

8 Iowa ISASP

GRADE 6

MATH

PRACTICE TESTS

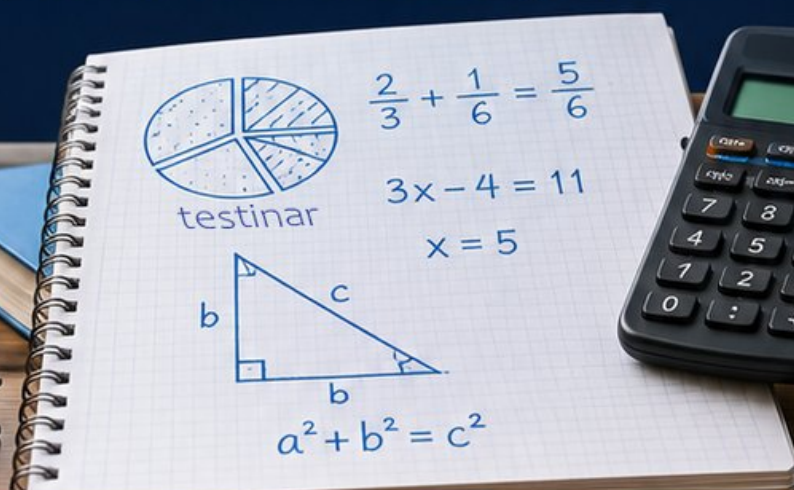
8
PRINTED
TESTS

+

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



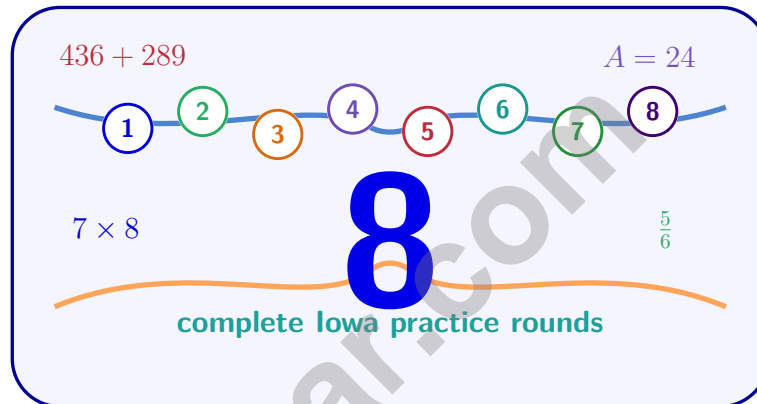
STRENGTHEN
MATH SKILLS



REVIEW, PRACTICE,
AND IMPROVE

8 Iowa ISASP Grade 6 Math Practice Tests

Standards-Aligned Clear Midwest Math Habits for Iowa Statewide Assessment of Student Progress



Eight complete 40-question Grade 6 practice rounds for ISASP, built for clear Midwest math habits 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, Iowa Math Explorer!

Eight focused rounds using clear Midwest math habits

This book gives you eight full Grade 6 practice tests for ISASP. Each round uses field rows, fair maps, and careful data reading as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

Your Iowa Practice Promise

Line up the information, choose a sensible method, and check that the answer matches the context.

Read

Plan

Check

How to Use This Book

A eight-session routine for clear Midwest math habits

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.

Iowa review rhythm: After each round, write one strength and one next skill so progress stays visible.



What Is Inside?

Eight ISASP 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. Clear midwest math habits 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 car rental requires drivers to be at least 18 years old. Which inequality represents this requirement?

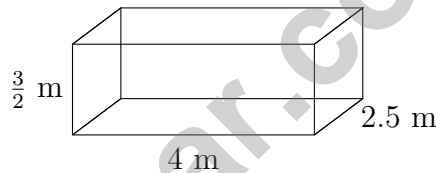
A. $d > 18$

C. $d \leq 18$

B. $d < 18$

D. $d \geq 18$

2) A company pays employees \$18 per hour. An employee works 25 hours in a week. Using the equation $w = 18h$, where w is weekly pay and h is hours worked, what does the number 18 represent?

 A. The number of hours worked C. The total weekly pay B. The number of employees D. The hourly pay rate

3)

Calculate the volume.

A. 15 m^3

C. 20 m^3

B. 18 m^3

D. 25 m^3

4) Using the conversion factor 1 yard = 3 feet, how many feet are in 7 yards?

 A. 10 feet C. 21 feet B. 14 feet D. 28 feet

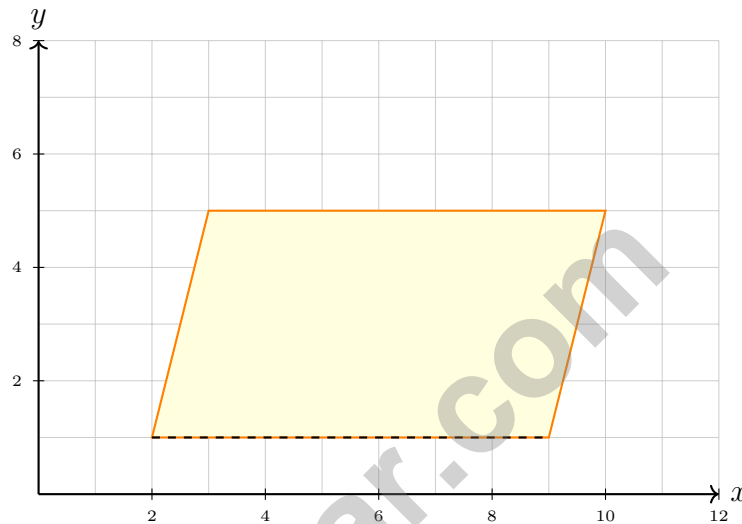
- 5) A scale drawing has a scale of 1 inch = 12 feet. If the actual length of a building is 60 feet, what is its length in the drawing?
- A. 4 inches C. 6 inches
 B. 5 inches D. 7.2 inches
- 6) A submarine descends 2 meters every minute for 6 minutes. How far below the starting point is it?
- A. 8 meters below C. 4 meters below
 B. 12 meters below D. -4 meters below
- 7) A weather report shows: Day 1 temperature change -5° F, Day 2 change $+8^{\circ}$ F, Day 3 change -6° F. If the starting temperature was 32° F, what is the final temperature?
- A. 23° F C. 35° F
 B. 29° F D. 51° F
- 8) Which expression matches “the difference of a number t and 3”?
- A. $3 - t$ C. $t + 3$
 B. $t - 3$ D. $3t$
- 9) Evaluate $x^2 - 3x$ when $x = -2$.
- A. -10 C. 2
 B. -2 D. 10
- 10) In the expression $4x - 7$, what does the variable x represent if the expression models “four times a number minus seven”?
- A. Four C. The unknown number
 B. Seven D. The result



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11) A student must score at least 80% to earn a B grade. Which value does NOT earn a B?

- A. 80% C. 79.9%
 B. 85% D. 90%



12)

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?

- A. 20 square units C. 28 square units
 B. 24 square units D. 32 square units

13) A data set shows the following box plot summary statistics: min = 5, $Q_1 = 12$, median = 18, $Q_3 = 24$, max = 35. Find both the range and the IQR.

- A. Range = 30, IQR = 12 C. Range = 29, IQR = 12
 B. Range = 30, IQR = 11 D. Range = 30, IQR = 6



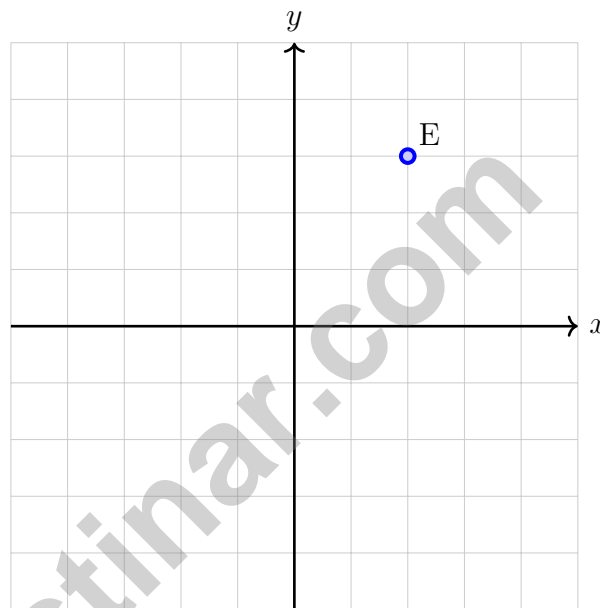
1) A company charges \$25 per hour plus a \$50 service fee. Which expression represents the total cost for h hours of work?

A. $25h + 50$

C. $50h + 25$

B. $25 + 50h$

D. $25h - 50$



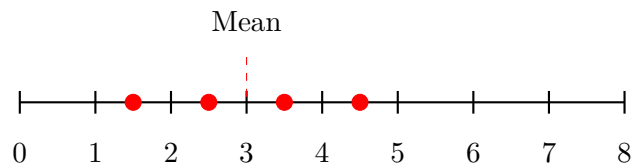
2)

Point E is located at $(2, 3)$. If it is translated 3 units to the right and 2 units down, what are the coordinates of its image E' ?



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3) Find the mean of the values shown on the number line:



- A. 2.5 C. 3.5
- B. 3 D. 4
- 4) The surface area of a cube is 600 cm^2 . What is the total length of all 12 edges?
- A. 40 cm C. 100 cm
- B. 60 cm D. 120 cm
- 5) Find the Mean Absolute Deviation for: 2, 4, 6, 8.
- A. 1 C. 3
- B. 2 D. 4
- 6) A scientist records bird counts at different altitudes. The stem-and-leaf plot uses a 2-digit stem (like 15, 16, 17). If stem 16 has leaves 0, 3, 7, what are the data values?
- A. 160, 163, 167 D. Cannot determine without the full plot
- B. 16, 16, 16
- C. 1603, 1663, 1673

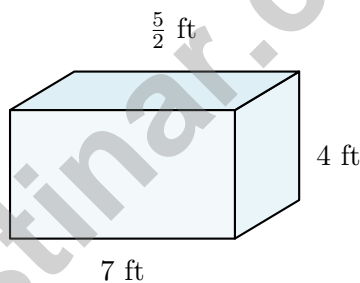


1) A dataset's five-number summary is: $\min = 12$, $Q_1 = 22$, $\text{median} = 30$, $Q_3 = 38$, $\max = 48$. Based on the five-number summary, which value appears to be the most typical of the data?

- A. The minimum value of 12 C. The maximum value of 48
 B. The median value of 30 D. The range of 36

2) A student's score on a test depends on the number of questions answered correctly. In this situation, which variable is dependent?

- A. The test C. The student's score
 B. The number of questions answered correctly D. The difficulty of the test

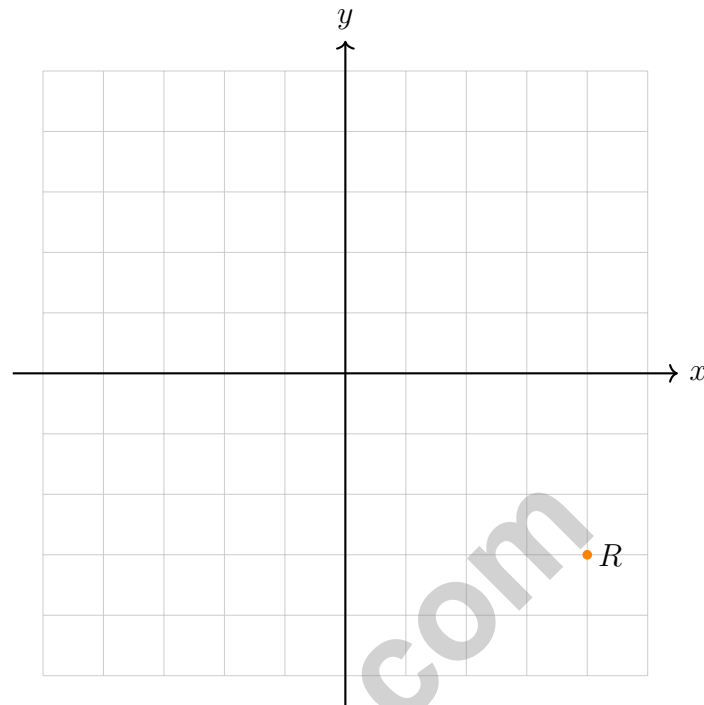


3)

Calculate the volume.

- A. 35 ft^3 C. 70 ft^3
 B. 56 ft^3 D. 140 ft^3





4)

Point R is reflected across the y -axis. In which quadrant does the reflected point lie?

- A. Quadrant I C. Quadrant III
 B. Quadrant II D. Quadrant IV

5) What is the result of $9 \times (-4)$?

- A. 36 C. 5
 B. -5 D. -36

6) A company had a profit of \$50,000 in month 1. In month 2, they had a loss of \$12,000. What is their combined profit or loss?

- A. \$62,000 loss C. \$38,000 loss
 B. \$62,000 profit D. \$38,000 profit



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Iowa ISASP Practice Test Answer Keys**How to use this Iowa ISASP 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 clear Midwest math habits
3. rework the problem before reading the full explanation, using this reminder:
Line up the information, choose a sensible method, and check that the answer matches the context.

A calm Iowa correction routine turns every missed item into useful practice. After each round, write one strength and one next skill so progress stays visible.



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Iowa Practice Test Answers and Explanations

Review the eight printed ISASP tests with focused, patient, and ready for the next problem set habits.

Practice Test 1 Answers and Explanations

- 1) **Choice D is correct.** **(6.EE.A.3)** “At least 18” means “greater than or equal to 18,” so the inequality is $d \geq 18$.
- 2) **Choice D is correct.** **(6.EE.C.9)** In the equation $w = 18h$, the coefficient 18 is the constant rate (hourly pay rate in dollars per hour).
- 3) **Choice A is correct.** **(6.G.A.2)** $V = 4 \times 1.5 \times 2.5 = 6 \times 2.5 = 15 \text{ m}^3$.
- 4) **Choice C is correct.** **(6.RP.A.3)** Multiply yards by the conversion factor: $7 \times 3 = 21$ feet.
- 5) **Choice B is correct.** **(6.RP.A.3)** Divide the actual length by the scale factor: $60 \div 12 = 5$ inches.
- 6) **Choice B is correct.** **(6.NS.B.3)** Descending 2 meters per minute for 6 minutes: $(-2) \times 6 = -12$ means 12 meters below.
- 7) **Choice B is correct.** **(6.EE.B.7)** Final temperature: $32 + (-5) + (+8) + (-6) = 32 - 5 + 8 - 6 = 29^\circ \text{ F}$.
- 8) **Choice B is correct.** **(6.EE.A.3)** “The difference of t and 3” starts with t , so we compute $t - 3$. Order matters: $3 - t$ gives a different result.
- 9) **Choice D is correct.** **(6.EE.A.4)** Substitute $x = -2$: $(-2)^2 - 3(-2) = 4 + 6 = 10$.
- 10) **Choice C is correct.** **(6.EE.B.6)** The variable x represents the unknown number being multiplied by 4 and decreased by 7.
- 11) **Choice C is correct.** **(6.NS.B.2)** The grade requires $g \geq 80$. Since $79.9 < 80$, it does not meet the requirement for a B.
- 12) **Choice C is correct.** **(6.G.A.1)** Area of a parallelogram = base \times height = $7 \times 4 = 28$ square units.
- 13) **Choice A is correct.** **(6.SP.A.3)** Range = max – min = $35 - 5 = 30$. IQR = $Q_3 - Q_1 = 24 - 12 = 12$.
- 14) **Choice D is correct.** **(6.SP.B.4)** Mode: 64 in (5 dots) is correct. Total: $1 + 3 + 5 + 4 + 2 = 15$ correct. Median: 8th value of 15 is 64 in, correct. False statement: students ≥ 66 in are $4 + 2 = 6$ out of 15, which is 40%, not more than half.
- 15) **Choice C is correct.** **(6.RP.A.1)** IQR = $Q_3 - Q_1 = 7.5 - 2.5 = 5$.
- 16) **Choice C is correct.** **(6.NS.B.3)** Outcomes: HH, HT, TH, TT. Total outcomes = $2 \times 2 = 4$.
- 17) **Choice A is correct.** **(6.RP.A.3)** The flour-to-sugar ratio is 3 : 9. Both numbers are divisible by 3, so the simplified ratio is 1 : 3.
- 18) **The correct answer is Both 2 : 3 and 8 : 12 are equivalent to 4 : 6.** **(6.RP.A.3)** 4 : 6 simplifies to 2 : 3 (divide by 2), so A is correct. 8 : 12 simplifies to 2 : 3 (divide by 4), so B is correct. 6 : 8 simplifies to 3 : 4 — not equivalent. 12 : 16 simplifies to 3 : 4 — not equivalent. 10 : 14 simplifies to 5 : 7 — not equivalent.
- 19) **Choice B is correct.** **(6.EE.A.2)** Shortfall is Expenses minus Budgeted Amount: $\$1700 - \$1500 = \$200$.
- 20) **The correct answer is 6.** **(6.EE.A.4)** Combine like terms: $4x + 2x = 6x$.
- 21) **Choice A is correct.** **(6.NS.B.3)** Multiply both by 10: $72 \div 8 = 9$.
- 22) **Choice C is correct.** **(6.NS.C.7)** Red is at -3 and Blue is at 1. Since $-3 < 1$, Red is less than Blue.
- 23) **Choice B is correct.** **(6.NS.C.8)** Same x -coordinate (1): $|2 - (-2)| = |2 + 2| = 4$ units.
- 24) **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.
- 25) **Choice D is correct.** **(6.RP.A.1)** The 9 made-shot parts represent 27 makes, so one part is $27 \div 9 = 3$. Misses are 1 part, so there are 3 misses.
- 26) **Choice A is correct.** **(6.RP.A.2)** Compare the unit prices. The 5-pack costs $12.50 \div 5 = \$2.50$ per pack, while the 8-pack costs $19.20 \div 8 = \$2.40$ per pack. The lower unit price is the better deal.
- 27) **Choice D is correct.** **(6.RP.A.3)** The ratio is 7 : 5. When chips are 35 (multiply by 5), pretzels are $5 \times 5 = 25$ bags.
- 28) **Choice B is correct.** **(6.RP.A.3)** All these points lie on a straight line passing through (0,0) because the ratio is constant (12 dollars per hour). Proportional relationships always graph as straight lines through the origin.
- 29) **Choice C is correct.** **(6.RP.A.3)** Shaded: 4 columns \times 10 rows = 40 squares. Unshaded: $100 - 40 = 60$ squares.



Cheer Squad Final Pep Talk

Hi, Math Star!

◇ 8 practice tests! That's a LOT of work, and you did it ALL. I am cheering so loud right now. You earned every clap and every cheer! ◇

★ **Cheerleader truth:** confidence is built by showing up. You showed up 8 times. That's real confidence. It is not pretend! ★

Cheer Roll Call

- **Effort:** 100% YOU SHOWED UP!
- **Heart:** BIG!
- **Skills:** STRONG and growing!
- **Spirit:** BRIGHT!

Cheer tip: on test day, be your own cheerleader. Whisper to yourself: "I can do this. I practiced." Tiny cheers make a big difference!

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

Jay Daie

Your Math Cheerleader

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.



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