

# 4 Idaho ISAT

GRADE  
**6**  
MATH

## PRACTICE TESTS

Standards Aligned Problem Solving  
For Comprehensive Assessment Programs

**4**

**PRINTED  
TESTS**



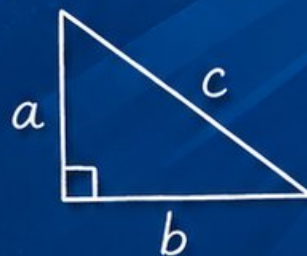
**2**

**ONLINE  
TESTS**



- ✓ Build Confidence
- ✓ Master Key Math Skills
- ✓ Answer Explanations for Every Question
- ✓ Test-Taking Strategies That Work

$$2x + 5 = 21$$
$$x = 8$$



$$\frac{3}{4} + \frac{1}{2} = \frac{5}{4}$$



**USE THESE TWO  
ADDITIONAL ONLINE  
PRACTICE TESTS**

**FOR EXTRA REVIEW AFTER  
THE PRINTED TESTS  
IN THIS BOOK.**

# 4 Idaho ISAT Grade 6 Math Practice Tests

*Standards-Aligned Mountain-Valley Math Focus for Idaho Standards Achievement Test*



Four complete 40-question Grade 6 practice rounds for ISAT, built for mountain-valley math focus with ratios, rational numbers, expressions, equations, geometry, statistics, answer keys, and clear explanations for every item.

**Jay Daie and Reza Nazari**



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# Welcome, Idaho Math Explorer!

Four focused rounds using mountain-valley math focus

This book gives you four full Grade 6 practice tests for ISAT. Each round uses valley fields, mountain roads, and practical problem setup as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

## Your Idaho Practice Promise

Build the setup before the calculation: list facts, choose the operation, and check reasonableness.

Read

Plan

Check

## How to Use This Book

A four-session routine for mountain-valley math focus

1. **Preview the skills.** Scan the quick review pages before beginning the first round.
2. **Mark confidence.** Put a small star beside problems where your plan felt strong.
3. **Work in order.** Take one 40-question test at a time in a quiet place.
4. **Plan the next round.** Use the growth log to choose one habit and one skill to practice.
5. **Correct actively.** Retry missed items before reading the full explanation.

**Idaho review rhythm:** Move through one test, harvest the missed skills, and practice those before the next round.



## What Is Inside?

Four ISAT tests, 160 questions, and a full review path

Part	What You Will Practice
Tests 1–2	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Tests 3–4	Skill-building and final stamina rounds with expressions, equations, geometry, data, and problem models.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Mountain-valley math focus means recognizing the skill even when the next question changes topic, changes format, or asks for an explanation.



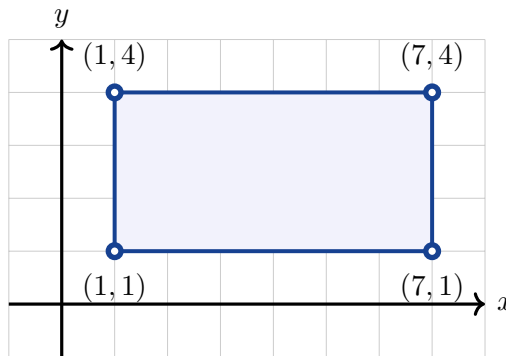
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& answers

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- 1) A hiker starts at elevation 1,200 feet and climbs to 1,850 feet. What is the change in elevation?
- A. 650 feet                       C. 3,050 feet  
 B. -650 feet                       D. 1,200 feet
- 2) A number line shows negative fractions. Point I is located at  $-\frac{7}{10}$ . Which statement is true?
- A. Point I is to the right of  $-\frac{3}{5}$                        D. Point I is at the same position as  
 B. Point I is to the left of  $-\frac{4}{5}$                       -0.6  
 C. Point I is between  $-\frac{3}{4}$  and  $-\frac{2}{3}$
- 3) What is the relationship between the points  $(5, 3)$  and  $(5, -3)$ ?
- A. They are reflections across the  $y$ -axis                       C. They are the same point  
 B. They are in the same quadrant                       D. They are reflections across the  $x$ -axis
- 4) Marcus has \$5 and Jessica has a debt of \$3 (written as  $-3$ ). Who has more money?
- A. Marcus                       C. They have the same  
 B. Jessica                       D. Cannot determine





5)

A rectangle has vertices at  $(1, 1)$ ,  $(7, 1)$ ,  $(7, 4)$ , and  $(1, 4)$ . What is the perimeter?

- A. 16 units                       C. 20 units  
 B. 22 units                       D. 18 units

6) Which statement about the height of a triangle is true?

- A. It is always a side of the triangle.     D. It is always perpendicular to the base.  
 B. It is the perimeter divided by 2.  
 C. It is always the longest side.

7) A  $10 \times 10$  grid has 52 shaded squares. What percent of the grid is shaded?

8) A parallelogram has a slanted side of 8 cm, a base of 12 cm, and a height of 5 cm. What is the area?

- A.  $25 \text{ cm}^2$                        C.  $60 \text{ cm}^2$   
 B.  $40 \text{ cm}^2$                        D.  $96 \text{ cm}^2$



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9) A wooden block has dimensions  $2\frac{1}{4}$  in by 2 in by 3 in. What is its volume?

A.  $7.25 \text{ in}^3$

B.  $13.5 \text{ in}^3$

C.  $14.5 \text{ in}^3$

D.  $18.5 \text{ in}^3$

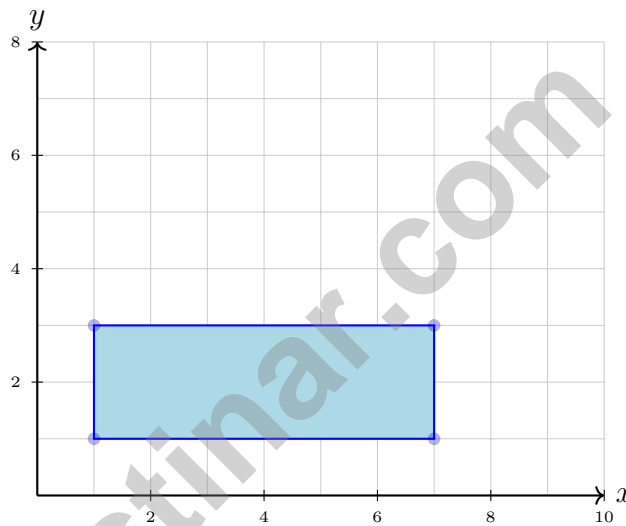
10) A vertical segment goes from  $(5, 2)$  to  $(5, 8)$ . What is its length?

A. 4 units

B. 5 units

C. 7 units

D. 6 units



11)

What is the area of the rectangle shown?

A. 10 square units

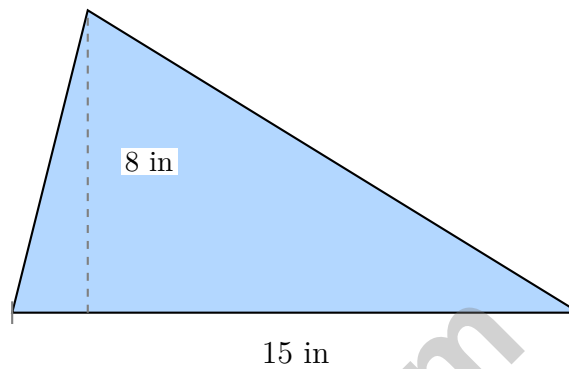
B. 12 square units

C. 16 square units

D. 18 square units



- 1) An obtuse triangle has a base of 15 inches and a perpendicular height of 8 inches measured from the opposite vertex to the extended base line. What is the area?



- A.  $60 \text{ in}^2$                        C.  $23 \text{ in}^2$   
 B.  $30 \text{ in}^2$                        D.  $120 \text{ in}^2$
- 2) A gym teacher records how many push-ups each student can do. Why is “How many push-ups can a student do?” a statistical question?
- A. Because push-ups require strength.     C. Because the gym teacher asked it.  
 B. Because different students can do     D. Because it is asked in gym class.  
different numbers of push-ups.
- 3) In a box plot, what does the left edge of the box represent?
- A. The minimum                       C. The median  
 B.  $Q_1$                                    D. The mean



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4) If the probability of success is 0.85, what is the probability of failure?

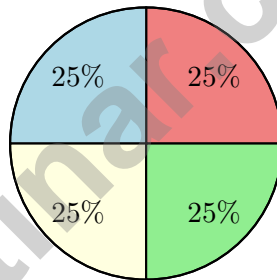
- A. 0.15                       C. 0.35  
 B. 0.25                       D. 0.50

5) Using the same stem-and-leaf plot from Question 2, what is the range of heights?

- A. 35 cm                       C. 25 cm  
 B. 30 cm                       D. 40 cm

6) A park counted 600 visitors. The circle graph shows  $\frac{3}{10}$  came on Saturday. How many visitors came on Saturday?

- A. 150                           C. 180  
 B. 120                           D. 200



7)

A circle graph is divided into four equal sections. If the whole circle represents 200 students, how many students does each section represent?

- A. 25 students                       C. 75 students  
 B. 40 students                       D. 50 students



- 1) A soccer team trains together. They cover 12 miles in  $\frac{5}{2}$  hours. What is their unit rate in miles per hour?
- A. 2.4 mph                       C. 4.0 mph  
 B. 3.0 mph                       D. 4.8 mph
- 2) Compute:  $12.7 + 8.45$
- A. 20.112                       C. 21.52  
 B. 4.25                       D. 21.15
- 3) What is the GCF of 16 and 40?
- A. 4                       C. 16  
 B. 20                       D. 8
- 4) Expand  $10(3 + 9)$ .
- A.  $30 + 90$                        C.  $10 + 12$   
 B.  $30 + 9$                        D. 120
- 5) A golfer is 12 strokes under par. Which representation shows the integer score?
- A.  $|-12|$  representing the magnitude of the score                       C. 12 representing 12 strokes under  
 B.  $-12$  representing 12 strokes under                       D.  $|12|$  representing 12 strokes over



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6) Which number is located farthest from  $-1$  on a number line?

A.  $-3.2$

C.  $0.8$

B.  $-2.1$

D.  $1.5$

7) A recipe uses 2 cups of flour for every 1 cup of sugar. If you want to make a batch using 5 cups of flour, how many cups of sugar do you need? Explain your reasoning using the concept of proportionality.

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**Idaho ISAT Practice Test Answer Keys****How to use this Idaho ISAT answer section with a Grade 6 student:**

1. check the answer first, then write one quick reason the choice is correct
2. mark questions to try again, especially the skills that feel connected to mountain-valley math focus
3. rework the problem before reading the full explanation, using this reminder:  
Build the setup before the calculation: list facts, choose the operation, and check reasonableness.

**A calm Idaho correction routine turns every missed item into useful practice. Move through one test, harvest the missed skills, and practice those before the next round.**



## Idaho Practice Test Answers and Explanations

Review the four printed ISAT tests with grounded, careful, and ready for more growth habits.

### Practice Test 1 Answers and Explanations

- 1) **Choice A is correct.** **(6.NS.B.3)** Change in elevation:  $1,850 - 1,200 = 650$  feet.
- 2) **Choice C is correct.** **(6.SP.B.4)** In decimal form:  $-\frac{7}{10} = -0.7$ ,  $-\frac{3}{4} = -0.75$ ,  $-\frac{2}{3} \approx -0.667$ . So  $-0.75 < -0.7 < -0.667$ , placing  $-0.7$  between these two values.
- 3) **Choice D is correct.** **(6.NS.C.8)** The points differ only in the sign of the  $y$ -coordinate, which is the definition of reflection across the  $x$ -axis.
- 4) **Choice A is correct.** **(6.NS.C.7d)**  $5 > -3$ , so Marcus has more money.
- 5) **Choice D is correct.** **(6.NS.C.8)** Length is  $|7 - 1| = 6$  units and width is  $|4 - 1| = 3$  units. The perimeter is  $2(6 + 3) = 18$  units.
- 6) **Choice D is correct.** **(6.G.A.1)** The height is defined as the perpendicular distance from the base to the opposite vertex, regardless of the triangle type.
- 7) **The correct answer is 52%.** **(6.RP.A.3)** A  $10 \times 10$  grid has 100 squares total. If 52 are shaded, the percent is  $\frac{52}{100} = 52\%$ .
- 8) **Choice C is correct.** **(6.G.A.1)** Area = base  $\times$  height =  $12 \times 5 = 60$  cm<sup>2</sup>. The slanted side is irrelevant.
- 9) **Choice B is correct.** **(6.G.A.2)**  $V = 2.25 \times 2 \times 3 = 4.5 \times 3 = 13.5$  in<sup>3</sup>.
- 10) **Choice D is correct.** **(6.G.A.3)** For a vertical segment, subtract the  $y$ -coordinates:  $8 - 2 = 6$  units.
- 11) **Choice B is correct.** **(6.G.A.1)** Width:  $7 - 1 = 6$  units. Height:  $3 - 1 = 2$  units. Area =  $6 \times 2 = 12$  square units.
- 12) **The correct answer is 25%.** **(6.RP.A.3)** Increase is  $93.75 - 75 = 18.75$ . Percent increase is  $\frac{18.75}{75} = 0.25 = 25\%$ .
- 13) **Choice C is correct.** **(6.NS.C.5)** Ordering from least to greatest:  $-8 < -3 < 0$ . Choice C is the only set in correct order.
- 14) **Choice A is correct.** **(6.NS.C.8)** Reflection over the  $y$ -axis changes the sign of the  $x$ -coordinate:  $(6, 2) \rightarrow (-6, 2)$ .
- 15) **Choice A is correct.** **(6.SP.B.5)** Median of 9 values is the 5th value, 88. Sum =  $78 + 82 + 85 + 87 + 88 + 89 + 90 + 92 + 96 = 787$ . Mean =  $787 \div 9 \approx 87.4$ , so the student's mean of 79 is incorrect.
- 16) **Choice D is correct.** **(6.EE.C.9)** Graph 1 passes through the origin and has constant ratio  $8/4 = 2$ , so it is proportional. Graph 2 is not proportional because the ratios are different:  $3/1 = 3$  but  $5/2 = 2.5$ .
- 17) **Choice C is correct.** **(6.EE.A.2)** Remaining percent:  $100\% - 60\% = 40\%$  of the original budget.
- 18) **Choice C is correct.** **(6.RP.A.3)** Multiply the drawing base by the scale: 4 inches  $\times$  2 feet/inch = 8 feet.
- 19) **Choice C is correct.** **(6.NS.A.1)**  $\frac{5}{6} \div \frac{1}{6} = \frac{5}{6} \times 6 = 5$ .
- 20) **Choice A is correct.** **(6.NS.B.2)**  $8,925 \div 35 = 255$  exactly. Verify:  $35 \times 255 = 8,925$ .
- 21) **The correct answer is 600.** **(6.RP.A.3)** Step 1: Find the unit rate:  $240 \div 8 = 30$  widgets per hour. Step 2: In 20 hours:  $30 \times 20 = 600$  widgets.
- 22) **The correct answer is The constant of proportionality is 4, and the cost per unit is \$4.** **(6.RP.A.3)** A is correct because  $k = \frac{8}{2} = 4$ . B is correct because the cost per unit is \$4. The equation is  $y = 4x$ , so Choice C is false; Choice D is false because the graph passes through  $(0, 0)$ ; Choice E gives the wrong unit rate.
- 23) **Choice A is correct.** **(6.NS.B.3)** Multiply both by 10:  $8.4 \div 7 = 1.2$ .
- 24) **Choice C is correct.** **(6.NS.B.4)** This is a GCF problem. Prime factors:  $32 = 2^5$  and  $48 = 2^4 \times 3$ . GCF =  $2^4 = 16$ . So they can make 16 gift sets with 2 mugs and 3 candles each.
- 25) **Choice A is correct.** **(6.NS.B.4)**  $8(5 + 3) = 8 \cdot 5 + 8 \cdot 3 = 40 + 24$ . Choice B gives  $8 + 8 = 16$ , so it is not equivalent.
- 26) **The correct answer is 2,500.** **(6.RP.A.3)** Multiply by the conversion factor: 2.5 liters  $\times$  1000 mL/liter = 2500 mL.
- 27) **Choice B is correct.** **(6.SP.B.4)** Absolute value measures distance from zero. Distance is always positive or zero, so  $|-8| = 8$ .



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## Hi, Math Inventor!

◇ 4 practice tests. 4 chances to invent new ways to think. You tried things. You changed them. You made your math brain stronger! ◇

★ **Inventors know:** the first try isn't always the best try. Sometimes you fix it. Sometimes you start over. You did all of that! ★

### Inventor's Workshop

- **Sketch Pad:** Full of ideas!
- **Toolbox:** Lots of math strategies.
- **Workbench:** Neat and organized.
- **Brave Mind:** You try new things.

**Inventor tip:** on test day, if your first try doesn't work, switch tools. Inventors don't get stuck on one tool. Pick the right one for the job!

If you want to share something or ask a question, please email me at [jay@testinar.com](mailto:jay@testinar.com).

**Jay Daie**

Your Math Inventor

# PRACTICE TODAY. SUCCEED TOMORROW!

This book includes 4 full-length Math practice tests and 2 online tests to help Grade 6 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:

**4** 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.

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### 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 & Rates
- ✓ Percents
- ✓ The Number System
- ✓ Statistics & Probability
- ✓ Expressions & Equations
- ✓ Data Analysis
- ✓ Geometry
- ✓ Measurement & Conversions
- ✓ Fractions & Decimals
- ✓ And More!



### 2 ONLINE TESTS

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



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