

5

Iowa ISASP

GRADE 6 MATH PRACTICE TESTS

Standards Aligned Problem Solving
For Comprehensive Assessment Programs



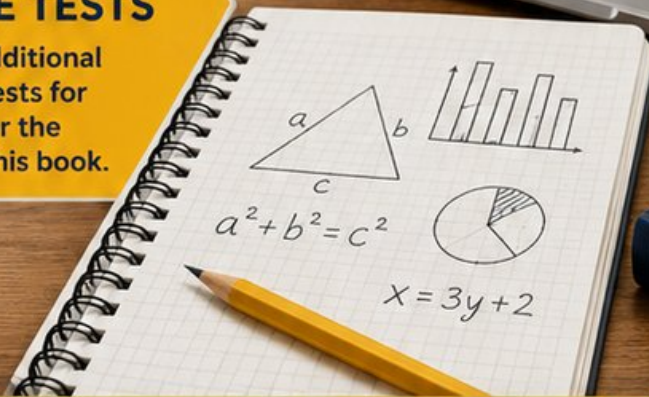
5 PRINTED TESTS

- ✓ Full-Length Practice Tests
- ✓ Realistic Questions
- ✓ Answer Key & Explanations



+ 2 ONLINE TESTS

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

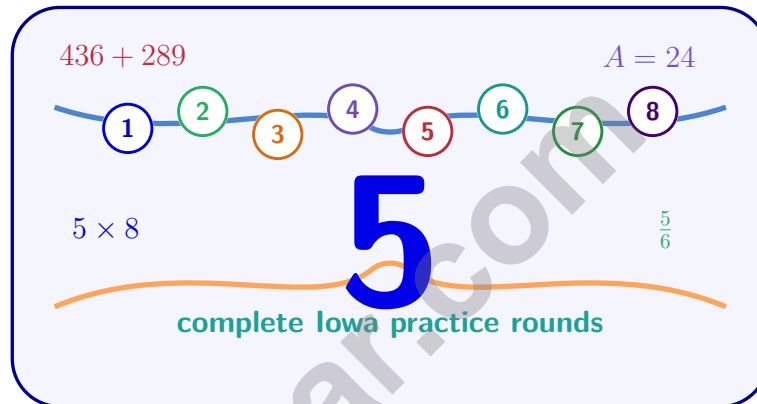


PREPARE • PRACTICE • SUCCEED



5 Iowa ISASP Grade 6 Math Practice Tests

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



Five 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 five 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 five-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 3–4	Skill-building rounds with expressions, equations, geometry, data, and problem models.
Test 5	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) Most students scored 85 or higher on a test, but a few scored in the 60s. What is the shape?

- A. Skewed right C. Symmetric
 B. Skewed left D. Bimodal

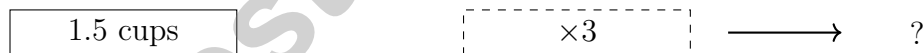
2) Which statement about the number line is FALSE?

- A. Negative numbers are to the left of zero C. The number 0 is both positive and negative
 B. The integer -10 is less than -5 D. All positive integers are greater than all negative integers

3) A student saves \$15 out of every \$100 earned. What percentage of earnings does the student save?

- A. 6% C. 25%
 B. 15% D. 85%

4) A recipe uses 1.5 cups of sugar. If you triple the recipe, how much sugar is needed?



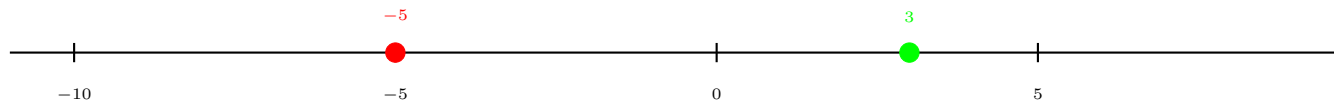
- A. 3.5 cups C. 5.0 cups
 B. 4.5 cups D. 4.0 cups

5) What is the GCF of 15 and 35?

- A. 3 C. 7
 B. 5 D. 15

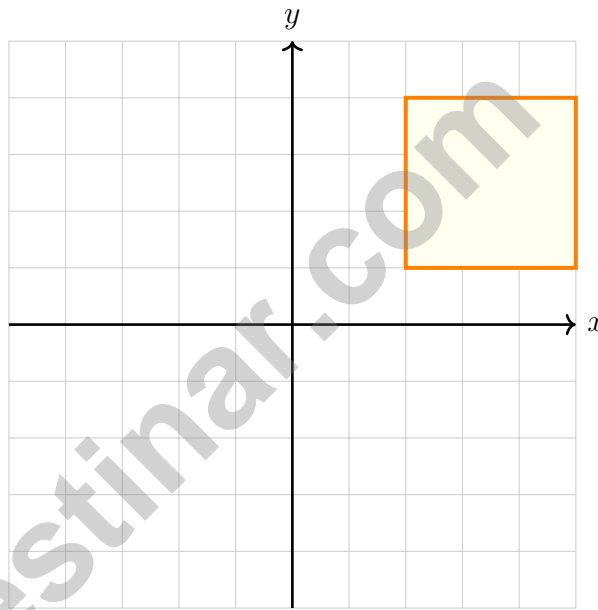


6)



Which number has a greater absolute value, -5 or 3 ?

- A. -5 because it is negative
- B. 3 because it is smaller
- C. -5 because $|-5| = 5$ and $5 > 3$
- D. They are equal



7)

A line segment has endpoints at $(2, 1)$ and $(5, 4)$. If it is translated 2 units left and 1 unit up, what will be the new endpoint that corresponds to the original point $(5, 4)$?

- A. $(3, 5)$
- B. $(7, 3)$
- C. $(3, 3)$
- D. $(7, 5)$



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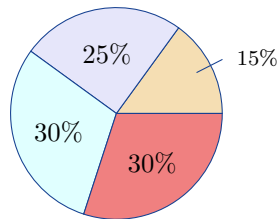
- 1) A pool fills at a rate of 12 gallons per minute. How many gallons will it contain after $\frac{1}{2}$ hour?
- A. 12 gallons C. 360 gallons
 B. 30 gallons D. 720 gallons
- 2) A histogram shows weights of 20 students. The shape is roughly symmetric. Which summary best describes the center?
- A. The mean, because symmetric data has mean \approx median. C. The mode, because it is the most common value.
 B. The median, because it is resistant to outliers. D. The range, because it spans the entire data.
- 3) A bag contains 6 white socks and 4 black socks. If one sock is drawn randomly, what is the probability of drawing a black sock expressed as a decimal?
- A. 0.4 C. 0.25
 B. 0.6 D. 0.75
- 4) A researcher plots quarterly sales (in thousands of dollars). When creating a stem-and-leaf plot from: 45, 52, 48, 61, 55, 58, 63, which stems are needed?

Stem	Leaf
4	5, 8
5	2, 5, 8
6	1, 3

- A. Stems 4 and 5 C. Stems 4, 5, and 6
 B. Stems 5 and 6 D. Only stem 5



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5)

A circle graph shows expenses for a business. If the total budget is \$4000, how much is allocated to the 15% category?

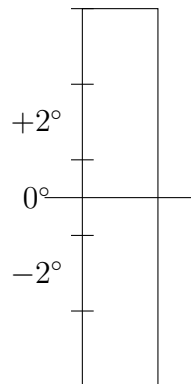
- A. \$500
- B. \$800
- C. \$700
- D. \$600

6) A histogram shows test scores with intervals: 60–69 (frequency 3), 70–79 (frequency 8), 80–89 (frequency 6), 90–99 (frequency 2).

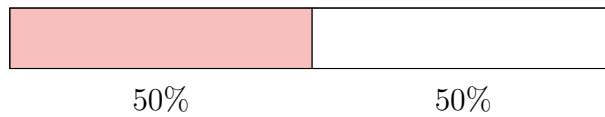
What is the total number of students who took the test?

- A. 17
- B. 19
- C. 21
- D. 24

7) A temperature starts at -5°F . After one hour, it is 8°F . How much did the temperature increase?



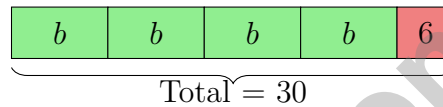
- A. 13°F
- B. 3°F
- C. -13°F
- D. 8°F



1) Total: 160 items

The shaded portion represents apples. How many apples are there?

- A. 40 C. 80
 B. 60 D. 100



2) The bar model represents $4b + 6 = 30$. Find b .

3) Two datasets have box plots with identical boxes but different whiskers. The first dataset's whiskers are much longer. What does this indicate?

- A. The first dataset has a higher median. C. The first dataset has more data points overall.
 B. The first dataset has a larger minimum and maximum, but the same IQR. D. The first dataset is skewed differently.

4) A sports analyst compares two athletes' scoring consistency. Athlete A: 10 games with mean = 18 points, IQR = 4. Athlete B: 10 games with mean = 18 points, IQR = 8. If a coach needs a reliable scorer for an important game, whom should she choose?

- A. Athlete A, due to smaller IQR D. Cannot decide without knowing all scores
 B. Athlete B, due to higher variability
 C. Both equally reliable

5) A jar contains 24 buttons: 9 red, 7 blue, and 8 yellow. If one button is chosen at random, what is the probability it is blue or yellow?

- A. $\frac{7}{24}$ C. $\frac{15}{24}$
 B. $\frac{8}{24}$ D. $\frac{16}{24}$

6) A researcher plots reaction times (in milliseconds) for 11 participants:

Stem	Leaf
20	2, 5, 7
21	1, 3, 6, 8
22	0, 4, 6, 9

What is the median reaction time?

- A. 213 ms C. 218 ms
 B. 216 ms D. 220 ms



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& 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 five 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.SP.A.2)** Most students clustered on the right (high scores) with a tail extending left (low scores) creates a left-skewed distribution.
- Choice C is correct.** **(6.NS.C.5)** Zero is neither positive nor negative; it is the reference point. Statements A, B, and D are all true, but C is false because 0 is not classified as positive or negative.
- Choice B is correct.** **(6.EE.A.2)** The ratio is $\frac{15}{100} = 0.15 = 15\%$.
- Choice B is correct.** **(6.NS.B.3)** Multiply: $1.5 \times 3 = 4.5$ cups of sugar.
- Choice B is correct.** **(6.NS.B.4)** Factors of 15: 1, 3, 5, 15. Factors of 35: 1, 5, 7, 35. Common factors: 1, 5. GCF is 5. Distractors: 3 divides 15 only; 7 divides 35 only; 15 is the largest number but not the GCF.
- Choice C is correct.** **(6.SP.B.4)** Compare absolute values: $|-5| = 5$ and $|3| = 3$. Since $5 > 3$, the number -5 has the greater absolute value.
- Choice A is correct.** **(6.NS.C.8)** Translate: $(5, 4) \rightarrow (5 - 2, 4 + 1) = (3, 5)$.
- Choice D is correct.** **(6.RP.A.1)** The scale says every 1 cm on the map represents 10 km in real life. For 5 cm, multiply $5 \times 10 = 50$ km.
- Choice A is correct.** **(6.RP.A.3)** The first group has 2 shaded out of 7. The second has 4 shaded out of 14, and $4 : 14$ simplifies to $2 : 7$. So both groups show the same part-to-whole ratio.
- Choice C is correct.** **(6.RP.A.1)** Divide cost by cups: $2.50 \div 1 = 2.50$ dollars per cup.
- Choice B is correct.** **(6.RP.A.2)** $8 \text{ gal/min} \times 5.5 \text{ min} = 44$ gallons.
- The correct answer is 0.25.** **(6.NS.B.3)** One correct choice out of 4 possible choices. Probability = $\frac{1}{4} = 0.25$.
- Choice D is correct.** **(6.RP.A.3)** The ratio is $3 : 2$. When fruit is 4 (multiply by 2), yogurt is $3 \times 2 = 6$ oz.
- Choice A is correct.** **(6.RP.A.3)** For the equation $y = 6x$: when $x = 1$, $y = 6(1) = 6$, so $(1, 6)$ is on the line. Check other options: $(2, 8)$ gives $8 \neq 12$; $(3, 12)$ gives $12 \neq 18$; $(4, 18)$ gives $18 \neq 24$. Only A satisfies the equation.
- Choice B is correct.** **(6.RP.A.3)** There are 30 shaded squares (rows 7–9), so $100 - 30 = 70$ unshaded squares. That is 70%.
- Choice B is correct.** **(6.RP.A.3)** 20% of $\$45 = 0.20 \times 45 = \9.00 .
- Choice C is correct.** **(6.RP.A.3)** Ratio $2 : 1$ with 4 cups yogurt: multiply by 4, so fruit is $2 \times 4 = 8$ cups.
- Choice B is correct.** **(6.RP.A.3)** Multiply: $1.5 \times 5280 = 7920$ feet.
- Choice A is correct.** **(6.SP.B.4)** 30% of $\$80$ is $0.30 \times 80 = \$24$.
- Choice C is correct.** **(6.EE.C.9)** For $c = 12j$, the line passes through $(0, 0)$, $(5, 60)$, $(10, 120)$, and $(15, 180)$. The constant rate is $\$12$ per jersey, so this represents a proportional relationship.
- The correct answer is 71.5.** **(6.SP.B.4)** In order: 67, 68, 71, 72, 74, 75. With 6 values, the median is the average of the 3rd and 4th values: $(71 + 72)/2 = 71.5$.
- The correct answer is Right-skewed distribution with high outliers..** **(6.SP.B.5)** When mean $(60) >$ median (55) , the tail points right, pulled by high values. (A) A right-skewed distribution matches. (C) High values pull mean up. (B) is wrong—left skew would give mean $<$ median. (D) is wrong—low values would pull mean down. (E) is wrong—symmetric means mean = median.
- Choice D is correct.** **(6.RP.A.3)** Divide: $54 \text{ feet} \div 18 \text{ inches} = 3 \text{ feet per inch}$.
- Choice C is correct.** **(6.NS.A.1)** $4\frac{1}{2} = \frac{9}{2}$, so $\frac{9}{2} \div \frac{3}{8} = \frac{9}{2} \times \frac{8}{3} = \frac{72}{6} = 12$.
- Choice B is correct.** **(6.NS.B.2)** The estimate is ≈ 192 . The exact answer is $4,756 \div 26 = 182$ remainder 24, which rounds to 183 as the closest choice.
- Choice B is correct.** **(6.NS.B.4)** GCF of 35 and 49 is 7. So $35 + 49 = 7(5 + 7)$. Only Choice B uses the GCF and whole numbers.



Trail Guide's Final Note

Hi, Brave Trail-Walker!

◇ You walked all 5 miles of the practice trail. Smooth paths, steep climbs, narrow passes. Every step taught you something. ◇

★ **Trail guides know:** the most important thing is to keep moving. Slow steps still get you there. You have a steady stride now. ★

Trail Survey

- **Route Knowledge:** You know lots of problem types.
- **Steady Pace:** You don't rush. You don't stop.
- **Pack Loaded:** You have all the math tools you need.
- **Confidence:** You trust your training.

Guide's tip: on test day, stay on the trail you've walked before. Use the strategies you've practiced. Trust the route. The summit is one steady walk away!

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

Jay Daie

Your Math Trail Guide

PRACTICE MORE. ACHIEVE MORE.

This book provides **5 full-length Math practice tests** designed to help Grade 6 students strengthen their skills, build confidence, and excel on standardized assessments.

Each test is carefully crafted to reflect the latest standards and covers a wide range of math topics with realistic questions and detailed answer explanations.



BUILD CONFIDENCE

Practice builds familiarity and reduces test anxiety.



IMPROVE ACCURACY

Sharpen skills and avoid common mistakes.



ACHIEVE SUCCESS

Consistent practice leads to greater results.

WHAT'S INSIDE?



5 Full-Length Practice Tests

Realistic tests designed to mirror actual exam conditions.



Realistic Questions

A variety of question types to strengthen problem-solving skills.



Answer Keys & Explanations

Detailed solutions to help students learn and improve.



Performance Tracking

Track progress and identify areas that need improvement.



Comprehensive Coverage

All essential topics aligned with Grade 6 math standards.



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SOLVE
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SUCCEED
BRIGHTLY

PREPARE TODAY. **SUCCEED TOMORROW!**