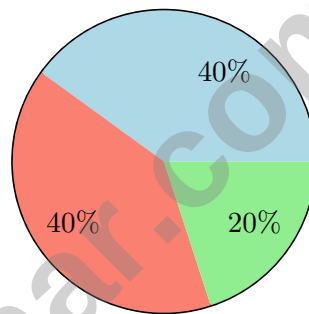


6) A student factors $-8m - 12$ and gets $-4(2m + 3)$. Is this correct?

- ☐ A. Yes; $-4(2m + 3) = -8m - 12$ ☐ D. No; the correct factorization is $-4(2m - 3)$
☐ B. No; the GCF should be -2
☐ C. No; the correct factorization is $4(2m + 3)$

7) A cube has edge length 6 cm. Find its surface area.

- ☐ A. 36 cm^2 ☐ C. 144 cm^2
☐ B. 72 cm^2 ☐ D. 216 cm^2



8)

The circle graph shows the results of a survey on transportation methods. Blue is cars (40%), salmon is buses (40%), and green is bicycles (20%). If 500 people were surveyed, how many use bicycles?

- ☐ A. 50 ☐ C. 200
☐ B. 100 ☐ D. 400

9) The equation $y = 5x$ represents a proportional relationship. Find the value of y when $x = 8$.



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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 D is correct.** (7.RP.1-7.RP.3) Proportional relationships have the form $y = kx$ with no constant term. The equation $C = 2.50n + 5.99$ has a nonzero initial value, \$5.99, so it does not pass through the origin and is not proportional.
- 2) **Choice C is correct.** (7.EE.1-7.EE.2) Substitute: $3(4) - 2(-3) = 12 + 6 = 18$.
- 3) **Choice A is correct.** (7.EE.1-7.EE.2) Quotient rule: $v^{12} \div v^8 = v^{12-8} = v^4$.
- 4) **Choice A is correct.** (7.EE.4a) Each ticket (including fee) costs $35 + 6.50 = \$41.50$. For 3 tickets: $3(41.50) = \$124.50$.
- 5) **Choice C is correct.** (7.EE.3-7.EE.4) Add 8: $6x = 36$. Divide by 6: $x = 6$.
- 6) **Choice B is correct.** (7.EE.3-7.EE.4) Subtract 5: $4x = 16$. Divide by 4: $x = 4$.
- 7) **Choice B is correct.** (7.SP.1-7.SP.4) The mode is 3 hours (appears 4 times), which best represents the typical week's practice. The mode is most useful for identifying the most common value.
- 8) **Choice C is correct.** (7.RP.1-7.RP.3) Proportional relationships have the form $y = kx$ (passing through the origin). Option C has a $+2$ term, so it does not pass through $(0,0)$ and is not proportional.
- 9) **Choice B is correct.** (7.NS.1-7.NS.3) $(-56) \div (-8) = 7$ and $(-56) \div 8 = -7$. Since $7 > -7$, the first is larger.
- 10) **Choice C is correct.** (7.NS.1-7.NS.3) Total cost: $12.50 \times 7.5 = 93.75$ dollars.
- 11) **Choice A is correct.** (7.NS.1-7.NS.3) $4.06 \times 10^4 = 4.06 \times 10,000 = 40,600$. Move decimal 4 places right.
- 12) **The correct answer is -250.** (7.NS.1b) $500 + (-750) = -250$ feet. The final elevation is 250 feet below the reference point (sea level or starting reference).
- 13) **Choice A is correct.** (7.EE.1-7.EE.2) Work left to right: $(4y + 7 + 3y - 2) - (2y + 1) = (7y + 5) - (2y + 1) = 7y + 5 - 2y - 1 = 5y + 4$.
- 14) **Choice C is correct.** (7.EE.4a) Equation: $5x - 5 = 45$. Add 5: $5x = 50$. Divide by 5: $x = 10$.
- 15) **The correct answer is 11.** (7.NS.1-7.NS.3) $\sqrt{25} = 5$ and $\sqrt{36} = 6$, so $5 + 6 = 11$.
- 16) **Choice C is correct.** (7.SP.5-7.SP.8) Two favorable outcomes out of five equal sections: $P(2 \text{ or } 4) = \frac{2}{5} = 0.4$.
- 17) **Choice A is correct.** (7.NS.2) $-\frac{7}{8} \times 8 = \frac{-7 \times 8}{8} = -7$. The 8's cancel.
- 18) **Choice C is correct.** (7.RP.3) Total fee = $35 + (0.50 \times 80) = 35 + 40 = \75 .
- 19) **Choice A is correct.** (7.SP.3) Predictability requires consistent behavior. Model X's concentration at 18–20 hours makes it predictable. Model Y's spread (12–24 hours) is too wide to predict reliably.
- 20) **The correct answer is A,C.** (7.RP.3) A balanced budget must include money for necessities (A) and reserves for savings and emergencies (C). Options B, D, and E represent poor financial habits that lead to deficit budgets or lack of financial security.
- 21) **Choice B is correct.** (7.G.4-7.G.6) Calculate the area of each triangle using the formula $\frac{1}{2} \times b \times h$. Each triangle: $\frac{1}{2} \times 6 \times 4 = 12 \text{ cm}^2$. Add the two triangles: $12 + 12 = 24 \text{ cm}^2$.
- 22) **The correct answer is 14.465.** (7.NS.1-7.NS.3) Average current temperature: $\frac{12.5+13.2+12.8+14.1}{4} = \frac{52.6}{4} = 13.15^\circ\text{C}$. Increase of 10%: $0.10 \times 13.15 = 1.315^\circ\text{C}$. New temperature: $13.15 + 1.315 = 14.465^\circ\text{C}$.
- 23) **Choice C is correct.** (7.RP.1-7.RP.3) Ratio 5 : 3 means $5x + 3x = 64$, so $8x = 64$ and $x = 8$. Vegetables area = $5x = 5 \times 8 = 40 \text{ m}^2$.
- 24) **Choice C is correct.** (7.G.4-7.G.6) Volume of a prism = base area $\times$ height = $15 \times 10 = 150 \text{ cm}^3$.
- 25) **Choice C is correct.** (7.G.1-7.G.5) When three specific side lengths are given, exactly one shape is determined (up to congruence). All triangles with sides 4, 5, 6 are congruent.
- 26) **Choice B is correct.** (7.G.4-7.G.6) The segment BA passes through the center O and has endpoints on the circle, making it a diameter.
- 27) **Choice B is correct.** (7.G.1-7.G.5) Two sides ($ST = 7 \text{ cm}$ and $TU = 6 \text{ cm}$) and the included angle (at $T = 52^\circ$) are known. This is the SAS (Side-Angle-Side) condition.
- 28) **Choice C is correct.** (7.SP.1-7.SP.4) $\frac{90}{300} = \frac{x}{15000}$. Reduce: $\frac{3}{10} = \frac{x}{15000} \Rightarrow x = 4500$.
- 29) **Choice C is correct.** (7.NS.1-7.NS.3) Only zero is its own opposite. For any other number n , its opposite $-n$ is different. We verify: $-0 = 0$.



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A Note for a Careful Thinker

Hi, Careful Thinker!

◇ This wide-ranging book gave you eight serious Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. This book gave you room to practice the kind of thinking seventh graders need: comparing quantities, analyzing patterns, and organizing information. ◇

★ **Remember this:** The goal was never just to finish pages. The goal was to become the kind of student who knows how to begin, how to adjust, and how to check. ★

Your Careful-Thinking Toolkit

- **Read Twice:** First for the story, second for the math.
- **Label Values:** Give each number a job.
- **Check Signs:** Negatives and inequalities deserve attention.
- **Use Evidence:** Let the work prove the answer.

Grade 7 test-day tip: On test day, underline the question before solving. It keeps your answer aimed at the right target.

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

Jay Daie

Your Math Practice Coach

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!

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