

# 6

# Iowa ISASP

GRADE

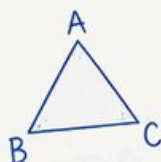
# 6

MATH

## PRACTICE TESTS

Standards-Aligned  
Steady Southern  
Problem Solving for  
Comprehensive  
Assessment Program

$$2x + 3 = 11$$



$$7^2 = 49$$

BUILD SKILLS.  
GAIN CONFIDENCE.  
**SUCCEED!**



### 6 PRINTED TESTS

Realistic practice to  
build confidence  
and mastery



### 2 ONLINE TESTS

Extra practice for  
continued success



### DETAILED ANSWER EXPLANATIONS

Learn with step-by-step  
solutions



### FOCUSED & EFFECTIVE

Target key math skills  
with purposeful  
practice



### 6 PRINTED TESTS + 2 ONLINE TESTS

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



### PRACTICE

Sharpen skills  
with targeted  
practice tests



### REVIEW

Understand  
concepts and  
strengthen skills

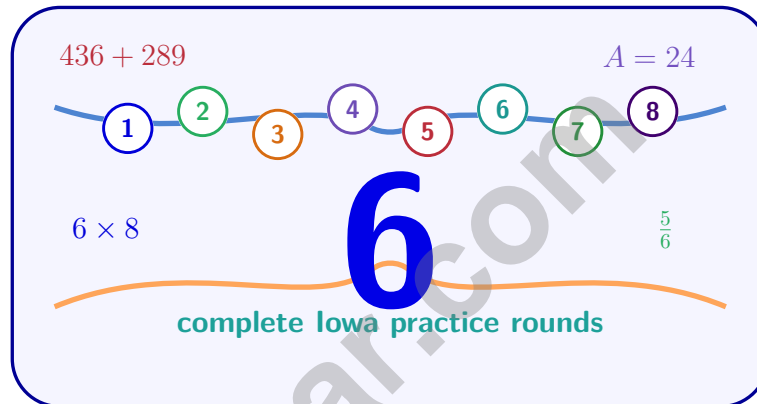


### SUCCEED

Build confidence  
and achieve  
your best

# 6 Iowa ISASP Grade 6 Math Practice Tests

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



Six 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 six 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 six-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 1–2	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Tests 3–5	Skill-building rounds with expressions, equations, geometry, data, and problem models.
Test 6	Final stamina round for mixed review, neat work, and flexible strategy choices.
Answer Pages	Compact keys and explanations that show why each answer works.

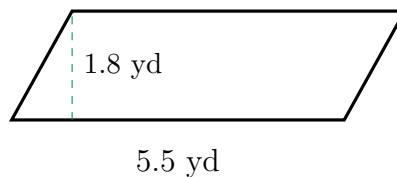
The tests are mixed on purpose. Clear midwest math habits means recognizing the skill even when the next question changes topic, changes format, or asks for an explanation.



Scan me!  
For more practice  
& answers

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1)

This parallelogram has a base of 5.5 yards and a perpendicular height of 1.8 yards. What is the area?

- A.  $7.3 \text{ yd}^2$ 
 C.  $14.6 \text{ yd}^2$   
 B.  $9.9 \text{ yd}^2$ 
 D.  $3.6 \text{ yd}^2$

2) Which equation has a solution of  $x = 10$ ?

- A.  $x + 5 = 14$ 
 C.  $x - 4 = 5$   
 B.  $3x = 30$ 
 D.  $x + 2 = 11$

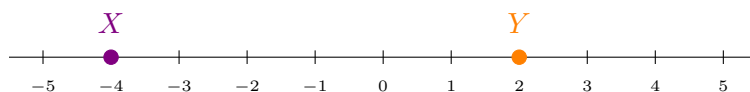
3) Which fraction is located between 0 and 1 on a number line?

- A.  $-\frac{2}{5}$ 
 C.  $\frac{5}{4}$   
 B.  $\frac{3}{10}$ 
 D.  $\frac{7}{6}$

4) What is the reflection of the point  $(2, 6)$  across the  $x$ -axis?

- A.  $(-2, 6)$ 
 C.  $(-2, -6)$   
 B.  $(2, -6)$ 
 D.  $(6, 2)$

5)



The distance between  $X$  and  $Y$  is:

- A. 2 units
  C. 6 units  
 B. 4 units
  D. 8 units



6) After distributing  $3(4a - 2)$ , what is the coefficient of  $a$ ?

7) The table below shows the cost of renting a canoe.

Hours	2	4	6
Cost (\$)	30	60	90

What is the cost per hour to rent the canoe?

8) A right triangle has legs of 11 inches and 18 inches. Calculate the area of the triangle.

9) Compute:  $\frac{-45}{5}$

A. 9

B. -40

C. 40

D. -9



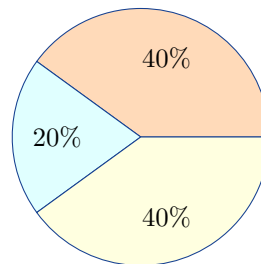
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& answers

- 10) A diver's position log shows: Start at 0 m (sea level), descend to  $-25$  m, then rise to  $-10$  m. What is the net change from start to finish?
- A.  $-35$  m                       C. 10 m  
 B.  $-10$  m                       D. 35 m
- 11) Evaluate:  $18 \div 3 + 4^2$
- A. 16                                   C. 26  
 B. 22                                   D. 30
- 12) Write an expression for "the difference of a number  $s$  and the product of 3 and 2".
- A.  $3 \cdot 2 - s$                        C.  $(s - 3)(2)$   
 B.  $s(3 - 2)$                        D.  $s - 3 \cdot 2$
- 13) A store buys notebooks at \$2.50 each and pens at \$0.75 each. If a student buys  $n$  notebooks and  $p$  pens, the total cost is  $2.50n + 0.75p$  dollars. What does the coefficient 0.75 tell you?
- A. The cost of one pen is \$0.75.                       C. The number of pens is 0.75.  
 B. The total cost of pens is \$0.75.                       D. The cost of one notebook is \$0.75.
- 14) Evaluate  $p + q$  when  $p = 7$  and  $q = 9$ .
- A. 2                                       C. 63  
 B. 16                                       D. 18
- 15) A bakery sells cookies for  $c$  cents each. A customer buys 6 cookies. Which expression shows the total cost in cents?
- A.  $c + 6$                                    C.  $c - 6$   
 B.  $6c$                                        D.  $\frac{c}{6}$



- 1) Maya is building a garden box with dimensions  $3\frac{1}{2}$  ft long, 2 ft wide, and  $1\frac{1}{2}$  ft deep. How many cubic feet of soil does she need?
- A.  $7 \text{ ft}^3$                        C.  $10.5 \text{ ft}^3$   
 B.  $8.5 \text{ ft}^3$                        D.  $14 \text{ ft}^3$
- 2) The five-number summary of student test scores is: min = 55,  $Q_1 = 70$ , median = 78,  $Q_3 = 85$ , max = 98. How many points is the range?
- A. 15                                   C. 43  
 B. 23                                   D. 78
- 3) A container has 15 balls: 5 red, 4 blue, 3 yellow, and 3 green. If one ball is drawn at random, what is the probability it is **not** red?
- A.  $\frac{2}{3}$                                    C.  $\frac{1}{3}$   
 B.  $\frac{3}{5}$                                    D.  $\frac{3}{5}$
- 4) A student records the number of minutes spent on homework: 24, 31, 28, 35, 29, 32, 26. Arranging in a stem-and-leaf plot, the data spans:
- A. One stem (20s)                       C. Three stems  
 B. Two stems (20s and 30s)                       D. Cannot determine





5)

A circle graph shows 300 total items. How many items are in one of the 40% sections?

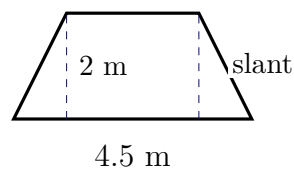
- A. 120                                       C. 80  
 B. 100                                       D. 140

6) A double-bar graph compares attendance at morning and afternoon classes over 5 days. If the morning bars average 25 students and the afternoon bars average 30 students, which statement is TRUE?

- A. Morning classes always have fewer students than afternoon classes       C. All afternoon classes have at least 30 students  
 B. Morning classes are larger than afternoon classes                       D. The afternoon classes have a higher average attendance

7) From the bar chart above, what percent of the total budget is allocated to rent?

- A. 25%                                       C. 50%  
 B. 40%                                       D. 60%



8)

What is the area of the parallelogram? (The height is shown by dashed lines.)

- A.  $4.5 \text{ m}^2$                                        C.  $9 \text{ m}^2$   
 B.  $6.5 \text{ m}^2$                                        D.  $13 \text{ m}^2$



Scan me!  
For more practice  
& answers





**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.**



## Iowa Practice Test Answers and Explanations

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

### Practice Test 1 Answers and Explanations

- Choice B is correct.** (6.G.A.1) Area =  $5.5 \times 1.8 = 9.9$  yd<sup>2</sup>.
- Choice B is correct.** (6.EE.B.5) Check each: A gives  $x = 9$ ; B gives  $x = 10$  ✓; C gives  $x = 9$ ; D gives  $x = 9$ . B is correct.
- Choice B is correct.** (6.SP.B.4)  $\frac{3}{10} = 0.3$ , which is between 0 and 1. All other choices are either negative or greater than 1.
- Choice B is correct.** (6.NS.C.8) Reflection across the  $x$ -axis changes the sign of the  $y$ -coordinate while the  $x$ -coordinate remains the same. The point (2, 6) becomes (2, -6).
- Choice C is correct.** (6.NS.C.7)  $X = -4$  and  $Y = 2$ . Distance =  $2 - (-4) = 2 + 4 = 6$  units.
- The correct answer is 12.** (6.EE.A.4)  $3(4a - 2) = 12a - 6$ , so the coefficient is 12.
- The correct answer is 15.** (6.EE.C.9) The cost increases by \$30 for every 2 hours. So the rate is  $\frac{\$30}{2 \text{ hours}} = \$15$  per hour. Check: 2 h at \$15/h costs \$30; 4 h costs \$60; 6 h costs \$90.
- The correct answer is 99.** (6.G.A.1)  $A = \frac{1}{2} \times 11 \times 18 = 99$  in<sup>2</sup>.
- Choice D is correct.** (6.NS.B.3) Negative divided by positive is negative:  $\frac{-45}{5} = -9$ .
- Choice B is correct.** (6.EE.B.7) Net change from start (0 m) to finish (-10 m):  $-10 - 0 = -10$  m (10 meters below sea level).
- Choice B is correct.** (6.EE.A.1) Exponent first:  $4^2 = 16$ . Division next:  $18 \div 3 = 6$ . Finally add:  $6 + 16 = 22$ .
- Choice D is correct.** (6.EE.A.3) "The product of 3 and 2" is  $3 \cdot 2 = 6$ . "The difference of  $s$  and" that product is  $s - 3 \cdot 2$ .
- Choice A is correct.** (6.EE.A.3) In the term  $0.75p$ , the coefficient 0.75 is the unit rate (cost per pen). The variable  $p$  is multiplied by this rate.
- Choice B is correct.** (6.EE.A.4) Substitute:  $7 + 9 = 16$ .
- Choice B is correct.** (6.EE.B.6) Total = price per cookie  $\times$  number of cookies =  $6c$  cents.
- Choice D is correct.** (6.NS.B.2) "At most" means the maximum is 2,500:  $c \leq 2,500$ .
- Choice D is correct.** (6.EE.A.3) "Greater than or equal to" uses the  $\geq$  symbol, so the inequality is  $x \geq -5$ .
- Choice D is correct.** (6.G.A.2) The correct volume is  $V = 2.5 \times 3 \times 4 = 7.5 \times 4 = 30$  m<sup>3</sup>. The student forgot to multiply by the height.
- The correct answer is Both scenarios require rounding up because partial containers/buses must be counted as whole units..** (6.NS.B.2) A is correct:  $5,432 \div 32 = 169$  remainder 24, so 170 crates are needed. C is correct:  $6,250 \div 48 = 130$  remainder 10, so 131 buses are needed. B, D, and E distribute items equally with no rounding needed (they divide evenly or we report the quotient with remainder).
- Choice B is correct.** (6.G.A.3) For a vertical segment:  $10 - 3 = 7$  units.
- Choice C is correct.** (6.G.A.1) Base:  $10 - 4 = 6$  units. Height:  $5 - 1 = 4$  units. Area =  $\frac{1}{2} \times 6 \times 4 = 12$  square units.
- Choice D is correct.** (6.RP.A.1) The diameter is 14 inches, so the radius is  $r = 7$  inches. Area =  $\pi r^2 = \pi \times 7^2$ .
- Choice B is correct.** (6.SP.A.3) Swimmer A's range is 4 seconds, Swimmer B's range is 10 seconds. The smaller range indicates less variation in Swimmer A's times.
- Choice D is correct.** (6.SP.B.4) Sum the frequencies:  $4 + 6 + 5 + 3 = 18$  total data points.
- Choice C is correct.** (6.RP.A.1) The upper whisker extends from  $Q_3$  to the maximum, representing the top 25% (the fourth quartile) of the data.
- Choice B is correct.** (6.SP.B.5) Mean =  $(2 + 3 + 4 + 5 + 6 + 8 + 10 + 15) / 8 = 53 / 8 = 6.625$ . Median =  $(5 + 6) / 2 = 5.5$ . The single outlier of 15 pulls the mean up. For stability assessment, median better reflects typical performance, ignoring the anomalous high month.



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## Author's Note

### From a Friend Who Believes in You

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#### Hi, Friend!

◇ I just want to say something important: I am proud of you. You did 6 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](mailto:jay@testinar.com).

**Jay Daie**

Your Math Friend

# PRACTICE TODAY. SUCCEED TOMORROW!

This Grade 6 Math Practice Tests book is designed to help students strengthen their math skills, master important concepts, and build the confidence they need to excel on comprehensive assessments.

With 6 full-length printed tests and 2 online tests, students get the review, practice, and realistic test experience they need to improve accuracy, develop problem-solving abilities, and reach their full potential.

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

6  
PRINTED  
TESTS

+  
2  
ONLINE  
TESTS

## PERFECT FOR:

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

★ BUILD SKILLS.  
GAIN CONFIDENCE.  
SUCCEED!

## 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.



### Deeper Understanding

Reinforce key concepts aligned with standards through meaningful practice.



### Test Confidence

Become familiar with test formats and improve accuracy and speed.



### Achieve Success

Build confidence and perform your best on test day.

## TOPICS COVERED

- ✓ Ratios & Rates
- ✓ The Number System
- ✓ Expressions & Equations
- ✓ Geometry
- ✓ Fractions & Decimals
- ✓ Percents
- ✓ Statistics & Probability
- ✓ Data Analysis
- ✓ Measurement & Conversions
- ✓ 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.



6 FULL-LENGTH  
PRINTED TESTS



2 ONLINE  
PRACTICE TESTS



DETAILED ANSWER  
EXPLANATIONS