

3

Iowa ISASP

GRADE

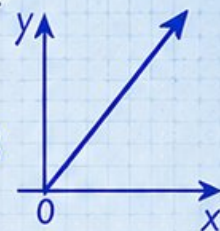
6

MATH

PRACTICE TESTS

Standards Aligned Problem Solving
For Comprehensive Assessment Programs

$$y = 2x + 3$$



$$\frac{3}{5} + \frac{2}{10} = \frac{8}{10} = \frac{4}{5}$$

$$36\% \text{ of } 150 = ?$$



3 | PRINTED
TESTS



2 | ONLINE
TESTS



Build
Confidence



Master Key
Math Skills



Answer Explanations
for Every Question

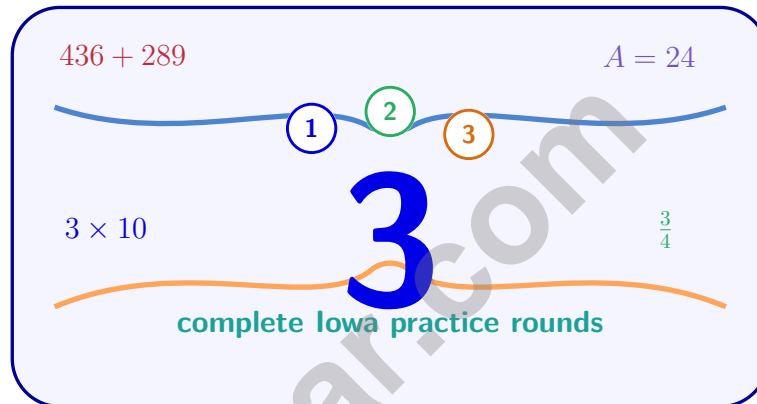


Test-Taking
Strategies That Work

USE THESE TWO
ADDITIONAL ONLINE
PRACTICE TESTS
FOR EXTRA REVIEW AFTER
THE PRINTED TESTS
IN THIS BOOK.

3 Iowa ISASP Grade 6 Math Practice Tests

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



Three 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!

Three focused rounds using clear Midwest math habits

This book gives you three 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 three-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?

Three ISASP tests, 120 questions, and a full review path

Part	What You Will Practice
Tests 1–2	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Test 3	Final stamina round for expressions, equations, geometry, data, problem models, and mixed review.
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.

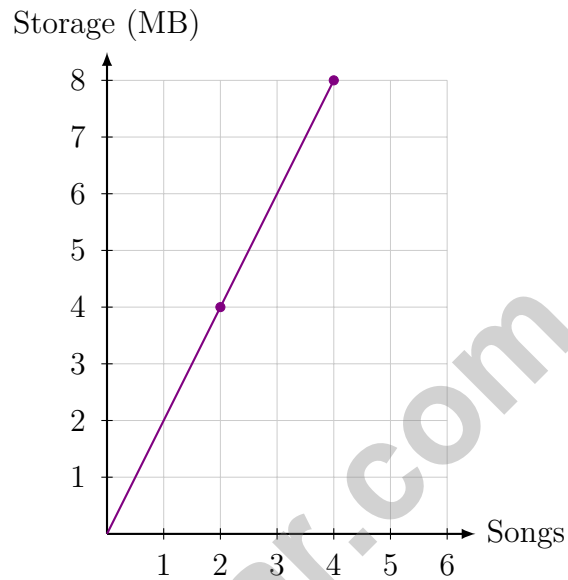


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For more practice
& answers

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- 1) The graph below shows the relationship between number of songs downloaded and total storage used.



How much storage does each song use?

- A. 1 MB per song
- B. 2 MB per song
- C. 4 MB per song
- D. 8 MB per song
- 2) A smoothie recipe uses strawberries and bananas in a 5 : 3 ratio. If the recipe calls for 15 strawberries, how many bananas should be added?



3) What is $-7 + 3$?

A. -10

B. -4

C. 4

D. 10

4) Solve for x : $\frac{x}{4} = 6$

A. $x = 1.5$

B. $x = 10$

C. $x = 24$

D. $x = 2.4$

5) A triangular prism has two congruent triangular bases (each with area 20 cm^2) and three rectangular faces with areas 30 cm^2 , 40 cm^2 , and 50 cm^2 . What is the total surface area?

A. 140 cm^2

B. 160 cm^2

C. 180 cm^2

D. 200 cm^2

6) A machine produces 420 items in 7 hours. At this rate, how many items will the machine produce in 12 hours?

7) A student graphed the ratio of cats to dogs as (cats, dogs). For the point $(2, 5)$, the correct constant of proportionality is $\frac{5}{2} = 2.5$. The student wrote $\frac{2}{5} = 0.4$ instead. What did this error represent?

A. The student divided the x-value by the y-value instead of the y-value by the x-value

B. The student forgot to simplify the fraction

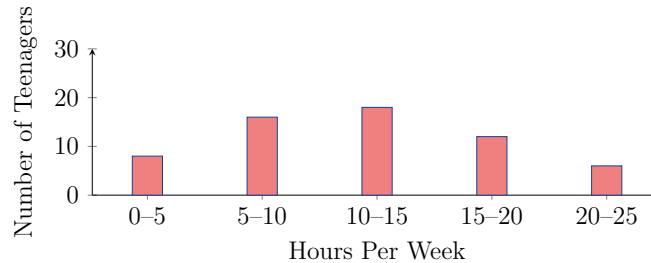
C. The student found $\frac{5}{2}$ instead of $\frac{2}{5}$

D. The student changed the point to $(5, 2)$



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- 6) The histogram shows the number of hours per week teenagers spend on social media. How many teenagers spend between 5 and 15 hours per week?



- A. 16 teenagers C. 42 teenagers
 B. 34 teenagers D. 50 teenagers
- 7) A teacher gives two quizzes to a class. Quiz 1 has a five-number summary: min = 60, $Q_1 = 75$, median = 82, $Q_3 = 88$, max = 95. Quiz 2 has: min = 65, $Q_1 = 78$, median = 82, $Q_3 = 85$, max = 92. Based on the IQR, which quiz had more consistent student performance in the middle 50%?
- A. Quiz 1 had more consistent performance.
 B. Consistency cannot be determined from the five-number summary.
 C. Both quizzes had the same consistency.
 D. Quiz 2 had more consistent performance.
- 8) Two classes compare their test results using box plots. Class 1: IQR = 10. Class 2: IQR = 25. Which is most accurate?
- A. Class 1 has more students C. Class 1's middle 50% of scores are more tightly clustered
 B. Class 2 has higher test scores D. Class 1 did better overall



1) Which list contains all factors of 20?

A. 1, 2, 4, 5, 10, 20

C. 2, 4, 5, 10

B. 1, 2, 3, 4, 5, 20

D. 1, 2, 4, 5, 8, 20

2) A parallelogram has a base of 9 in and a height of 7 in. What is its area?

A. 16 in²

C. 63 in²

B. 32 in²

D. 126 in²

3) A shipping container is 10 m long, 4 m wide, and 3 m high. How much volume does it have?

A. 17 m³

C. 60 m³

B. 30 m³

D. 120 m³

4) If $|x| = 25$, list both possible values of x .

5) What is the length of a horizontal segment from (2, 4) to (8, 4)?

A. 4 units

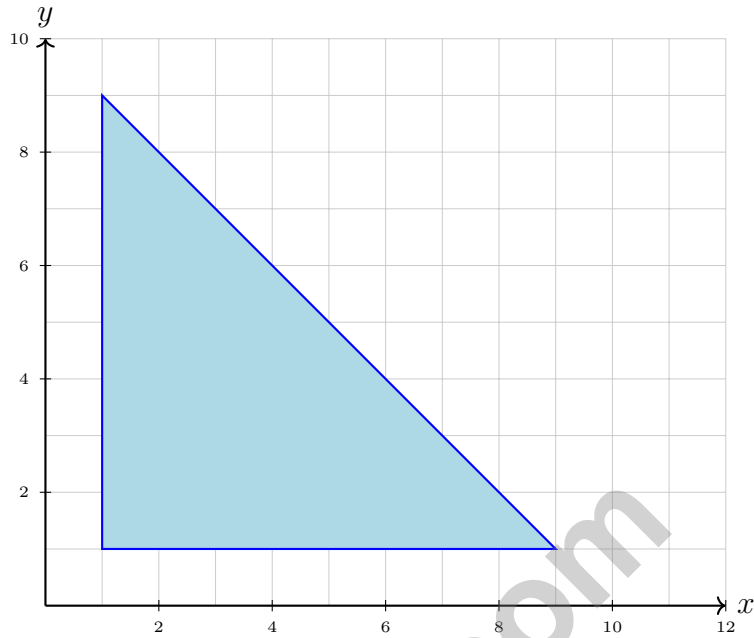
C. 7 units

B. 5 units

D. 6 units



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6)

What is the area of the right triangle with vertices at $(1, 1)$, $(9, 1)$, and $(1, 9)$?

- A. 32 square units C. 24 square units
 B. 28 square units D. 36 square units



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

Practice Test 1 Answers and Explanations

- 1) **Choice B is correct.** **(6.EE.C.9)** The line passes through (2, 4) and (4, 8). The slope is $\frac{8-4}{4-2} = \frac{4}{2} = 2$ MB per song.
- 2) **The correct answer is 9.** **(6.RP.A.3)** Strawberries are the 5-part amount. Since $15 \div 5 = 3$, each part is 3, and bananas are 3 parts: $3 \times 3 = 9$.
- 3) **Choice B is correct.** **(6.NS.B.3)** Start at -7 on a number line and move 3 units right: $-7 + 3 = -4$.
- 4) **Choice C is correct.** **(6.EE.B.5)** Multiply both sides by 4: $x = 6 \times 4 = 24$.
- 5) **Choice C is correct.** **(6.G.A.4)** Total surface area = (area of two triangular bases) + (area of three rectangles) = $2(20) + 30 + 40 + 50 = 40 + 120 = 180 \text{ cm}^2$.
- 6) **The correct answer is 720 items.** **(6.RP.A.1)** First, find the unit rate: $420 \div 7 = 60$ items per hour. Then multiply by 12 hours: $60 \times 12 = 720$ items.
- 7) **Choice A is correct.** **(6.RP.A.3)** For a graph with cats on the x-axis and dogs on the y-axis, the constant of proportionality is $y \div x = \frac{5}{2}$. The student used $x \div y = \frac{2}{5}$, so the fraction was inverted.
- 8) **Choice C is correct.** **(6.RP.A.3)** $\frac{18}{20} = \frac{90}{100} = 90\%$ (multiply numerator and denominator by 5).
- 9) **Choice D is correct.** **(6.RP.A.3)** 20% of $\$24 = 0.20 \times 24 = \4.80 . Final price is $\$24 - \$4.80 = \$19.20$.
- 10) **Choice B is correct.** **(6.RP.A.3)** Unit price: $3.75 \div 15 = 0.25$ dollars per ounce.
- 11) **Choice B is correct.** **(6.RP.A.3)** Converting cups to fluid ounces requires multiplying by 8, not dividing. $3 \times 8 = 24$ fl oz.
- 12) **Choice B is correct.** **(6.SP.B.4)** Assets: $\$250 + \$400 + \$150 = \800 . Net worth: $\$800 - \$200 = \$600$.
- 13) **Choice B is correct.** **(6.EE.C.9)** The ratio cost/notebooks = $3/1 = 6/2 = 9/3 = 12/4 = 3$. The constant ratio confirms proportionality, and the equation is $c = 3n$.
- 14) **Choice C is correct.** **(6.EE.A.2)** Rent is 30% of income: $0.30 \times 2000 = \$600$.
- 15) **Choice A is correct.** **(6.RP.A.3)** Divide: $5280 \text{ feet} \div 200 \text{ feet/inch} = 26.4$ inches.
- 16) **Choice B is correct.** **(6.NS.A.1)** $\frac{9}{16} \times \frac{4}{3} = \frac{36}{48} = \frac{3}{4}$.
- 17) **Choice A is correct.** **(6.NS.B.2)** $8,350 \div 40 = 208$ remainder 30. The remainder 30 out of 40 is $\frac{30}{40} = \frac{3}{4}$, so the mixed number is $208\frac{3}{4}$.
- 18) **Choice C is correct.** **(6.NS.B.3)** Double means multiply by 2: $3.5 \times 2 = 7$ cups.
- 19) **Choice D is correct.** **(6.NS.B.4)** Prime factorization: $38 = 2 \times 19$ and $57 = 3 \times 19$. The only common prime factor is 19, so GCF is 19.
- 20) **Choice C is correct.** **(6.NS.B.4)** Factors of 10: 1, 2, 5, 10. Factors of 15: 1, 3, 5, 15. Common factors: 1, 5. The GCF is 5.
- 21) **The correct answer is $4 : 6 = 2 : 3$ (dividing by 2) and $4 : 6 = 8 : 12$ (multiplying by 2)..** **(6.RP.A.1)** Nice checking: Choice A works because $4 : 6$ simplifies to $2 : 3$, and Choice B works because multiplying both parts of $4 : 6$ by 2 gives $8 : 12$. The other choices change the relationship.
- 22) **Choice B is correct.** **(6.NS.C.5)** Descent below sea level is represented by a negative elevation. A descent of 12 meters is an elevation of -12 meters.
- 23) **Choice D is correct.** **(6.SP.B.4)** Both $|-7|$ and $|7|$ equal 7, so they are equal.
- 24) **Choice D is correct.** **(6.SP.B.4)** Distance = $1.5 - (-3.5) = 1.5 + 3.5 = 5$.
- 25) **Choice A is correct.** **(6.NS.C.8)** Point M is at $(-4, 3)$ and M' is at $(-4, -3)$. They have the same x -coordinate but opposite y -coordinates, indicating reflection across the x -axis.
- 26) **Choice A is correct.** **(6.NS.C.7)** -4 is further left on a number line than -1 , so -4 is less than -1 .
- 27) **Choice C is correct.** **(6.NS.C.8)** Side length: 5 units. Perimeter: $4 \times 5 = 20$ units.



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& answers

Star Player Pep Talk

Hi, Star Player!

◇ 3 practice tests. Every one of them was a chance to grow. You took every chance. That's why you're a math star today! ◇

★ **Star players know:** confidence comes from practice. You can't fake it. You build it. You built yours over 3 tests. It's real now! ★

Star Player Stats

- **Practice:** OFF THE CHARTS!
- **Skills:** BROAD! You can do many problem types.
- **Toughness:** HIGH! You don't quit on hard problems.
- **Game Plan:** READY! You know your strategies.

Star tip: on test day, take it one play at a time. One problem. Then the next. You will earn your stars!

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

Jay Daie

Your Math Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes 3 full-length Math practice tests and 2 online tests to help Grade 6 students build confidence, strengthen skills, and excel on standardized assessments.

Each practice test is carefully crafted to reflect the latest standards and includes a variety of question types, realistic test conditions, and detailed answer explanations.

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

THIS BOOK INCLUDES:

- 3 Full-Length Printed Tests
 - 2 Online Practice Tests
-  Detailed Answer Explanations

MORE PRACTICE. GREATER RESULTS.

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

WHAT YOU'LL 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 with clear explanations and meaningful practice.



Test Confidence

Familiarize 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

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



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