

8

Idaho ISAT

GRADE 6

MATH

PRACTICE TESTS

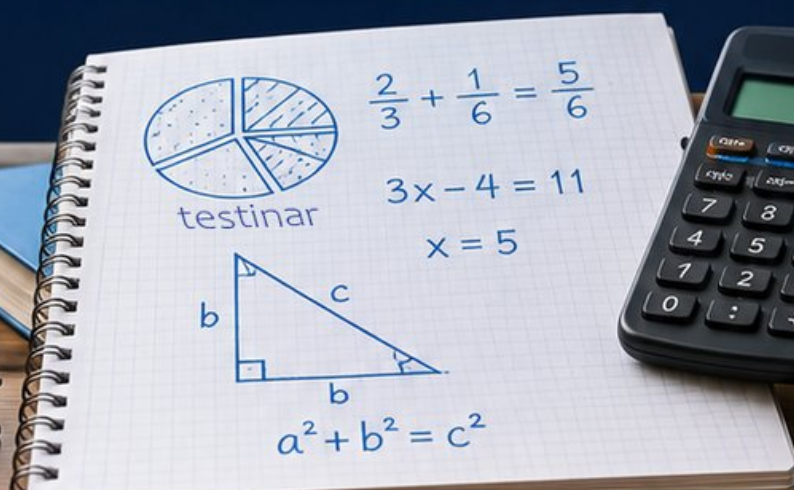
8
PRINTED
TESTS

+

2
ONLINE
TESTS

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

Standards-Aligned *Steady Southern* Problem Solving for Comprehensive Assessment Program



BUILT FOR
ACAP SUCCESS



REALISTIC TESTS
& QUESTION TYPES



STRENGTHEN
MATH SKILLS



REVIEW, PRACTICE,
AND IMPROVE

8 Idaho ISAT Grade 6 Math Practice Tests

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



Eight 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!

Eight focused rounds using mountain-valley math focus

This book gives you eight 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 eight-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?

Eight ISAT tests, 320 questions, and a full review path

Part	What You Will Practice
Tests 1–3	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Tests 4–6	Skill-building rounds with expressions, equations, geometry, data, and problem models.
Tests 7–8	Final stamina rounds for mixed review, neat work, and flexible strategy choices.
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.



Scan me!
For more practice
& answers

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- 1) A rectangular prism has a base with length 7 in and width 4 in. Its height is 5 in. Find the volume using $V = Bh$.
- A. 140 in^3 C. 58 in^3
 B. 99 in^3 D. 280 in^3
- 2) How many of the values $\{2, 4, 6, 8\}$ satisfy the inequality $x \leq 5$?
- A. 1 value C. 3 values
 B. 2 values D. 4 values
- 3) A quadrilateral has vertices at $(0, 2)$, $(4, 2)$, $(4, 5)$, and $(0, 5)$. What is its perimeter?
- A. 9 units C. 14 units
 B. 12 units D. 18 units
- 4) A net of a triangular prism consists of 2 triangles and 3 rectangles. If the triangular base is a right triangle with legs 3 cm and 4 cm, and the hypotenuse is 5 cm, and the prism height is 7 cm, what is the total surface area?
- A. 96 cm^2 C. 72 cm^2
 B. 84 cm^2 D. 120 cm^2
- 5) From the pie chart above, what is the combined allocation for Emergency and Car?
- A. \$1600 C. \$1900
 B. \$1800 D. \$2000



6) Solve for x : $5x = 30$.

7) A golf tournament score is calculated as: Par is 72. A player scores -3 (3 under par). What is the player's actual score?

A. 69

C. -3

B. 75

D. 72

8) What is 4^3 ?

A. 12

C. 64

B. 16

D. 81

9) The table shows the relationship between time and distance for a car traveling at constant speed.

Time (hours)	1	3	5
Distance (miles)	60	180	300

Find the speed of the car in miles per hour.



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10) In the expression $2 \cdot 3 \cdot x$, written as $6x$, what are the factors of the coefficient 6?

- A. 2 and 3 C. 6 only
 B. 2, 3, and x D. 1 and 6

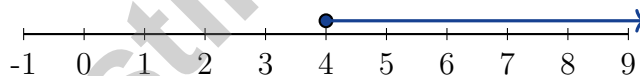
11) Which table shows correct values for the expression $y = 2x - 1$?

	$x = 1$	$x = 2$	$x = 3$	$x = 4$
A:	0	3	5	7
B:	1	3	5	7
C:	2	4	6	8
D:	3	5	7	9

12) A number n is decreased by 12 and then the result is doubled. Which expression shows the final result?

- A. $2n - 12$ C. $n - 2(12)$
 B. $2n(12)$ D. $2(n - 12)$

13) Which number line graph shows all numbers that are NOT solutions to $x < 4$?

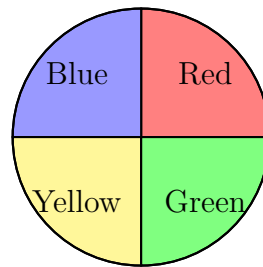


- A. Open circle at 4, arrow right C. Open circle at 4, arrow left
 B. Closed circle at 4, arrow left D. Closed circle at 4, arrow right

14) A sports analyst wants to study the heights of basketball players in a league. She measures 12 players. What is the population?

- A. The 12 players she measured C. All people who play sports
 B. The height measurements she recorded D. All basketball players in the league





1)

The spinner above is spun. Which probability is impossible?

- A. $P(\text{Red}) = 0.25$ C. $P(\text{Purple}) = 0.25$
 B. $P(\text{Blue}) = 0.25$ D. $P(\text{Yellow}) = 0.25$

2) A data set has a mean of 10. If you remove an outlier value of 30, which is likely true?

- A. The new mean decreases C. The new median stays the same
 B. The new mean increases D. Both B and C

3) A pentagon has vertices at $(1, 1)$, $(5, 1)$, $(7, 4)$, $(4, 7)$, and $(1, 5)$. How many sides does it have?

- A. 4 sides C. 6 sides
 B. 5 sides D. 7 sides





4)

A trapezoid has bases of 10 units and 8 units, with a height of 5 units. What is its area?

- A. 40 square units C. 50 square units
 B. 45 square units D. 55 square units

5) A square pyramid has a base with side length 8 cm. The slant height is 6 cm. Find the total surface area including the base.

- A. 64 cm^2 C. 160 cm^2
 B. 96 cm^2 D. 224 cm^2

6) Four numbers have a mean of 25. Three of them are 20, 28, 32. What is the fourth number?



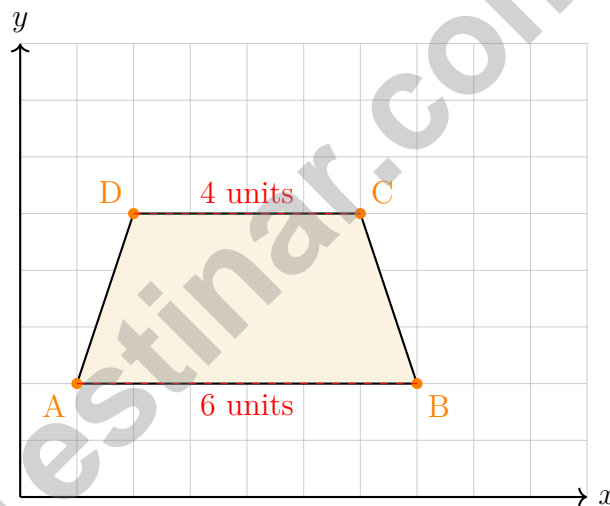
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1) Read the question in the box below:

“How tall are the players on the basketball team?”

Is this a statistical question, and why or why not?

- A. No, because it asks about a team that has a fixed number of players.
- B. Yes, because it asks about many different heights.
- C. No, because basketball teams always have the same average height.
- D. Yes, because you must collect data from many players whose heights vary.

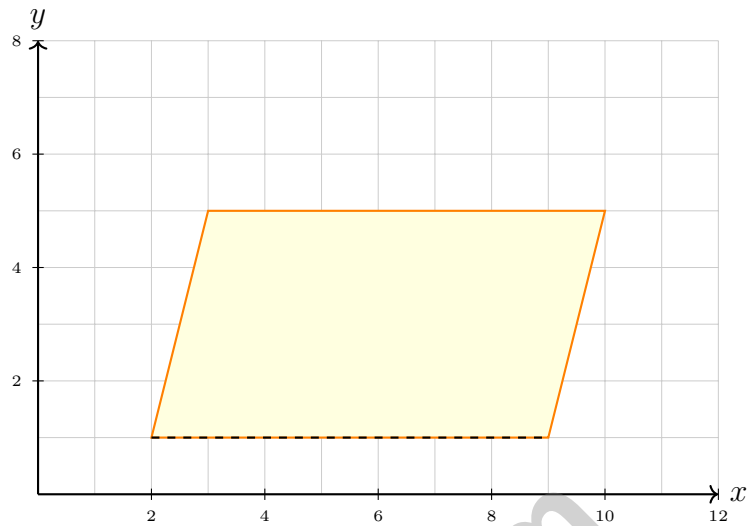


2)

This trapezoid has bases of 6 and 4 units and height 3 units. What is its area?

- A. 12 square units
- B. 24 square units
- C. 18 square units
- D. 15 square units





3)

A parallelogram has vertices at $(2, 1)$, $(9, 1)$, $(10, 5)$, and $(3, 5)$. If the base is 7 units and the height is 4 units, what is the area?

- | | |
|---|---|
| <input type="checkbox"/> A. 20 square units | <input type="checkbox"/> C. 28 square units |
| <input type="checkbox"/> B. 24 square units | <input type="checkbox"/> D. 32 square units |

4) A mine shaft entrance is at sea level (0 meters). A tunnel goes down to -450 meters. How deep is the tunnel?

- | | |
|---|---|
| <input type="checkbox"/> A. 450 meters | <input type="checkbox"/> C. 225 meters |
| <input type="checkbox"/> B. -450 meters | <input type="checkbox"/> D. -225 meters |

Parentheses first

Evaluate: $(4 + 1)^2 \times 2$

5)

What is the value after Step 1 (parentheses)?

- | | |
|---|--|
| <input type="checkbox"/> A. $5^2 \times 2$ | <input type="checkbox"/> C. $5 + 1 \times 2$ |
| <input type="checkbox"/> B. $4 \times 1 \times 2$ | <input type="checkbox"/> D. 16×2 |



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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 eight printed ISAT tests with grounded, careful, and ready for more growth habits.

Practice Test 1 Answers and Explanations

- 1) **Choice A is correct.** **(6.G.A.2)** Base area: $B = 7 \times 4 = 28 \text{ in}^2$. Volume: $V = 28 \times 5 = 140 \text{ in}^3$.
- 2) **Choice B is correct.** **(6.NS.B.4)** Values ≤ 5 are: 2 and 4. The values 6 and 8 are both greater than 5, so only 2 values satisfy.
- 3) **Choice C is correct.** **(6.G.A.3)** Length = 4 units; width = 3 units. Perimeter = $2(4 + 3) = 14$ units.
- 4) **Choice A is correct.** **(6.G.A.4)** Two triangular bases: $2 \times \frac{1}{2}(3)(4) = 12 \text{ cm}^2$. Three rectangles: $3 \times 7 = 21 \text{ cm}^2$, $4 \times 7 = 28 \text{ cm}^2$, $5 \times 7 = 35 \text{ cm}^2$. Total = $12 + 21 + 28 + 35 = 96 \text{ cm}^2$.
- 5) **Choice C is correct.** **(6.EE.A.2)** Emergency and Car: $(22\% + 16\%) = 38\%$ of $\$5000 = 0.38 \times 5000 = \1900 .
- 6) **The correct answer is 6.** **(6.EE.B.5)** Divide both sides by 5: $x = 30 \div 5 = 6$. The inverse of multiplying by 5 is dividing by 5.
- 7) **Choice A is correct.** **(6.EE.A.3)** Under par means strokes below par: $72 + (-3) = 72 - 3 = 69$ strokes.
- 8) **Choice C is correct.** **(6.EE.A.1)** $4^3 = 4 \times 4 \times 4 = 64$. The exponent 3 tells us to multiply 4 by itself 3 times.
- 9) **The correct answer is 60.** **(6.EE.C.9)** The speed is $\frac{\text{distance}}{\text{time}}$. From the table, $\frac{60 \text{ mi}}{1 \text{ h}} = 60 \text{ mph}$; or $\frac{180 \text{ mi}}{3 \text{ h}} = 60 \text{ mph}$. The constant rate of change is 60 miles per hour.
- 10) **Choice A is correct.** **(6.EE.A.4)** The coefficient is 6, which comes from $2 \cdot 3$. The factors of 6 that are visible in the original expression are 2 and 3.
- 11) **Choice B is correct.** **(6.EE.A.3)** For each x value: $x = 1 \rightarrow 2(1) - 1 = 1$; $x = 2 \rightarrow 2(2) - 1 = 3$; $x = 3 \rightarrow 2(3) - 1 = 5$; $x = 4 \rightarrow 2(4) - 1 = 7$. Option B is correct.
- 12) **Choice D is correct.** **(6.EE.B.6)** First subtract 12 from n to get $n - 12$. Then double: $2(n - 12)$. Note: $2n - 12$ only doubles the number n , not the result of the subtraction.
- 13) **Choice D is correct.** **(6.SP.B.4)** Numbers NOT less than 4 means $x \geq 4$ (greater than or equal). This requires a closed circle at 4 with an arrow pointing right.
- 14) **Choice D is correct.** **(6.SP.A.3)** The population is the entire group being studied. The 12 players are a sample from the full population of all basketball players in the league.
- 15) **Choice A is correct.** **(6.NS.B.3)** Five equal sections, one labeled A. Probability = $\frac{1}{5}$.
- 16) **Choice D is correct.** **(6.SP.B.4)** With 11 data points (odd), the median is at position $(11 + 1)/2 = 6$. So the median value 55 is the 6th value in the ordered list.
- 17) **Choice D is correct.** **(6.NS.A.1)** Each section represents 25%. The central angle is $0.25 \times 360^\circ = 90^\circ$.
- 18) **Choice B is correct.** **(6.RP.A.3)** The median (middle value when ordered) is 2.5, largely unaffected by the outlier 5. The mean becomes 2.3 (affected), mode is 2, and range is 5 (which reflects the outlier).
- 19) **Choice D is correct.** **(6.RP.A.1)** The 1 loss part stands for 4 losses, so each ratio part is worth 4. Wins are 4 parts, and $4 \times 4 = 16$ wins.
- 20) **The correct answer is Plan X shows a proportional relationship, and it is represented by $e = 20h$.** **(6.EE.C.9)** Statement A is correct: Plan X has equation $e = 20h$, so it is proportional. Statement C matches the equation for Plan X. Plan Y has equation $e = 100 + 10h$, so it is not proportional and its graph does not pass through the origin. After 10 hours, both plans pay \$200, so D is false.
- 21) **Choice D is correct.** **(6.RP.A.1)** Divide miles by gallons: $48 \div 2 = 24$ miles per gallon.
- 22) **The correct answer is 8.** **(6.G.A.1)** Using $A = b \times h$: $96 = b \times 12$, so $b = 8$ m.
- 23) **Choice B is correct.** **(6.RP.A.2)** $100 \div 25 = 4$ meters per second.
- 24) **Choice C is correct.** **(6.RP.A.3)** Multiply: $1.2 \times 1000 = 1200$ grams.
- 25) **Choice C is correct.** **(6.NS.C.7d)** Brand X costs $\$3.00 \div 12 = \0.25 per ounce. Brand Y costs $\$4.50 \div 15 = \0.30 per ounce. Brand X has the lower unit price.
- 26) **Choice A is correct.** **(6.SP.B.4)** On the number line, $-\frac{1}{2}$ is to the right of -1 , so it is greater. Check: $-0.5 > -1$ is true.



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Author's Note

From a Friend Who Believes in You

Hi, Friend!

◇ I just want to say something important: I am proud of you. You did 8 full practice tests. That takes time, hard work, and heart. ◇

★ **Friendly truth:** a test is just one part of your math journey. You are SO much more than a score. The work you did is the real win! ★

What I Want You to Know

- **You are smart.** Every test you finished proves it.
- **You are brave.** You tried hard problems.
- **You are growing.** Mistakes taught you new things.
- **You are ready.** The skills are inside you.

One more thing: on test day, take a deep breath. Smile. Remember that someone (me!) believes in you. You can do this!

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

Jay Daie

Your Math Friend

MASTER MATH. ACE YOUR TESTS.

This Grade 6 Math Practice Tests book is designed to help students build confidence, strengthen math skills, and excel on comprehensive assessments.

With 8 full-length printed tests and 2 online tests, this resource provides realistic practice, a variety of question types, and detailed answer explanations to help students achieve their best.

Perfect for classroom use, homework, test preparation, and extra practice at home.

8
PRINTED
TESTS

+

2
ONLINE
TESTS

PERFECT FOR

- ✓ Classroom Practice
- ✓ Homework & Review
- ✓ Independent Learning
- ✓ Test Preparation
- ✓ Skill Reinforcement
- ✓ Building Confidence



**PRACTICE TODAY.
SUCCEED TOMORROW.**

WHAT STUDENTS WILL GAIN



Stronger Math Skills

Build a solid foundation through targeted practice and review.



Better Problem Solving

Develop logical thinking and effective solution strategies.



Understand Key Concepts

Reinforce important math ideas aligned with standards.



Test Confidence

Get familiar with test formats and improve accuracy.



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

Extra online practice to reinforce learning and build confidence.

MORE PRACTICE. GREATER RESULTS.

Give your child the tools needed to develop strong math skills, confidence, and a positive attitude toward learning.



8 FULL-LENGTH
PRACTICE TESTS



2 ONLINE
PRACTICE TESTS



DETAILED ANSWER
EXPLANATIONS