

8

Alaska AK STAR

GRADE 4

PRACTICE TESTS



1

$2 \times 3 = 6$

3

5

$2 \times 3 = 6$

2

4



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

**COMPREHENSIVE
TEST PREP**

Includes Solutions

8 Alaska AK STAR Grade 4 Math Practice Tests

Standards-Aligned Review with Mixed Practice and Answer Key



Eight complete 30-question Grade 4 practice rounds for AK STAR, built around glacier paths, northern lights, and careful tracker thinking, with answer keys and clear explanations for every item.

Jay Daie and Reza Nazari



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Welcome, Alaska Math Explorer!

Eight steady rounds on the Last Frontier math route

This book gives you eight full Grade 4 practice tests for AK STAR. Each round uses glacier paths, northern lights, and careful tracker thinking to keep practice memorable while you read carefully, choose a strategy, show work, and check the answer.

Alaska Practice Promise

I will slow down for the question, circle what matters, solve one step at a time, and use mistakes as clues for getting stronger.

Read

Plan

Check

How to Use This Book

A ten-session routine for Alaska AK STAR review

1. **Preview the skills.** Read the quick review pages before the first test.
2. **Take one test at a time.** Treat each round like a stop on the Last Frontier math route.
3. **Mark your confidence.** Put a small star beside problems you solved with a strong plan.
4. **Check, then retry.** For missed questions, try the problem again before reading the explanation.
5. **Track your next move.** Use the growth log to name one habit and one skill for the next test.

Good rhythm: Test one day, correct carefully the next day, then return for the next round when your corrections feel clear.



What Is Inside?

Eight tests, 240 questions, and a full AK STAR review path

Part	What You Will Practice
Tests 1–3	Warm-up rounds for reading carefully, choosing operations, and using models.
Tests 4–6	Skill-building rounds with fractions, measurement, area, data, and two-step problems.
Tests 6–8	Stamina rounds for mixed review, neat work, and flexible strategies.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Real test readiness means recognizing the skill even when the next question changes topic.



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& answers

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11) Two friends share pizza. One eats $\frac{3}{8}$ and the other eats $\frac{4}{8}$. How much pizza do they eat together?

A. $\frac{7}{16}$ of the pizza

C. $\frac{1}{8}$ of the pizza

B. $\frac{7}{8}$ of the pizza

D. $1\frac{1}{8}$ pizzas

12) A pitcher holds 64 fluid ounces. How many pints is this?

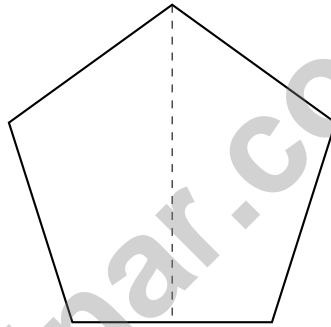
A. 2

C. 8

B. 4

D. 16

13) A regular pentagon has 5 sides. How many lines of symmetry does it have?



A. 0

C. 3

B. 2

D. 5

14) In the number 8,888, the digit in the thousands place is how many times the value of the digit in the ones place?



- 1) A growing shape pattern shows: Figure 1 has 2 squares, Figure 2 has 5 squares, Figure 3 has 8 squares. Following the pattern, how many squares are in Figure 6?

- 2) A protractor shows that two adjacent angles measure 63° and 117° . What is their sum?

- A. 54°
 B. 117°

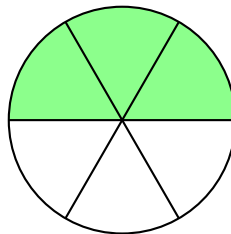
- C. 180°
 D. 200°

- 3) Order these decimals from least to greatest: 0.72, 0.27, 0.70, 0.07.

- A. 0.07, 0.27, 0.70, 0.72
 B. 0.72, 0.70, 0.27, 0.07

- C. 0.27, 0.07, 0.70, 0.72
 D. 0.07, 0.70, 0.27, 0.72

- 4) Look at the circle divided into equal parts. Which expression shows the shaded amount as a sum of unit fractions?



Pie divided into 6 equal slices

- A. $\frac{1}{6} + \frac{1}{6} + \frac{1}{6}$
 B. $\frac{3}{6}$

- C. $\frac{3}{3}$
 D. $\frac{6}{3}$



5) What is the main characteristic of a line in geometry?

- A. It has exactly two endpoints C. It is always horizontal
 B. It continues forever in both directions D. It is shorter than a line segment

6) A recipe calls for $\frac{5}{4}$ cups of flour. Noah only has $\frac{3}{4}$ cup. How much more flour does Noah need?

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

7) Add: $5,234 + 2,145 = ?$

- A. 7,279 C. 7,479
 B. 8,379 D. 7,379

8) Write 0.56 as a fraction.

9) Sam runs 3 miles to get to the park. How many feet is this?

- A. 528 C. 5,280
 B. 1,584 D. 15,840



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1) What decimal represents $\frac{8}{10}$?

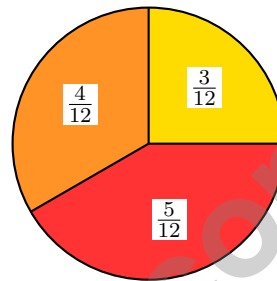
A. 0.08

C. 8.0

B. 0.88

D. 0.8

2) A pie chart shows three slices: $\frac{3}{12}$, $\frac{4}{12}$, and $\frac{5}{12}$. What fraction do these three slices make?



A. $\frac{12}{36}$

C. $\frac{7}{12}$

B. $\frac{12}{12}$ or 1 whole pie

D. $\frac{11}{12}$

3) Ming has 936 marbles. She wants to pack them into bags with 9 marbles each. How many full bags can she make?

A. 104

C. 108

B. 99

D. 114

4) Which turn is the largest?

A. $\frac{1}{2}$ turn

C. $\frac{2}{5}$ turn

B. $\frac{1}{3}$ turn

D. $\frac{1}{4}$ turn



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- 5) A farmer has 23,456 kg of grain. He uses 5,678 kg. How much grain is left?
- A. 17,778 kg C. 18,778 kg
 B. 17,878 kg D. 17,678 kg
- 6) The corner of a book page is a right angle. An angle that is slightly smaller than the corner of a book is most likely:
- A. acute C. obtuse
 B. right D. straight
- 7) Sam's teacher cut a pie into 4 equal pieces. Sam ate 3 pieces. Which expression shows what Sam ate?
- A. $3 \times \frac{1}{4}$ C. $3 + 4$
 B. $4 \times \frac{1}{3}$ D. $\frac{3}{3}$
- 8) Two rays form an angle of 127° . One ray is rotated to create a smaller angle of 39° with the other ray. What is the angle that was swept during the rotation?
- A. 88° C. 39°
 B. 166° D. 90°
- 9) Which list shows only multiples of $\frac{1}{4}$?
- A. $\frac{1}{2}, \frac{3}{5}, \frac{1}{4}$ C. $\frac{1}{4}, \frac{2}{8}, \frac{1}{12}$
 B. $\frac{2}{4}, \frac{1}{4}, \frac{3}{4}$ D. $\frac{1}{5}, \frac{2}{5}, \frac{3}{5}$



Practice Test Answer Keys

How to use this section with a Grade 4 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 C is correct.** (4.NF.3) Start at 0 and make three jumps of $\frac{1}{4}$ each. After three jumps: $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{3}{4}$.
- The correct answer is 396.** (4.NBT.5) Weight problem: 22 boxes with 18 kg each. Calculate: $22 \times 18 = 22 \times (10 + 8) = 220 + 176 = 396$ kg.
- Choice C is correct.** (4.G.1) Think of an angle as two rays (the sides) that meet at one point (the vertex). That point is like the hinge, and the rays are like the two flaps of the angle.
- Choice D is correct.** (4.OA.1) This is a two-step problem. Step 1: find Chen's cars: $4 \times 6 = 24$. Step 2: "how many more" is a subtraction question, so $24 - 6 = 18$. Chen has **18** more cars than Diego.
- Choice D is correct.** (4.NF.4) Three batches of $\frac{1}{6}$ gallon each: $3 \times \frac{1}{6} = \frac{3}{6}$, which is the same as $\frac{1}{2}$.
- Choice B is correct.** (4.MD.5) Count X marks for measurements greater than $\frac{2}{4}$ inch. At $\frac{4}{4}$ inch: 1 mark. At $\frac{6}{4}$ inch: 2 marks. Total: $1 + 2 = 3$ marks.
- Choice B is correct.** (4.MD.9) Add the two known angles first: $55^\circ + 40^\circ = 95^\circ$. Then subtract from the straight angle: $180^\circ - 95^\circ = 85^\circ$.
- Choice C is correct.** (4.NF.5) Compare place by place: Write 0.6 as 0.60. Now both have the same number of decimal places. Since $60 > 59$ hundredths, we have $0.6 > 0.59$.
- Choice C is correct.** (4.G.2) An obtuse triangle has exactly one angle greater than 90 degrees, called an obtuse angle. The other two angles must be acute. The answer is C.
- Choice A is correct.** (4.MD.7) Since the angle turns through 75 one-degree angles, it measures **75°**.
- Choice B is correct.** (4.NF.3) One friend eats $\frac{3}{8}$, the other eats $\frac{4}{8}$. Together, that's $3 + 4 = 7$ eighths: $\frac{7}{8}$ of the pizza.
- Choice B is correct.** (4.MD.1) Since 1 pint = 16 fluid ounces, divide: $64 \div 16 = 4$ pints. The answer is **4** pints.
- Choice D is correct.** (4.G.3) A regular pentagon with 5 equal sides has five lines of symmetry. Each line passes through one corner (vertex) and the middle of the opposite side. The answer is **5** lines of symmetry.
- The correct answer is 1,000.** (4.NBT.1) Step 1: name the place values. The thousands 8 is worth $8 \times 1,000 = 8,000$; the ones 8 is worth $8 \times 1 = 8$. Step 2: divide to compare: $8,000 \div 8 = 1,000$. So the thousands 8 is 1,000 times the ones 8. ✓
- Choice B is correct.** (4.NF.3) The flour bag started full, and some was used. Find how much was used by subtracting what remains: $5\frac{3}{10} - 2\frac{1}{10} = 3\frac{2}{10}$ pounds of flour was used.
- The correct answer is A, C.** (4.OA.2) "3 times as many" means $3 \times 12 = 36$ blue balloons—that's choice A. And the expression 3×12 in choice C is exactly the calculation we just did, so it's correct too. B (24) and D (15) come from wrong operations, and E uses + instead of \times .
- Choice D is correct.** (4.OA.3) Watch out for extra information! The 18 older books are not new sales, so we ignore them. Just multiply: $12 \text{ books/day} \times 15 \text{ days} = 180$ new books sold.
- Choice D is correct.** (4.NF.3) Add the wholes: $1 + 0 + 1 = 2$. Add the fractions: $\frac{5}{8} + \frac{3}{8} = \frac{8}{8} = 1$. Combine: $2 + 1 = 3$.
- Choice C is correct.** (4.MD.7) Points marked on the sides of an angle lie on the rays that form the angle.
- Choice A is correct.** (4.NF.1) Diego started with the whole bar ($\frac{6}{6}$). After giving $\frac{1}{6}$ away, he has $\frac{5}{6}$ left. The original ($\frac{6}{6}$) is larger.
- Choice D is correct.** (4.NBT.1) Dots form odd-number rows: Figure 1 = 1, Figure 2 = $1 + 3 = 4$, Figure 3 = $1 + 3 + 5 = 9$. Figure 4 = $9 + 7 = 16$ dots.
- Choice B is correct.** (4.NF.4) Three marbles, each weighing $\frac{2}{6}$ ounce, give us $3 \times \frac{2}{6} = \frac{6}{6} = 1$ ounce.
- Choice A is correct.** (4.NF.3) One whole is $\frac{6}{6}$, plus $\frac{1}{6}$ more: $6 + 1 = 7$, so $\frac{6}{6} + \frac{1}{6} = \frac{7}{6} = 1\frac{1}{6}$ ✓.
- Choice C is correct.** (4.MD.8) This angle measures about 95° , which is more than 90° but less than 180° . That's the definition of obtuse, so the answer is obtuse.
- The correct answer is $\frac{25}{100}$.** (4.NF.5) One dollar contains 100 cents. So 25 cents is $\frac{25}{100}$ of a dollar.
- Choice C is correct.** (4.NF.5) To convert $\frac{1}{10}$ to hundredths, multiply both the numerator and denominator by 10: $\frac{1}{10} = \frac{1 \times 10}{10 \times 10} = \frac{10}{100}$.



Hi, Math Champion!

◇ You trained hard! 8 full practice tests is real practice. Your math game is way better now than when you started. ◇

★ **Coach's truth:** kids who practice get better. You practiced. You got better. That's how it works!
★

Your Game Stats

- **Energy:** HIGH! You can finish a long test.
- **Smart Plays:** You know lots of strategies.
- **Calm Head:** You stay cool with hard problems.
- **Game-Day Ready:** You feel strong and prepared.

Coach's tip: the night before the test, get good sleep. Eat a good breakfast. Bring a sharp pencil. Trust your training!

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

Jay Daie

Your Math Coach

8 PRACTICE TESTS. PREPARE. PRACTICE. SUCCEED!

This **Grade 4 Math Practice Tests** book is designed to help students build strong math skills, master essential concepts, and boost confidence for success in the classroom and beyond.

Featuring 8 full-length practice tests, a variety of question types, and detailed answer explanations, this book provides the practice and support students need to improve accuracy, strengthen problem-solving abilities, and achieve their best.

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

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- ✓ Skill Reinforcement

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SUCCESS FOR LIFE.**

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Build a solid foundation through targeted practice and review.



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Develop logical thinking and effective solution strategies.



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Become familiar with test-style questions and formats.



Track Progress

Measure growth across multiple practice tests.



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Strengthen skills needed for future learning.

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- ✓ Place Value & Number Sense
- ✓ Multi-Digit Addition & Subtraction
- ✓ Multiplication & Division
- ✓ Fractions & Equivalent Fractions
- ✓ Geometry & Shapes
- ✓ Measurement & Data
- ✓ Perimeter & Area
- ✓ Word Problems
- ✓ Patterns & Algebraic Thinking
- ✓ Graphs & Data Interpretation
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