

# 4

**COMPLETE**

# Iowa ISASP

Grade

# MATH

# 5

## PRACTICE TESTS

Standards-Based Test Prep with  
Mixed Review, Word Problems,  
and **Full Answer Key**



- ✓ **4 COMPLETE PRACTICE TESTS**  
Built to reflect the test format and rigor



- ✓ **COVERS ALL ESSENTIAL TOPICS**  
Numbers & Operations, Fractions, Decimals, Geometry, Measurement, Data & Probability, and more



- ✓ **STRENGTHEN SKILLS & CONFIDENCE**  
Mixed review, challenging questions, and strategic practice



- ✓ **FULL ANSWER KEY INCLUDED**  
Detailed explanations for every question



**BUILD STRONG  
MATH SKILLS  
& TEST READINESS**



**IMPROVE ACCURACY,  
SPEED, AND  
PROBLEM SOLVING**



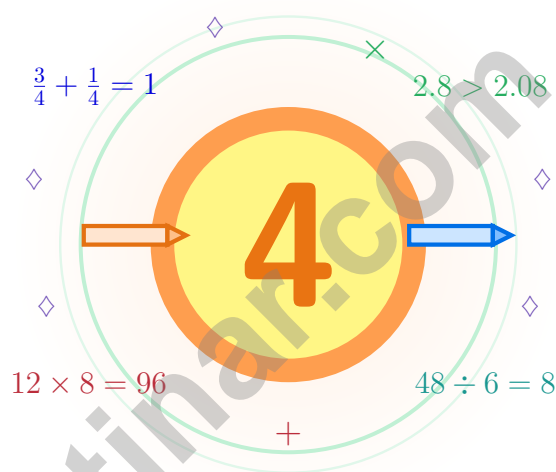
**PERFECT FOR  
CLASSROOM,  
HOME, OR  
SELF-STUDY**



**ALIGNED TO  
IOWA  
STATE STANDARDS  
(ISASP)**

# 4 Iowa ISASP Grade 5 Math Practice Tests

*Four steady test-day rehearsals, woven into one strong routine*



Four full tests, a smart quick review, mission-style strategy pages,  
and student-tested support that help Grade 5 mathematicians from  
The Hawkeye State build calm, careful, confident habits.

**Jay Daie and Reza Nazari**



# Copyright ©

**Testinar Inc**



Published by Testinar Inc

[Testinar.com](http://Testinar.com)

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of the author, except in the case of brief quotations embodied in critical reviews and certain other noncommercial uses permitted by copyright law, including Section 107 or 108 of the 1976 United States Copyright Act.

This publication is independently produced and has no official connection to any state, district, or national testing program.

Test names and organizational names used herein are the property of their respective trademark holders.



*Copyright ©*

# Open the Map, Iowa – Math Mission Time

Four practice tests woven into one calm, steady routine

## Welcome Letter for Iowa Math Crew

This book gives you four chances to read closely, solve carefully, and level up your math thinking. Strong math practice grows the way a cornfield grows – in tidy rows, with patience, and one steady season at a time.

You do not need to feel perfect before you begin. You just need to stay curious, use strategies, and learn from every correction. That is how confident mathematicians are built.

### Notice

Notice numbers, units, labels, and tricky words.

### Sketch

Sketch a model, table, or quick number line.

### Confirm

Confirm your answer with a quick estimate.

**A strong mission habit for Iowa:** keep your work neat, estimate when it helps, label units carefully, and never let one hard question decide your mood for the whole page.

# A Map of the Pages

A four-step routine that turns practice into real improvement

## Step 1: Plan

**Plan a quiet hour for one full test.**  
Wake up the big Grade 5 ideas before the test starts so your brain is already warmed up.

## Step 2: Practice

**Take the test with calm focus.**  
Find a calm corner, settle in, and aim for careful, honest choices before quick ones.

## Step 3: Inspect

**Inspect every answer like a careful builder.**  
Circle missed questions, sort out what went sideways, and notice which skills are calling for attention.

## Step 4: Adjust

**Adjust what needs adjusting for the next test.**  
Read the explanation, fix the work, and carry that lesson into the very next test.

## A Four-Week Iowa Mission Map

Week	Mission Focus
Week 1	Take Test 1 and plant the first row carefully.
Week 2	Take Test 2 and tend word problems and clear writing.
Week 3	Take Test 3 and sharpen fractions, decimals, and conversions.
Week 4	Take Test 4 and harvest your habits: neat work, calm pace, careful checking.



Scan me

# What These Tests Are For

## What these four practice tests help Grade 5 students build

These three practice tests prepare Grade 5 students in Iowa for the Iowa ISASP with the steady rhythm of a long Iowa summer. The goal is bigger than collecting right answers. Students are practicing how to read carefully, choose a strategy, solve step by step, and explain their reasoning clearly – the same way mathematicians do every day.

### Selected-Response Questions

Students solve the problem and choose the best answer. Estimating first, crossing out weak choices, and checking for reasonableness can save time and points.

### Constructed-Response Questions

Students show steps, explain a method, or support an answer with clear math. Strong reasoning matters because it shows how the answer was found.

### Grade 5 Ideas That Show Up Again and Again

- place value, comparing numbers, and rounding
- multi-digit addition, subtraction, multiplication, and division
- fractions, mixed numbers, and decimals
- perimeter, area, volume, and measurement conversions
- tables, line plots, patterns, and coordinate points
- geometry and multi-step real-world problem solving

**What strong ISASP-style work looks like:** accurate math, readable steps, the right labels or units, and a final answer that really matches the question being asked.



# Table of Contents

★ Practice Test 1	_____	18
★ Practice Test 2	_____	33
★ Practice Test 3	_____	47
★ Practice Test 4	_____	61
Practice Test Answer Keys	_____	78
Practice Test Answers and Explanations	_____	81

## Grade 5 Mathematics Reference Materials

### PERIMETER AND AREA

Perimeter of Rectangle  $P = 2l + 2w$  or  $P = 2(l + w)$

Area of Rectangle  $A = l \times w$

Area of Triangle  $A = \frac{1}{2} \times b \times h$

Volume of Rectangular Prism  $V = l \times w \times h$

### LENGTH

#### Customary

1 foot (ft) = 12 inches (in.)

1 yard (yd) = 3 feet (ft)

1 yard (yd) = 36 inches (in.)

#### Metric

1 meter (m) = 100 centimeters (cm)

1 centimeter (cm) = 10 millimeters (mm)

1 kilometer (km) = 1,000 meters (m)

### CAPACITY

#### Customary

1 cup (c) = 8 fluid ounces (fl oz)

1 pint (pt) = 2 cups (c)

1 quart (qt) = 2 pints (pt)

1 gallon (gal) = 4 quarts (qt)

#### Metric

1 liter (L) = 1,000 milliliters (mL)

### WEIGHT AND MASS

#### Customary

1 pound (lb) = 16 ounces (oz)

#### Metric

1 kilogram (kg) = 1,000 grams (g)

1 gram (g) = 1,000 milligrams (mg)

### TIME

1 minute (min) = 60 seconds (sec)    1 week = 7 days

1 hour (hr) = 60 minutes (min)    1 year = 12 months

1 day = 24 hours (hr)    1 year = 52 weeks





- 4) Write a division equation for: 5 cups of juice poured into  $\frac{1}{4}$ -cup servings.

*Record your answer in the space provided.*

- 5) A rope is  $\frac{5}{9}$  meters long. A shorter rope is  $\frac{2}{9}$  meters. What is the total length of both ropes?

A.  $\frac{3}{9}$  m

B.  $\frac{5}{9}$  m

C.  $\frac{7}{9}$  m

D.  $\frac{9}{9}$  m

- 6) What is  $9 \div \frac{1}{3}$ ?

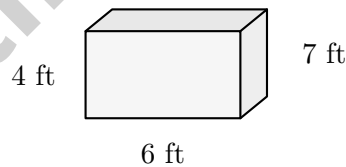
A. 27

B. 9

C. 18

D. 36

- 7) A closet is shaped like a rectangular prism with dimensions 6 feet long, 4 feet wide, and 7 feet tall. What is the volume of the closet?



A. 108 cubic feet

B. 154 cubic feet

C. 168 cubic feet

D. 210 cubic feet



## Grade 5 Mathematics Reference Materials

### PERIMETER AND AREA

Perimeter of Rectangle  $P = 2l + 2w$  or  $P = 2(l + w)$

Area of Rectangle  $A = l \times w$

Area of Triangle  $A = \frac{1}{2} \times b \times h$

Volume of Rectangular Prism  $V = l \times w \times h$

### LENGTH

#### Customary

1 foot (ft) = 12 inches (in.)

1 yard (yd) = 3 feet (ft)

1 yard (yd) = 36 inches (in.)

#### Metric

1 meter (m) = 100 centimeters (cm)

1 centimeter (cm) = 10 millimeters (mm)

1 kilometer (km) = 1,000 meters (m)

### CAPACITY

#### Customary

1 cup (c) = 8 fluid ounces (fl oz)

1 pint (pt) = 2 cups (c)

1 quart (qt) = 2 pints (pt)

1 gallon (gal) = 4 quarts (qt)

#### Metric

1 liter (L) = 1,000 milliliters (mL)

### WEIGHT AND MASS

#### Customary

1 pound (lb) = 16 ounces (oz)

#### Metric

1 kilogram (kg) = 1,000 grams (g)

1 gram (g) = 1,000 milligrams (mg)

### TIME

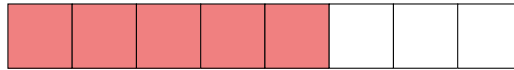
1 minute (min) = 60 seconds (sec)    1 week = 7 days

1 hour (hr) = 60 minutes (min)    1 year = 12 months

1 day = 24 hours (hr)    1 year = 52 weeks



- 1) Bar shows 8 parts, 5 shaded. Remove 2 parts.  $\frac{5}{8} - \frac{2}{8} = ?$



- A.  $\frac{3}{8}$   
 B.  $\frac{7}{8}$

- C.  $\frac{2}{8}$   
 D.  $\frac{5}{16}$

- 2) Order these decimals from least to greatest:

0.6, 0.06, 0.66, 0.16

- A. 0.06, 0.16, 0.6, 0.66  
 B. 0.06, 0.6, 0.16, 0.66

- C. 0.16, 0.06, 0.66, 0.6  
 D. 0.66, 0.6, 0.16, 0.06

- 3) Find:  $\frac{7}{8} \times 4$ .

*Record your answer in the space provided.*

- 4) What digit is in the hundredths place in 4.06?

*Record your answer in the space provided.*



## Grade 5 Mathematics Reference Materials

### PERIMETER AND AREA

Perimeter of Rectangle  $P = 2l + 2w$  or  $P = 2(l + w)$

Area of Rectangle  $A = l \times w$

Area of Triangle  $A = \frac{1}{2} \times b \times h$

Volume of Rectangular Prism  $V = l \times w \times h$

### LENGTH

#### Customary

1 foot (ft) = 12 inches (in.)

1 yard (yd) = 3 feet (ft)

1 yard (yd) = 36 inches (in.)

#### Metric

1 meter (m) = 100 centimeters (cm)

1 centimeter (cm) = 10 millimeters (mm)

1 kilometer (km) = 1,000 meters (m)

### CAPACITY

#### Customary

1 cup (c) = 8 fluid ounces (fl oz)

1 pint (pt) = 2 cups (c)

1 quart (qt) = 2 pints (pt)

1 gallon (gal) = 4 quarts (qt)

#### Metric

1 liter (L) = 1,000 milliliters (mL)

### WEIGHT AND MASS

#### Customary

1 pound (lb) = 16 ounces (oz)

#### Metric

1 kilogram (kg) = 1,000 grams (g)

1 gram (g) = 1,000 milligrams (mg)

### TIME

1 minute (min) = 60 seconds (sec)    1 week = 7 days

1 hour (hr) = 60 minutes (min)    1 year = 12 months

1 day = 24 hours (hr)    1 year = 52 weeks





## Grade 5 Mathematics Reference Materials

### PERIMETER AND AREA

Perimeter of Rectangle  $P = 2l + 2w$  or  $P = 2(l + w)$

Area of Rectangle  $A = l \times w$

Area of Triangle  $A = \frac{1}{2} \times b \times h$

Volume of Rectangular Prism  $V = l \times w \times h$

### LENGTH

#### Customary

1 foot (ft) = 12 inches (in.)

1 yard (yd) = 3 feet (ft)

1 yard (yd) = 36 inches (in.)

#### Metric

1 meter (m) = 100 centimeters (cm)

1 centimeter (cm) = 10 millimeters (mm)

1 kilometer (km) = 1,000 meters (m)

### CAPACITY

#### Customary

1 cup (c) = 8 fluid ounces (fl oz)

1 pint (pt) = 2 cups (c)

1 quart (qt) = 2 pints (pt)

1 gallon (gal) = 4 quarts (qt)

#### Metric

1 liter (L) = 1,000 milliliters (mL)

### WEIGHT AND MASS

#### Customary

1 pound (lb) = 16 ounces (oz)

#### Metric

1 kilogram (kg) = 1,000 grams (g)

1 gram (g) = 1,000 milligrams (mg)

### TIME

1 minute (min) = 60 seconds (sec)    1 week = 7 days

1 hour (hr) = 60 minutes (min)    1 year = 12 months

1 day = 24 hours (hr)    1 year = 52 weeks



1) A 4-foot ribbon is cut into pieces that are each  $\frac{1}{3}$  foot long. How many pieces can be cut?

- A. 6 pieces                       C. 18 pieces  
 B. 9 pieces                       D. 12 pieces

2) Pattern A: 0, 4, 8, 12. Pattern B: 0, 1, 2, 3. For the nonzero matching terms, what fraction of A is B?

*Record your answer in the space provided.*

3) Compare:  $4.2 \times 5$    $4.2 \times 5.1$

- A. >                               C. =  
 B. <                               D. Cannot tell

4) A store sells fabric ribbon at \$0.60 per meter. How much does 3.5 meters cost?

- A. \$1.80                       C. \$2.40  
 B. \$2.60                       D. \$2.10



## Practice Test Answer Keys

### How to use this section:

1. check your answer
2. circle missed questions
3. rework them before reading the explanation

**Good correction habits build strong scores.**

Testinar.com



## Practice Test Answers and Explanations

### Practice Test 1 Answers and Explanations

- 1) **Choice D is correct.** (5.OA.A.2) Both expressions use the same base amount,  $(55 + 17)$ . The first expression has 6 copies of that amount, while the second has 1 copy, so the first is greater.
- 2) **Choice B is correct.** (5.G.A.1) Width is the horizontal distance left to right, determined by the difference in x-coordinates:  $6 - 1 = 5$  units.
- 3) **Choice D is correct.** (5.NF.B.4) Only Aisha and Ahmed got  $\frac{8}{15}$  correct. Maria and Juan incorrectly added instead of multiplying.
- 4) **The correct answer is  $5 \div \frac{1}{4} = n$ .** (5.NF.B.3) The total is 5 cups and each serving is one fourth cup, so divide total by serving size.
- 5) **Choice C is correct.** (5.NF.A.2)  $\frac{5}{9} + \frac{2}{9} = \frac{7}{9}$  meters. Since denominators are the same, add numerators.
- 6) **Choice A is correct.** (5.NF.B.7)  $9 \div \frac{1}{3} = 9 \times 3 = 27$ .
- 7) **Choice C is correct.** (5.MD.C.4) Volume =  $6 \times 4 \times 7 = 168$  cubic feet.
- 8) **Choice B is correct.** (5.G.A.2) Using the rule “5 more than the first coordinate,” when the first coordinate is 4, the second coordinate is  $4 + 5 = 9$ .
- 9) **Choice C is correct.** (5.OA.A.1) Inside the brackets, handle the parentheses first:  $8 \div 4 = 2$ . Now the bracket is  $[15 + 2] = 17$ , and  $17 \times 2 = 34$ .
- 10) **Choice B is correct.** (5.G.A.2) Use the rule with  $x = 3$ . Double 3 to get 6, then add 1, so the missing value is 7.
- 11) **Choice A is correct.** (5.MD.C.4)  $V = 20 \times 15 \times 10 = 300 \times 10 = 3000 \text{ cm}^3$ .
- 12) **Choice C is correct.** (5.MD.A.1) Total: 9 yards = 27 feet. Each piece:  $27 \div 3 = 9$  feet.
- 13) **Choice D is correct.** (5.NBT.A.2)  $6,800 \div 100 = 68$ . The divisor must be  $10^2 = 100$ .
- 14) **Choice C is correct.** (5.NF.B.5)  $\frac{3}{2} > 1$ , so the product is greater than 18.
- 15) **The correct answer is 700.** (5.NBT.A.2)  $10^2 = 100$ , so  $7 \times 10^2 = 7 \times 100 = 700$ .
- 16) **The correct answer is 5.** (5.MD.C.5) The base area is  $8 \times 5 = 40$  square meters. Since  $200 \div 40 = 5$ , the height is 5 m.
- 17) **Choice C is correct.** (5.MD.C.5) Choose the operation from the story, then keep the unit with the answer. Multiply:  $1,200 \times 15 = 18,000$  toys. This confirms the answer.
- 18) **Choices A, B are correct.** (5.NBT.B.7) Align decimals and subtract. A and B are true. C should be 0.70, and D should be 2.97.
- 19) **Choice A is correct.** (5.NF.B.6) First day:  $\frac{2}{5} \times 150 = 60$  figures sold. Remaining:  $150 - 60 = 90$  figures. Second day:  $\frac{1}{3} \times 90 = 30$  figures sold.
- 20) **Choice C is correct.** (5.NBT.A.2)  $23 \times 10 = 230$ . When multiplying by 10, append one zero.
- 21) **The correct answer is about 1.** (5.NF.B.6)  $\frac{1}{10} \approx 0$  and  $\frac{5}{6} \approx 1$ , so the benchmark estimate is about 1. For scoring, accept 1, about 1, 0.9,  $\frac{9}{10}$ , or the exact sum  $\frac{14}{15}$ .
- 22) **Choice C is correct.** (5.NF.B.5)  $8 \times \frac{3}{2} = 12$ . Since  $\frac{3}{2} > 1$ , the product is farther from zero than the starting value.
- 23) **Choice C is correct.** (5.NBT.B.5)  $21 \times 13 = (20 + 1) \times 13 = (20 \times 13) + (1 \times 13) = 260 + 13 = 273$  (Riley). Also,  $21 \times 13 = 21 \times (10 + 3) = (21 \times 10) + (21 \times 3) = 210 + 63 = 273$  (Jamal). Piper made an error; the correct answer is 273, not 260.
- 24) **Choice B is correct.** (5.MD.C.4) One prism:  $3 \times 4 \times 2 = 24 \text{ cm}^3$ . Three prisms:  $24 \times 3 = 72 \text{ cm}^3$ .
- 25) **Choice C is correct.** (5.G.B.4) All three sides have different lengths (3 cm, 4 cm, and 5 cm), so this is a scalene triangle.
- 26) **Choice B is correct.** (5.NBT.A.2) The nonzero parts make  $6 \times 7 = 42$ , which has no trailing zero. The three factor zeros give 42,000, so there are 3 zeros.
- 27) **Choice B is correct.** (5.MD.A.1) 1 centimeter = 10 millimeters. Divide:  $550 \div 10 = 55 \text{ cm}$ .
- 28) **Choice D is correct.** (5.G.B.3) The matching tick marks show that triangle D has 3 equal sides. An equilateral triangle also has 3 equal angles, making it a regular polygon.
- 29) **The correct answer is  $<$ .** (5.NBT.A.3) Tenths are equal (both 3). Hundredths: 4 vs. 8; since  $4 < 8$ ,  $0.342 < 0.386$ .



### Notes From Your Math Architect

#### Dear Builder of Big Ideas,

◇ Across 4 practice tests, you laid down brick after brick of math skill. The foundation is solid. The walls are strong. The roof is in place. You've built yourself a study sturdy enough to stand any storm test day might bring. ◇

★ **What architects know:** a great building starts with a great plan. You've practiced planning—reading carefully, picking your strategy, and working step by step. That blueprint thinking is what turns hard problems into clear answers. ★

#### Builder's Inspection Checklist

- **Foundation:** ROCK SOLID! Number sense, fractions, decimals—all in place.
- **Frame:** STRONG! You can break down a problem into clear parts.
- **Walls:** TIGHT! Your work is organized and easy to follow.
- **Roof:** FINISHED! You always answer the question that was asked.

**Architect's tip:** on test day, build each answer like a small building. Foundation: read the question. Frame: pick the strategy. Walls: do the math. Roof: check the answer. Each piece matters. Each piece is yours.

If you'd like to share your experience or have questions, please email me at [reza@testinar.com](mailto:reza@testinar.com). I'd love to hear from you!

**Reza Nazari & Jay Daie**

Your Math Architect (Built to Last)

# 4 COMPLETE TESTS. CONFIDENCE. SUCCESS.



Give your child the practice and confidence they need to excel in **Grade 5 Math**. This book includes **4 full-length** practice tests designed to build skills, improve test readiness, and help students reach their full potential.

## WHAT'S INSIDE:



### 4 COMPLETE PRACTICE TESTS

Full-length tests that reflect real test format and rigor.



### COVERS ALL GRADE 5 TOPICS

Numbers & Operations, Fractions, Decimals, Geometry, Measurement, Data & Probability, and more.



### MIXED REVIEW & WORD PROBLEMS

Build problem-solving skills with mixed review questions and real-world word problems.



### DETAILED ANSWER KEY

Step-by-step explanations for every question to help students learn and improve.



### BUILD CONFIDENCE & IMPROVE SCORES

Practice consistently, reduce test anxiety, and achieve your best score!



**PRACTICE SMART. LEARN MORE. ACHIEVE YOUR BEST.**



**Strengthen**  
Math Skills



**Improve**  
Accuracy  
& Speed



**Master**  
Essential  
Concepts



**Boost**  
Confidence  
on Test Day



Visit [testinar.com/math5](https://testinar.com/math5)  
for more Grade 5 math resources  
and practice materials!



# Testinar

Smart Practice. Stronger Results.