

# 7 Iowa ISASP

## Grade 6 MATH

### PRACTICE TESTS

7  
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



7 Full-Length  
Printed Tests



Standards-Aligned  
Math Practice



Detailed Answer Keys  
and Explanations



Build Confidence.  
Achieve Success.



You've  
Got  
This!



PREPARE  
PRACTICE  
SUCCEED



PRACTICE  
WITH PURPOSE



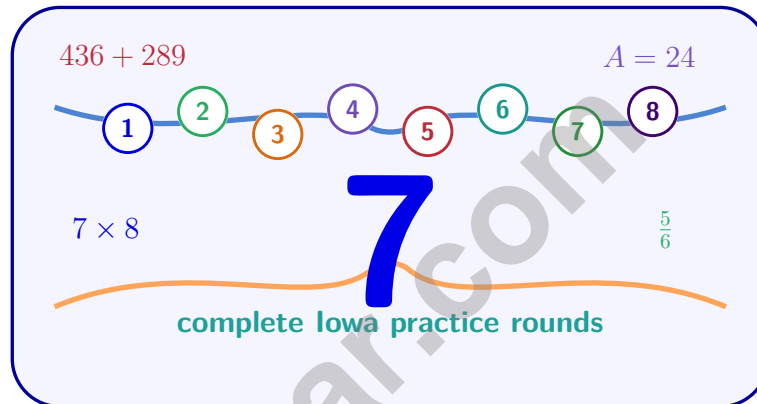
STRENGTHEN  
MATH SKILLS



REVIEW, IMPROVE,  
AND SUCCEED

# 7 Iowa ISASP Grade 6 Math Practice Tests

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



Seven 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 seven 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 seven-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.
Test 7	Final stamina round for mixed review, neat work, and flexible strategy choices.
Answer Pages	Compact keys and explanations that show why each answer works.

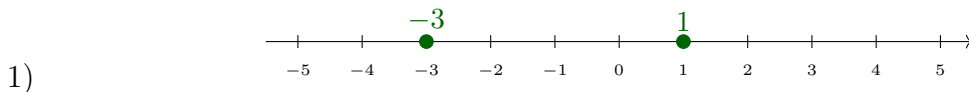
The tests are mixed on purpose. Clear midwest math habits means recognizing the skill even when the next question changes topic, changes format, or asks for an explanation.



Scan me!  
For more practice  
& answers

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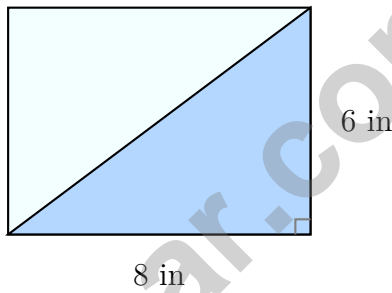
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Which two numbers are equally far from zero?

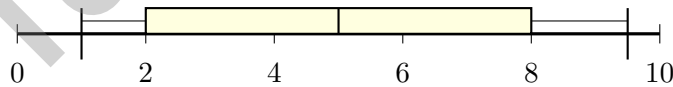
- A. -3 and 1
- B. 2 and 2
- C. -4 and 4
- D. -2 and 2

2) A right triangle is cut from a rectangular piece of paper that is 8 inches by 6 inches. The triangle has legs of 8 inches and 6 inches. What is the area of the triangle?



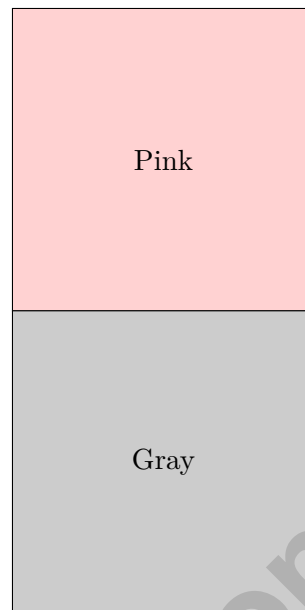
- A. 14 in<sup>2</sup>
- B. 24 in<sup>2</sup>
- C. 48 in<sup>2</sup>
- D. 56 in<sup>2</sup>

3) Using the box plot, find the value of the third quartile ( $Q_3$ ):



- A. 2
- B. 5
- C. 8
- D. 9.5





4)

A square is chosen at random from the grid. What is the probability that it is pink?

A.  $\frac{1}{4}$   
 B.  $\frac{1}{3}$

C.  $\frac{1}{2}$   
 D.  $\frac{2}{3}$

5) A fitness app records heart rates (bpm). The stem-and-leaf plot shows:

Stem	Leaf
6	8
7	2, 4, 6, 8
8	1, 3, 5, 7, 9
9	0, 2

Which range contains the most recorded heart rates?

A. 80 – 89 bpm

C. 60 – 69 bpm

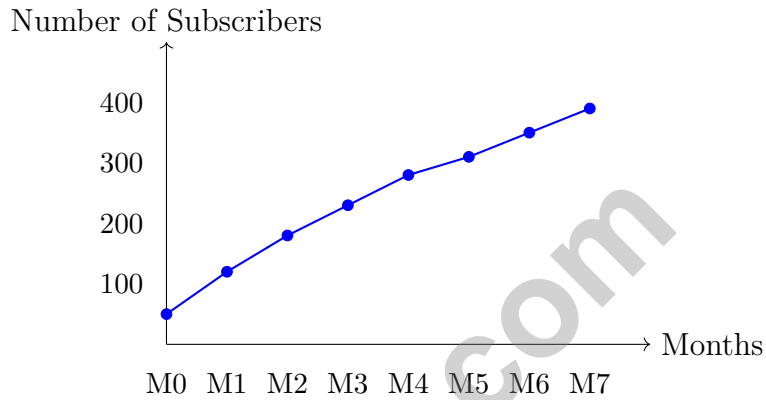
B. 70 – 79 bpm

D. 90 – 99 bpm



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6) In Quadrant IV, how many coordinates are negative?



7)

This line graph tracks a website’s subscriber growth over 7 months. During which month did the subscriber count grow the LEAST?

- A. Between months 0 and 1
- B. Between months 4 and 5
- C. Between months 5 and 6
- D. Between months 6 and 7

8) A car travels at a constant speed. The table shows equivalent distances and times:

Distance (miles)	Time (hours)
60	1
120	2
?	3

- A. 160
- B. 180
- C. 200
- D. 220

1) A circle has a radius of 8 meters. What is the approximate area using  $\pi \approx \frac{22}{7}$ ?

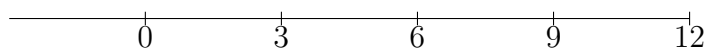
A. 176 m<sup>2</sup>

C. 352 m<sup>2</sup>

B. 201 m<sup>2</sup>

D. 1408 m<sup>2</sup>

2) A runner is doing interval training. Starting at position 0, the runner sprints forward 15 yards, then backward 8 yards, then forward 3 yards. What is the runner's final position relative to the start?



A. 10 yards forward

C. 8 yards forward

B. 20 yards backward

D. 26 yards forward

3) A sweater originally costs \$40. It is on sale for 25% off. What is the sale price?

A. \$10

C. \$30

B. \$15

D. \$50

4) Two people compare budgets. Person A saves 20% of \$800, and Person B saves 40% of \$400. Who saves more?

A. Person A saves more.

C. They save the same amount.

B. Person B saves more.

D. Cannot be determined.

5) A cutting board has 3 feet of length. A pattern repeats every  $\frac{1}{3}$  foot. How many times does the pattern repeat?

A. 6

C. 9

B. 8

D. 12



- 6) A snack mix uses raisins and pretzels in the ratio 3 : 5. If you use 15 cups of raisins, how many cups of pretzels should you use?

- 7) Which multiplication has the decimal point in the correct place?

A.  $2.3 \times 5.1 = 117.3$

C.  $2.3 \times 5.1 = 11.73$

B.  $2.3 \times 5.1 = 1173$

D.  $2.3 \times 5.1 = 1.173$

- 8) A school is organizing sports equipment. They have 16 soccer balls and 24 basketballs. They want to distribute them equally into bins with no equipment left over. What is the maximum number of bins needed?

A. 4 bins

C. 16 bins

B. 40 bins

D. 8 bins

- 9) Which shows  $15 + 10$  factored using the GCF?

A.  $3(5 + 10)$

C.  $2(8 + 5)$

B.  $5(3 + 2)$

D.  $10(2 + 1)$

- 10) A city is at an elevation of 2050 feet above sea level. Its opposite elevation would be:

A.  $-2050$  feet

C. 2050 feet

B.  $|2050|$  feet

D. 4100 feet



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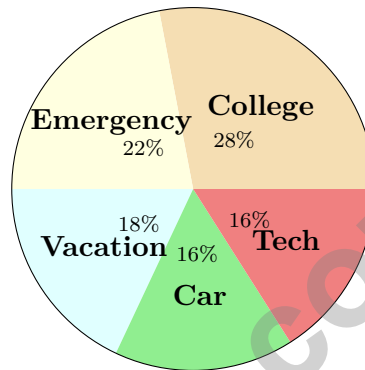
1) A recipe says: “For every 2 cups of flour there are 3 cups of sugar.” Write this as a simplified numerical ratio of flour to sugar.

A. 2 : 3

C. 2 : 5

B. 3 : 2

D. 5 : 1



2)

The pie chart shows savings goals. If total savings is \$5000, how much is allocated to the College fund?

A. \$1000

C. \$1400

B. \$1200

D. \$1600

3) Which calculation is correct?

A.  $0.2 \times 0.3 = 6$

C.  $0.2 \times 0.3 = 0.06$

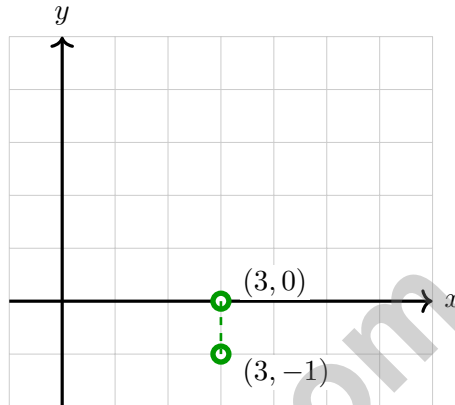
B.  $0.2 \times 0.3 = 0.006$

D.  $0.2 \times 0.3 = 0.6$



4) Compare  $-0.2$  and  $-0.02$ . Which is greater?

- A.  $-0.2$                        C. They are equal  
 B. Cannot compare             D.  $-0.02$



5)

What is the distance between  $(3, 0)$  and  $(3, -1)$ ?

- A. 0 units                       C. 2 units  
 B. 1 unit                         D. 3 units

6) A swimmer swims 100 meters in 25 seconds. What is the unit rate in meters per second?

- A. 2 m/s                         C. 5 m/s  
 B. 4 m/s                         D. 25 m/s

7) What is the least integer that is at least 25?



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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.**



## Iowa Practice Test Answers and Explanations

Review the seven 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.NS.C.7)** Numbers are equally far from zero if their absolute values are equal.  $|-2| = |2| = 2$ . The shown points  $-3$  and  $1$  are not equally distant.
- 2) **Choice B is correct.** **(6.G.A.1)**  $A = \frac{1}{2} \times 8 \times 6 = 24 \text{ in}^2$ .
- 3) **Choice C is correct.** **(6.RP.A.1)**  $Q_3$  is the right edge of the box in the box plot.
- 4) **Choice C is correct.** **(6.NS.B.3)** Total squares = 50. Pink squares = 25. Probability =  $\frac{25}{50} = \frac{1}{2}$ .
- 5) **Choice A is correct.** **(6.SP.B.4)** Stem 8 has 5 leaves, which is more than any other stem. Thus, the  $80 - 89$  range contains the most heart rates.
- 6) **The correct answer is 1.** **(6.NS.C.8)** Quadrant IV has positive  $x$ -values and negative  $y$ -values, so one coordinate is negative.
- 7) **Choice B is correct.** **(6.RP.A.3)** The slope (rise) between months 4 and 5 is  $3.1 - 2.8 = 0.3$ , the smallest growth. Other intervals show larger increases:  $0 \rightarrow 1$  is  $0.7$ ,  $5 \rightarrow 6$  is  $0.4$ ,  $6 \rightarrow 7$  is  $0.4$ .
- 8) **Choice B is correct.** **(6.RP.A.3)** The car travels 60 miles per hour. In 3 hours:  $60 \times 3 = 180$  miles.
- 9) **The correct answer is  $-55$ .** **(6.NS.B.3)** Starting depth:  $-85$  meters. After rising:  $-85 + 30 = -55$  meters.
- 10) **Choice B is correct.** **(6.G.A.4)** A rectangular prism with dimensions  $2 \times 3 \times 4$  has 6 faces: two opposite faces of size  $2 \times 3$ , two of size  $2 \times 4$ , and two of size  $3 \times 4$ . Choice B lists exactly this composition.
- 11) **Choice A is correct.** **(6.NS.C.8)** Reflections preserve shape and size; only position and possibly orientation change.
- 12) **Choice D is correct.** **(6.SP.A.2)** Original mean =  $(10 + 12 + 14 + 16 + 18)/5 = 14$ . With 100:  $(10 + 12 + 14 + 16 + 18 + 100)/6 = 28.3$ . The outlier pulls the mean up dramatically.
- 13) **Choice C is correct.** **(6.SP.A.2)** Mean =  $\frac{2.5 + 3 + 2 + 4.5}{4} = \frac{12}{4} = 3 \text{ cm}$ .
- 14) **Choice A is correct.** **(6.SP.A.1)**  $42\%$  of  $360^\circ$  is  $0.42 \times 360^\circ = 151.2^\circ$ .
- 15) **The correct answer is  $-230$ .** **(6.EE.B.7)** Descending further makes the depth more negative:  $-180 + (-50) = -230$  feet.
- 16) **Choice B is correct.** **(6.EE.A.3)** The coefficient of  $-5y$  is  $-5$ . The coefficient of  $z$  (which is  $1z$ ) is  $1$ . Sum:  $-5 + 1 = -4$ .
- 17) **Choice B is correct.** **(6.EE.A.4)** Substitute:  $5(2) + 2(3) - 3(1) = 10 + 6 - 3 = 13$ .
- 18) **Choice B is correct.** **(6.EE.B.6)** Three equal parts of  $m$  means add  $m$  three times, or multiply by 3:  $3m$ .
- 19) **Choice A is correct.** **(6.NS.B.2)** A score  $\geq 70$  includes 70 and above. Since  $69 < 70$ , it fails to meet the requirement.
- 20) **Choice D is correct.** **(6.EE.A.3)** "At least" means "greater than or equal to," so the inequality is  $v \geq 15$ .
- 21) **The correct answer is Comparing rational numbers on a number line.** **(6.SP.B.4)** Statement B is correct:  $-0.6$  is to the right of  $-0.8$  on the number line, so  $-0.6 > -0.8$ . Statement D is correct:  $\frac{1}{5} = 0.2 < \frac{2}{5} = 0.4$ . Statement A is false:  $-\frac{3}{4} = -0.75 < -0.5$ , so  $-\frac{3}{4}$  is actually less than  $-\frac{1}{2}$ . Statement C is false:  $-2.1 < -1.9$  (more negative is smaller). Statement E is false:  $-1.5 < -1$ .
- 22) **Choice B is correct.** **(6.RP.A.1)** Divide total cost by number of packs:  $18 \div 9 = 2$  dollars per pack.
- 23) **Choice D is correct.** **(6.RP.A.3)**  $60\%$  of  $15 = 0.60 \times 15 = 9 \text{ kg}$ .
- 24) **Choice C is correct.** **(6.EE.A.2)** Total savings:  $\$12 \times 6 = \$72$ .
- 25) **Choice D is correct.** **(6.NS.A.1)**  $\frac{3}{5} \times 2 = \frac{6}{5}$ .
- 26) **Choice D is correct.** **(6.NS.C.8)** Length:  $|8 - 2| = 6$  units. Width:  $|3 - 1| = 2$  units. Perimeter:  $2(6 + 2) = 16$  units.
- 27) **Choice D is correct.** **(6.G.A.1)** Area =  $18 \times 10 = 180 \text{ m}^2$ .



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& answers

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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 7 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

# MASTER 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 7 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.



## 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.



### 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.



7 FULL-LENGTH  
PRINTED TESTS



STANDARDS-  
ALIGNED PRACTICE



DETAILED ANSWER  
KEYS & EXPLANATIONS