

# 4

# Iowa ISASP

## Grade 3

# MATH

## PRACTICE TESTS

### Standards-Aligned Practice



#### STANDARDS-ALIGNED

Practice to build skills and boost confidence



#### 4 FULL-LENGTH TESTS

Realistic questions to prepare for test day



#### ANSWER KEYS & EXPLANATIONS

Detailed solutions to learn and improve



# 4 Iowa ISASP Grade 3 Math Practice Tests

*Standards-Aligned Review with Mixed Practice and Answer Key*



Four focused 30-question missions for Grade 3 math: number facts, fractions, measurement, data, area, shapes, answer keys, and clear explanations for every item.

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# Welcome to the Iowa Math Launch

Four missions, careful work, and a stronger Grade 3 thinker



Read the mission. Show the work. Check the answer. Launch again.

## To the Grade 3 Mission Leader

This book is a four-mission practice launch for the Iowa ISASP. Each test gives you a fresh chance to multiply, divide, read graphs, compare fractions, measure, find area, and explain math in a way someone else can follow.

Iowa has rolling fields, river towns, and neat rows that make organized thinking powerful. Good math uses the same habit: pause, check the details, and move forward with a steady plan.

### Notice

Find the numbers, units, and question before choosing a path.

### Model

Draw an array, number line, table, or quick equation.

### Verify

Ask whether your answer fits the story and the unit.

**Launch promise:** I will slow down at the important moments, show the work I can, and use every miss as a clue for the next mission.

# How to Use This Book

A four-mission routine for steady Grade 3 growth

## 1. Warm Up the System

Read the review pages first. Remind your brain how equal groups, fractions, clocks, graphs, and area models work.

## 2. Fly One Mission

Take one complete 30-question test. Keep your work neat enough that you can check it later.

## 3. Review the Flight

Use the answer key, then pause. A wrong answer is useful when you can name what happened.

## 4. Repair and Relaunch

Rework a few missed questions before starting the next test. The repair step is where the score begins to move.

### A Four-Session Plan

<b>Session 1</b>	Take Test 1 and mark the topics that need attention.
<b>Session 2</b>	Take Test 2 and focus on showing every step clearly.
<b>Session 3</b>	Take Test 3 and watch for units, labels, and two-step problems.
<b>Session 4</b>	Take Test 4 and finish with calm, careful checking.

**Best mission habit:** After checking answers, write one sentence: “Next time I will pay attention to \_\_\_\_\_.”



# Test Overview

## What each Grade 3 math mission asks you to do

Each practice test has 30 questions. Across four tests, you will practice the kind of Grade 3 math thinking used on the Iowa ISASP: reading carefully, choosing a strategy, doing accurate computation, and explaining enough work to make your answer clear.

### Multiple Choice

Look for the best answer. Estimate first when you can, cross out choices that do not fit, and reread the question before you choose.

### Open Response

Write the answer and show the reason. A good Grade 3 response may use a drawing, equation, table, number line, or a few clear words.

### Math Ideas Inside the Four Tests

- multiplication, division, arrays, missing factors, and two-step word problems
- place value, rounding, addition, subtraction, and multiplying by tens
- unit fractions, number lines, equivalent fractions, and comparing fractions
- time, mass, liquid volume, picture graphs, bar graphs, and line plots
- area, perimeter, unit squares, rectangles, and shape categories

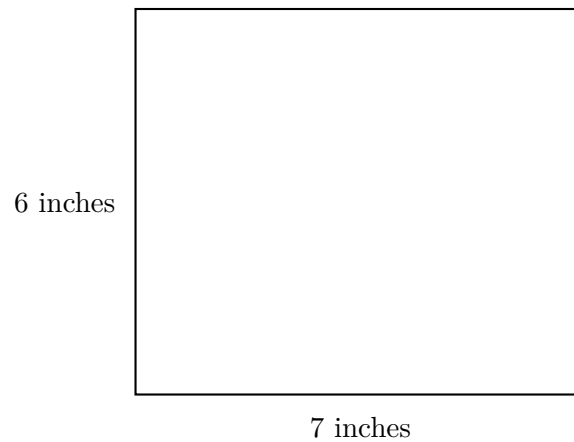
**What strong ISASP work looks like:** the answer matches the question, the units make sense, and the work is clear enough to check.



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1)

What is the area of this rectangle?

 A. 26 sq in B. 42 sq in C. 13 sq in D. 84 sq in

2) A circle is divided into 6 equal parts. Write the fraction that represents one part of the circle.

3) Noah uses  $3 \times (4 + 5)$ . Which shows this same problem using the distributive property?

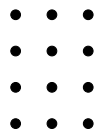
 A.  $(3 \times 4) + (3 \times 5)$  B.  $3 + 4 + 5$  C.  $(3 + 4) \times 5$  D.  $3 + (4 + 5)$ 

- 4) 

What multiplication equation matches this picture?

- A.  $3 \times 5 = 15$                        C.  $3 + 4 = 7$   
 B.  $7 \times 3 = 21$                        D.  $4 \times 3 = 12$
- 5) Maria has 328 marbles. She rounds to the nearest 10 to estimate. Then she rounds that answer to the nearest 100. What is the final answer? (This is called double rounding.)
- A. 300                                       C. 330  
 B. 320                                       D. 400
- 6) A watering can holds 5 liters. Sam uses 2 liters to water the garden and 1500 mL to water the pots. How many milliliters of water remain in the can?

- 7) Shown below is an array of dots. Count the rows and columns to find the total.

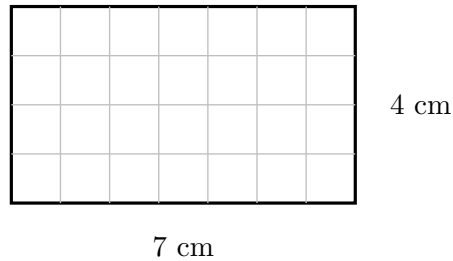


The array shows 3 columns and 4 rows. How many dots are there?

- A. 7     C. 10  
 B. 14      D. 12



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8)

Count the grid squares to find the area.

 A. 11 sq cm C. 28 sq cm B. 22 sq cm D. 35 sq cm

9) Two different rectangles both have areas of 16 square units. Which pair of dimensions is NOT possible?

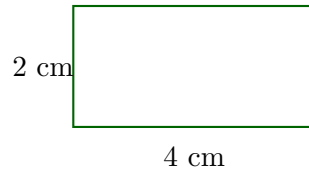
 A.  $4 \times 4$  C.  $3 \times 5$  B.  $2 \times 8$  D.  $1 \times 16$ 

10) Which number sentence represents “How many groups of 3 are in 24?”

 A.  $24 \div 3$  C.  $3 + 24$  B.  $3 \div 24$  D.  $3 \times 24$ 

11) Noah finishes dinner at 6 : 11 PM. He finishes 26 minutes after starting. What time did Noah start eating dinner?

 A. 5 : 45 PM C. 6 : 00 PM B. 5 : 55 PM D. 6 : 37 PM12) A rectangle is broken into  $3 \times (4 + 5)$ . Which is NOT a correct next step? A.  $3 \times 9 = 27$  C.  $3 + 4 + 5 = 12$  B.  $(3 \times 4) + (3 \times 5) = 12 + 15 = 27$  D.  $(3 \times 4) + (3 \times 5)$ 

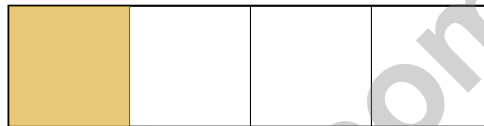


1)

Find the area of the rectangle shown above.

- A. 6 sq cm                       C. 4 sq cm  
 B. 8 sq cm                       D. 12 sq cm

2) A rectangle is divided into 4 equal parts. Ben colors  $\frac{1}{4}$  of the rectangle. How many parts does Ben color?



- A. 1 part                       C. 3 parts  
 B. 2 parts                       D. 4 parts

3) Which is NOT equal to a whole number?

- A.  $\frac{20}{4}$                        C.  $\frac{3}{2}$   
 B.  $\frac{7}{1}$                        D.  $\frac{8}{8}$

4) Write a fraction equivalent to  $\frac{1}{2}$ .

5) What is  $9 \times 8$ ?

A. 63

C. 72

B. 70

D. 80

6) Mia and one friend share 16 cookies equally. How many cookies does each person get?

A. 6

C. 14

B. 18

D. 8

7) What number makes the equation true?

$$36 \div \square = 9$$

A. 4

C. 6

B. 5

D. 3

8) A store arranges tennis balls into groups of 9. If there are 63 tennis balls, how many groups are there?

A. 7

C. 54

B. 8

D. 72

9) An L-shaped patio is divided by dashed lines. The upper part is 5 m by 4 m. The lower left part is 3 m by 2 m. Find the total area of the patio.



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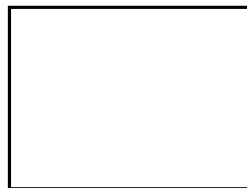
1) A teacher says: “If a number rounds to 500 when rounded to the nearest 100, it must be at least 450. Is the teacher correct? Why or why not?”

- |  |  |
|--|--|
| <input type="checkbox"/> A. Yes, the teacher is correct              | <input type="checkbox"/> C. No, numbers as low as 400 can round to 500 |
| <input type="checkbox"/> B. No, numbers from 450 to 549 round to 500 | <input type="checkbox"/> D. No, the rule only works for even numbers   |

2) A bar graph shows library books borrowed by four friends. Each unit represents 5 books. Liam’s bar is 3 units, Kat’s is 4 units, Max’s is 2 units, and Nora’s is 3 units. Who borrowed the most books?

- |                                  |                                  |
|----------------------------------|----------------------------------|
| <input type="checkbox"/> A. Liam | <input type="checkbox"/> C. Max  |
| <input type="checkbox"/> B. Kat  | <input type="checkbox"/> D. Nora |

3) The bar is completely shaded. It shows  $\frac{5}{5}$ . Write the whole number this equals.



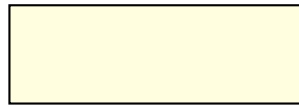
3 units

4) 4 units

What is the area of the rectangle?

- |   |   |
|---|---|
| <input type="checkbox"/> A. 7 sq units  | <input type="checkbox"/> C. 14 sq units |
| <input type="checkbox"/> B. 12 sq units | <input type="checkbox"/> D. 24 sq units |

- 5) Look at these two rectangles. Rectangle A is 6 units by 2 units. Rectangle B is 3 units by 4 units. Which has the greater area?

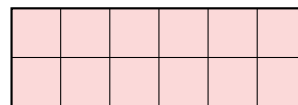


Rectangle A  
 $6 \times 2$



Rectangle B  
 $3 \times 4$

- A. Rectangle A                       C. Cannot determine  
 B. Rectangle B                       D. They are equal
- 6) A rectangle is 8 units long and 12 units wide. If split into two rectangles with the same length of 8, and widths of 7 and 5, which is correct?
- A.  $8 \times (7 + 5) = 8 \times 12 = 96$  square units     D.  $(8 \times 7) + (8 \times 5) = 56 + 40 = 96$  square units  
 B.  $8 + 12 = 20$  units  
 C.  $7 + 5 = 13$  units
- 7) Lily has a rectangular garden that is 6 meters long and 2 meters wide. If she uses 1-meter by 1-meter tiles (unit squares), how many tiles does she need?



6 meters

- A. 8 tiles                                       C. 12 tiles  
 B. 10 tiles                                     D. 14 tiles



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## Practice Test Answer Keys

**How to use this section with a Grade 3 student:**

1. check the answer first
2. mark questions to try again
3. rework the problem before reading the full explanation

**A calm correction routine turns every missed item into useful practice.**

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## Practice Test Answers and Explanations

### Practice Test 1 Answers and Explanations

- Choice B is correct.** **(3.MD.C.7b)** Area = length  $\times$  width =  $7 \times 6 = 42$  square inches.
- The correct answer is  $\frac{1}{6}$ .** **(3.G.A.2)** When a circle is divided into 6 equal parts, each part is  $\frac{1}{6}$  of the whole.
- Choice A is correct.** **(3.OA.B.5)** By the distributive property,  $3 \times (4 + 5) = 3 \times 4 + 3 \times 5 = 12 + 15 = 27$ .
- Choice D is correct.** **(3.OA.A.1)** The picture shows 4 rows with 3 circles in each row. This is 4 groups of 3, so  $4 \times 3 = 12$ .
- Choice A is correct.** **(3.NBT.A.1)** First round 328 to nearest 10: ones digit is  $8 \geq 5$ , so 328 rounds to 330. Then round 330 to nearest 100: tens digit is  $3 < 5$ , so 330 rounds down to 300. This is a two-step rounding process (double rounding).
- The correct answer is 1500 mL.** **(3.MD.A.2)** 5 L = 5000 mL. Total used:  $2000 + 1500 = 3500$  mL. Remaining:  $5000 - 3500 = 1500$  mL.
- Choice D is correct.** **(3.OA.A.3)** Multiply: 3 columns  $\times$  4 rows = 12 dots.
- Choice C is correct.** **(3.MD.C.7)** The grid has 7 columns and 4 rows. Area =  $7 \times 4 = 28$  square cm. You can also add:  $7 + 7 + 7 + 7 = 28$  (four rows of seven).
- Choice C is correct.** **(3.MD.C.5)**  $3 \times 5 = 15$  square units, not 16. The others work:  $4 \times 4 = 16$ ,  $2 \times 8 = 16$ ,  $1 \times 16 = 16$ .
- Choice A is correct.** **(3.OA.A.2)** Measurement division: Divide 24 by 3 to find how many groups of 3 fit in 24. The answer is 8 groups.
- Choice A is correct.** **(3.MD.A.1)**  $6 : 11 - 26 \text{ min} = 5 : 45 \text{ PM}$ .
- Choice C is correct.** **(3.MD.C.7c)** Adding the numbers instead of multiplying does not use the distributive property or find the area correctly.
- Choices A and C are correct.** **(3.NBT.A.3)**  $6 \times 40 = 240$  and  $4 \times 60 = 240$ . Choice B is  $8 \times 20 = 160$ , choice D is  $3 \times 70 = 210$ , and choice E is  $6 \times 30 = 180$ .
- Choice C is correct.** **(3.MD.C.7a)** Square:  $6 \times 6 = 36$  tiles. D is concatenation error.
- Choice A is correct.** **(3.NF.A.2a)** Divided in half means 2 equal parts. The first tick is at the unit fraction  $\frac{1}{2}$ .
- Choice A is correct.** **(3.OA.A.4)** To find the number of bags, divide the total marbles by the marbles in each bag:  $72 \div 8 = 9$ .
- Choice C is correct.** **(3.MD.C.5b)** Count the rows: 6 rows. Count down: 6 tiles in each row. Total:  $6 + 6 + 6 + 6 + 6 + 6 = 36$  square tiles.
- Choice B is correct.** **(3.MD.B.4)** At most  $2\frac{1}{2}$  includes weights of 2,  $2\frac{1}{4}$ , and  $2\frac{1}{2}$  ounces. The plot has  $1 + 3 + 0 = 4$  X's at those values.
- Choice B is correct.** **(3.MD.C.5a)** Rectangle A is  $5 \times 1 = 5$  unit squares. Rectangle B is  $3 \times 2 = 6$  unit squares.
- Choice B is correct.** **(3.NF.A.3d)** Same numerator: thirds have bigger pieces than sixths. One third is greater than one sixth.
- Choice B is correct.** **(3.G.A.1)** A rhombus with angles that are not right angles has 4 equal sides but no right angles, so it is a rhombus but not a square.
- Choice C is correct.** **(3.MD.B.3)** Count the stars and multiply by the scale:  $3 \times 2 = 6$  stickers.
- Choice D is correct.** **(3.OA.C.7)**  $56 \div 7 = 8$  because  $8 \times 7 = 56$ . Seven groups of 8 equals 56.
- Choice D is correct.** **(3.OA.D.9)** Skip counting by an even number always gives all even numbers.
- Choice D is correct.** **(3.NF.A.2b)**  $X = \frac{2}{4}$ ;  $Y = \frac{3}{4}$ . Sum:  $\frac{2}{4} + \frac{3}{4} = \frac{5}{4}$ .
- Choice B is correct.** **(3.MD.C.7d)** Add the areas:  $28 + 16 = 44$  square units.
- Choice B is correct.** **(3.NF.A.3c)** Three whole pizzas =  $\frac{3}{1}$  (three wholes, one part each).
- Choice C is correct.** **(3.OA.D.8)** Step 1: Divide:  $72 \div 8 = 9$  marbles per bag. Step 2: Remaining bags:  $8 - 3 = 5$  bags; kept marbles:  $5 \times 9 = 45$  marbles. (Choice A is step 1 only; choice B is incorrect calculation.)
- Choice D is correct.** **(3.OA.B.6)**  $54 \div 6 = \square$  means  $\square \times 6 = 54$ . Since  $9 \times 6 = 54$ , the answer is 9.
- The correct answer is  $\frac{2}{8}$ .** **(3.NF.A.2)** The second tick out of 8 equal parts is  $\frac{2}{8}$ .



## Hi, Strong Climber!

◇ You climbed all 4 tests. One step at a time. That takes patience and grit. The view from the top is amazing because you earned it! ◇

★ **Mountain guides say:** steady steps win the climb. You climbed steady. You stayed strong. ★

### Climber's Skills

- **Strong Steps:** You move forward, problem by problem.
- **Steady Pace:** You don't rush. You don't stop.
- **Map Skills:** You read questions carefully.
- **Top of the Mountain:** You can finish a long test.

**Guide's tip:** on test day, take small breaths between problems. One foot, then the next. You'll reach the top!

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 Trail Guide

# Build Skills. Achieve More.

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