

Grade 7 Math Practice Tests



7 PRINTED TESTS + 2 ONLINE TESTS

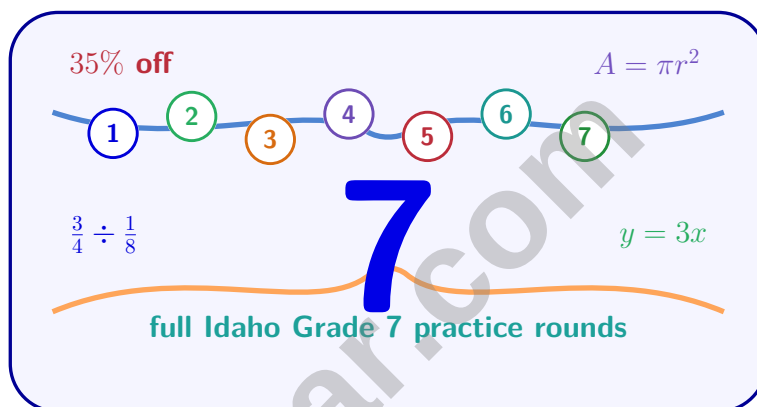


Standards Aligned Problem Solving For Comprehensive Assessment Programs



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 seven 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, 280 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) Which event has a probability of 0 (impossible)?

- ☐ A. Rolling a 7 on a standard six-sided die ☐ C. Drawing a number from 1 to 10
☐ B. Flipping a coin and getting tails ☐ D. Picking a blue marble from a bag of blue marbles

2) What is $\frac{2}{3} \times \frac{5}{6}$?

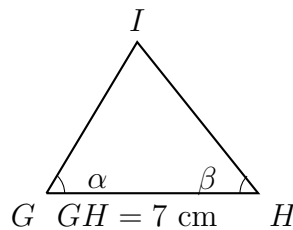
- ☐ A. $\frac{7}{9}$ ☐ C. $\frac{10}{9}$
☐ B. $\frac{10}{18}$ ☐ D. $\frac{30}{2}$

3) An online store deducts a 3% processing fee from seller payments. If a seller receives payment for items totaling \$1,000, how much is deducted as a fee?

- ☐ A. \$15 ☐ C. \$30
☐ B. \$25 ☐ D. \$100

4) A bank offers two savings products: Account 1 earns 7% compound interest on a \$1,200 deposit; Account 2 earns 8% compound interest on a \$1,100 deposit. After 1 year, which account has the greater balance and by how much?

- ☐ A. Account 1 by \$96 ☐ C. Account 1 by \$50
☐ B. Account 2 by \$96 ☐ D. Account 2 by \$20



5)

If $GH = 7$ cm and angles α and β at G and H are known, which congruence condition applies?

- ☐ A. SAS ☐ C. AAS
☐ B. ASA ☐ D. SSS



6) A student claims that $-14 + 14 = 28$. What is the student's error?

- ☐ A. They forgot that opposites sum to 0
☐ B. They should have subtracted instead
☐ C. The answer is correct
☐ D. Absolute values were not used

Like Terms Table

x terms	y terms
$3x, 5x, -2x$	$4y, y, -3y$

7)

Which expression is equivalent to the combined like terms shown in the table?

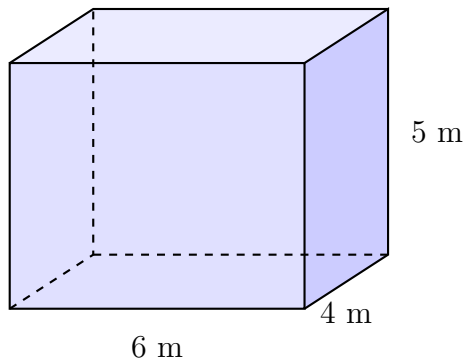
- ☐ A. $6x + 2y$
☐ B. $8x + 5y$
☐ C. $-10xy$
☐ D. $10x + 2y$

8) Which option shows a completely factored expression?

- ☐ A. $8x + 16 = 4(2x + 4)$
☐ B. $6y - 9 = 3(2y - 3)$
☐ C. $5m + 10 = 10(0.5m + 1)$
☐ D. $12p + 8 = 2(6p + 4)$



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9)

An isometric rectangular prism with dimensions $6\text{ m} \times 5\text{ m} \times 4\text{ m}$ is shown. Determine the surface area.

☐ A. 120 m^2 ☐ B. 148 m^2 ☐ C. 166 m^2 ☐ D. 240 m^2 

1) Point $M(4, 0)$ is rotated 90° clockwise about the origin. What is the image M' ?

☐ A. $(0, 4)$

☐ C. $(4, 0)$

☐ B. $(0, -4)$

☐ D. $(-4, 0)$

2) A storage container holds x liters. Three identical containers hold how much total volume?

☐ A. $x + 3$

☐ C. x^3

☐ B. $3x$

☐ D. $x + x + x + 3$

3) A dot plot shows the weights (in pounds) of two dog breeds. Breed A: 40, 42, 42, 45, 45, 45, 45, 48, 50 pounds; Breed B: 30, 35, 45, 50, 55, 60 pounds. Which breed has more predictable weight?

☐ A. Breed A (most dogs weigh 42–48 pounds)

☐ C. Both breeds have identical weights

☐ B. Breed B (lighter dogs overall)

☐ D. Breed B (wider range for variety)

4) The temperature in the morning was -8°C . It rose 15°C by afternoon. Then it dropped 5°C by evening. What was the evening temperature?

5) A composite shape is formed by placing a right triangle (legs 5 cm and 12 cm) next to a $12\text{ cm} \times 5\text{ cm}$ rectangle. What is the total area?

☐ A. 30 cm^2

☐ C. 90 cm^2

☐ B. 60 cm^2

☐ D. 150 cm^2



6) A rectangular prism has dimensions 2.5 m, 4 m, and 8 m. What is its volume?

☐ A. 14.5 m^3

☐ C. 100 m^3

☐ B. 80 m^3

☐ D. 20 m^3

7) Which of the following is always true about a chord?

☐ A. It must pass through the center

☐ C. It is always shorter than the radius

☐ B. It has both endpoints on the circle

☐ D. It is parallel to a diameter

8) What is the coefficient of x in the simplified form of $9x - 4x + 2y$?

☐ A. 9

☐ C. 4

☐ B. 5

☐ D. 13

9) Factor: $-4x - 12$

☐ A. $-4(x + 3)$

☐ C. $-4(x - 3)$

☐ B. $4(x + 3)$

☐ D. $-(4x + 12)$

10) A rectangular prism has length 7 cm, width 2 cm, and height 4 cm. What is the total surface area?

☐ A. 56 cm^2

☐ C. 100 cm^2

☐ B. 72 cm^2

☐ D. 112 cm^2

11)

Number of Heads	0	1	2	3	Total
Frequency	12	36	37	15	100

A coin is flipped 3 times in each trial, and this is repeated 100 times. The table shows the number of heads per trial. What is the estimated probability of getting exactly 2 heads in three flips?

☐ A. 0.27

☐ C. 0.37

☐ B. 0.35

☐ D. 0.40



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- 1) A concert ticket costs \$85. With a 15% service fee, the total is $85(1 + 0.15)$. What is the total cost?

☐ A. \$97.75 ☐ C. \$100
☐ B. \$70 ☐ D. \$12.75

- 2) Compare the total interest earned on \$2,000 over 4 years at 5% with compound vs. simple interest. Compound earns approximately how much more?

Year	Compound	Simple
1	\$2,100	\$2,100
2	\$2,205	\$2,200
3	\$2,315.25	\$2,300
4	\$2,431.01	\$2,400

☐ A. \$31.01 ☐ C. \$50
☐ B. \$30.50 ☐ D. \$100

- 3) Simplify $(t^4)^5$. What is the exponent on t ?

- 4) A phone plan costs \$25 per month plus \$0.20 for each minute of international calls. If a customer's bill was \$45, write an equation to represent the number of minutes m of international calls, solve for m , and verify your answer.



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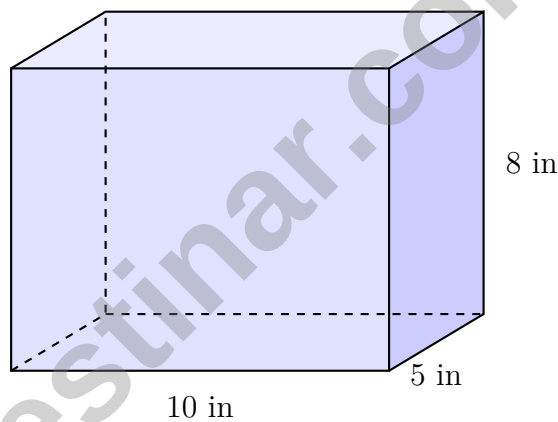
5)

Savings \$400/month	Expenses \$1600/month
------------------------	--------------------------

Based on the diagram, what percent of a \$2 000 monthly income goes to savings?

☐ A. 10%☐ C. 20%☐ B. 15%☐ D. 25%

6) A restaurant bill was originally \$80, and after a 15% increase, what is the new bill?

☐ A. \$95☐ C. \$88☐ B. \$12☐ D. \$92

7)

Which rectangular prism dimensions would give a surface area of exactly 340 square inches?

☐ A. 10 in $\times$ 8 in $\times$ 5 in☐ C. 12 in $\times$ 8 in $\times$ 5 in☐ B. 10 in $\times$ 9 in $\times$ 5 in☐ D. 11 in $\times$ 8 in $\times$ 5 in

Idaho Standards Achievement Test 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 Standards Achievement Test practice test.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice A is correct.** **(7.SP.5-7.SP.8)** A standard die only has faces 1–6, so rolling a 7 is impossible (probability = 0).
- 2) **Choice B is correct.** **(7.NS.2)** $\frac{2}{3} \times \frac{5}{6} = \frac{2 \times 5}{3 \times 6} = \frac{10}{18} = \frac{5}{9}$ (simplified). Multiply numerators and denominators, then reduce.
- 3) **Choice C is correct.** **(7.RP.3)** Processing fee = $0.03 \times 1000 = \$30$.
- 4) **Choice A is correct.** **(7.RP.3)** Account 1: $1200(1.07) = 1284$. Account 2: $1100(1.08) = 1188$. Difference: $1284 - 1188 = 96$.
- 5) **Choice B is correct.** **(7.G.1-7.G.5)** We have angle α at G , the side $GH = 7$ cm between them, and angle β at H . This is Angle-Side-Angle (ASA): two angles and the included side are given.
- 6) **Choice A is correct.** **(7.NS.1-7.NS.3)** The correct answer is $-14 + 14 = 0$ because -14 and 14 are opposites. The student incorrectly added the absolute values.
- 7) **Choice A is correct.** **(7.EE.1)** x terms: $3x + 5x - 2x = (3 + 5 - 2)x = 6x$. y terms: $4y + y - 3y = (4 + 1 - 3)y = 2y$. Result: $6x + 2y$.
- 8) **Choice B is correct.** **(7.EE.1-7.EE.2)** Check: A is not complete (can factor further as $8(x + 2)$). B is complete (GCF of 6 and 9 is 3). C is not standard (uses decimals). D is not complete (can factor further as $4(3p + 2)$).
- 9) **Choice B is correct.** **(7.G.4-7.G.6)** $SA = 2(6 \cdot 5 + 6 \cdot 4 + 5 \cdot 4) = 2(30 + 24 + 20) = 2(74) = 148 \text{ m}^2$.
- 10) **The correct answer is 0.85.** **(7.RP.1-7.RP.3)** The marked point is $(1, 0.85)$, which is the unit-rate point. This means the constant of proportionality is $k = 0.85$, so the cost is \$0.85 per item.
- 11) **Choice C is correct.** **(7.SP.5-7.SP.8)** Coin outcomes: 2 (heads, tails). Die outcomes: 6. Total: $2 \times 6 = 12$ outcomes.
- 12) **Choice A is correct.** **(7.NS.1b)** The student added $|-7| + |4| = 7 + 4 = 11$ and kept the negative sign. For opposite signs, subtract: $|-7| - |4| = 7 - 4 = 3$, so the correct answer is -3 .
- 13) **Choice A is correct.** **(7.EE.4b)** “A number decreased by 10” is $n - 10$; “is less than or equal to 25” is ≤ 25 . (Note: D is a valid simplification but A is the direct translation.)
- 14) **Choice B is correct.** **(7.SP.1-7.SP.4)** Dividing the population into lunch periods (strata) and randomly selecting from each group is stratified random sampling.
- 15) **Choice A is correct.** **(7.NS.1-7.NS.3)** Adding two negatives: $-3.6 + (-2.4) = -(3.6 + 2.4) = -6.0$.
- 16) **Choice A is correct.** **(7.NS.2d)** In a fraction $\frac{a}{b}$, we divide numerator by denominator: $3 \div 5 = 0.6$. Options B reverses the fraction, and C and D show incorrect quotients.
- 17) **Choice B is correct.** **(7.EE.1-7.EE.2)** Three times k is $3k$. Minus 7 gives $3k - 7$.
- 18) **Choice A is correct.** **(7.EE.1-7.EE.2)** Subtract exponents when dividing: $\frac{m^5}{m^2} = m^{5-2} = m^3$.
- 19) **The correct answer is \$30.** **(7.RP.3)** The increase is 25% of $\$24 = 0.25 \times 24 = 6$ dollars. New price: $24 + 6 = 30$ dollars.
- 20) **Choice C is correct.** **(7.EE.4a)** Each bag costs \$3 and yeast is \$2. Equation: $3b + 2 = 17$.
- 21) **Choice C is correct.** **(7.EE.3-7.EE.4)** Divide by 5: $x - 1 = 4$. Add 1: $x = 5$.
- 22) **The correct answer is A,C.** **(7.RP.1-7.RP.3)** True: A ($4 \times 6 = 24$ feet) and C ($2 \times 6 = 12$ feet; $2.5 \times 6 = 15$ feet). False: B (area scales by $6^2 = 36$, not 6); D (area: $900 \div 36 = 25$ sq in, not 36); E (areas are reduced by $\frac{1}{36}$ on the plan, not $\frac{1}{6}$).
- 23) **Choice D is correct.** **(7.EE.3-7.EE.4)** Correct: Subtract 6: $\frac{1}{2}x = 4$ (not 16). Multiply by 2: $x = 8$ (not 32). Both steps contain errors.
- 24) **Choice B is correct.** **(7.G.1-7.G.5)** Actual dimensions: $11 \times 200 = 2,200$ m and $13 \times 200 = 2,600$ m; perimeter: $2(2,200 + 2,600) = 9,600$ m.
- 25) **Choice A is correct.** **(7.G.1-7.G.5)** A plane parallel to the pentagonal bases of a prism produces a cross-section congruent to those bases. The cross-section is a pentagon with the same shape and size as the original bases.
- 26) **Choice A is correct.** **(7.NS.1-7.NS.3)** Positive divided by negative is negative: $48 \div (-6) = -8$.
- 27) **Choice A is correct.** **(7.NS.1-7.NS.3)** $2.5 \times \frac{3}{5} = \frac{2.5 \times 3}{5} = \frac{7.5}{5} = 1.5$ cups.
- 28) **Choice C is correct.** **(7.NS.1-7.NS.3)** $14^2 = 196$ and $15^2 = 225$. Since $196 < 200 < 225$, we have $14 < \sqrt{200} < 15$.



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Hi, Momentum Builder!

◇ Finishing a Grade 7 practice book is not a small thing. It means you practiced persistence, patience, and flexible problem solving. ◇

★ **Remember this:** Some questions were quick. Others probably made you stop and think. Both kinds helped you grow because practice turns effort into confidence. This version gave you 7 opportunities to rehearse test-day habits. ★

Momentum Habits

- **Start Clean:** Write down what the problem gives you.
- **Pick a Tool:** Use a table, model, equation, or graph.
- **Keep Moving:** Skip and return when needed.
- **Review Smart:** Study mistakes without judging yourself.

Grade 7 test-day tip: If a problem feels stuck, change tools. A graph, table, or sketch can make the same idea clearer.

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

Jay Daie

Your Math Momentum Partner

Practice Today. Succeed Tomorrow!

This book includes **7** 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.



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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!



PRACTICE
REGULARLY



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FOCUSED



SOLVE
CONFIDENTLY



SUCCEED
BRIGHTLY



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