

8

Alaska

AK STAR

GRADE 3

MATH

PRACTICE TESTS

Standards-Aligned Review with
Mixed Practice and Answer Key



8 Full-Length
Practice Tests



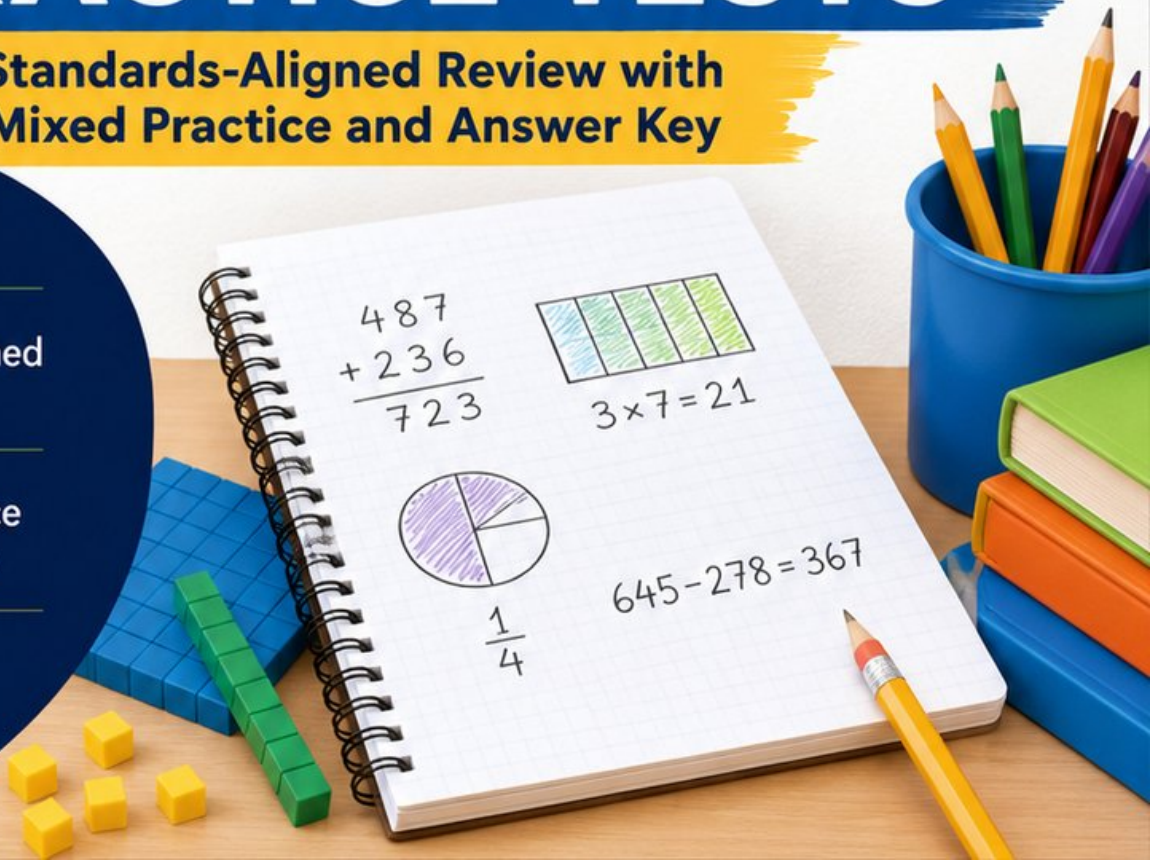
Standards-Aligned
Questions



Build Confidence
and Math Skills



Answer Key
Included



8 Alaska AK STAR Grade 3 Math Practice Tests

Standards-Aligned Review with Mixed Practice and Answer Key



Eight complete 30-question practice rounds for Grade 3 math: operations, fractions, measurement, data, area, shapes, answer keys, and clear explanations for every item.

Jay Daie and Reza Nazari



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Alaska, Your Eight-Test Math Path Begins

Eight focused rounds, one stronger Grade 3 problem solver

This book gives you eight full chances to practice like a careful test taker for the Alaska AK STAR. Each test is a new route through numbers, shapes, data, measurement, and word problems. Work slowly enough to notice what the question asks, and proudly enough to show your thinking.

Alaska has glacier trails, salmon streams, mountain weather, northern lights, and careful travel maps, where careful steps matter. Strong math follows that same path: notice the question, choose a tool, show the work, and track every detail before the final answer.

Your Alaska Math Promise

I will read the whole question, choose a smart strategy, write clear work, and check whether my answer makes sense.

Eight rounds. Thirty questions each. One careful step at a time.

How to Use This Book

A simple eight-round routine for confident review

Use this Alaska book as a practice plan, not a race. Finish one test, review it, fix a few problems, then carry one better habit into the next test.

1. **Preview the reference page.** Notice units, time, and measurement facts before you begin.
2. **Take one full test.** Circle anything that feels tricky so you can return to it.
3. **Check the answer key.** Mark correct answers and questions to try again.
4. **Read explanations.** Study missed items and lucky guesses first.
5. **Redo three problems.** Write fresh work without copying the explanation.
6. **Name one habit.** Pick a focus such as labels, facts, fractions, or neat work.
7. **Try the next test.** Bring that habit forward.
8. **Finish with a final check.** Look for growth across all eight tests.

Best review habit: In Alaska, strong practice means slowing down enough to see the clue. When an answer is wrong, ask, “What step would I change next time?”



What Is Inside the Eight Tests?

Mixed Grade 3 math practice for the AK STAR

Each practice test has 30 questions. You will see multiple-choice questions, select-all questions, and open-ended questions with workspace. The mix helps students practice both choosing an answer and explaining a short mathematical result.

Part	What to Expect
Eight full tests	30 mixed Grade 3 questions in each round
Math topics	multiplication, division, place value, fractions, time, measurement, data, area, perimeter, and shapes
Answer keys	compact answer boxes for quick checking
Explanations	short reasoning for every item so mistakes become useful review
Progress pages	places to record scores, habits, and next-step goals

Alaska focus: The practice path starts with glacier trails, salmon streams, mountain weather, northern lights, and careful travel maps. Strong math uses the same idea: know the path, follow the clues, and check the final answer.



Scan me!
For more practice
& answers

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1) $\frac{1}{3} = \frac{2}{?}$. What is the missing denominator?

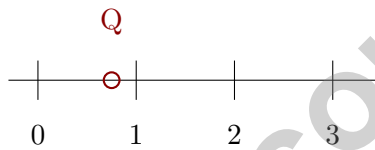
A. 4

C. 8

B. 6

D. 9

2) Draw a quadrilateral that is not a rectangle, square, or rhombus.



3)

The number line from 0 to 3 is divided into 4 equal parts. What fraction of the distance from 0 to 3 is point Q ?

A. $\frac{3}{4}$

C. $\frac{4}{3}$

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

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

4) A rectangle is covered by unit squares in a 6×2 arrangement. What is the area?

A. 8 square units

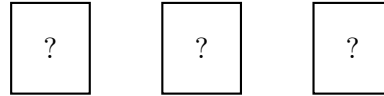
C. 12 square units

B. 10 square units

D. 16 square units



Dividing Almonds



Bag 1 Bag 2 Bag 3

5)

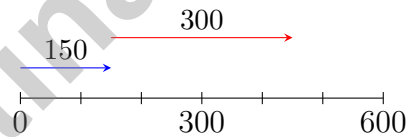
Ava divides 600 grams of almonds into 3 equal bags. How many grams are in each bag?

- A. 100 g C. 300 g
 B. 200 g D. 600 g

6) Eli is filling a rectangular mat with colored unit square patches. The mat measures 11 units by 3 units. How many patches will he need?

- A. 14 patches C. 33 patches
 B. 27 patches D. 44 patches

7)



Using the number line, what is $150 + 300$?

- A. 400 C. 500
 B. 550 D. 450



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1) What is 472 rounded to the nearest 10?

A. 470

C. 475

B. 472

D. 500

2) Which equation matches the tiling shown by a rectangle with one line cutting it vertically into two parts?

A. $7 \times (3 + 2) = (7 \times 3) + (7 \times 2)$

C. $7 + 3 + 2 = 12$

B. $3 \times 2 = 6$

D. $(3 \times 7) + (2 \times 7) = 35 + 14$

3) A rectangular whiteboard is 11 feet wide and 5 feet tall. What is the area of the whiteboard?

A. 32 sq ft

C. 55 sq ft

B. 110 sq ft

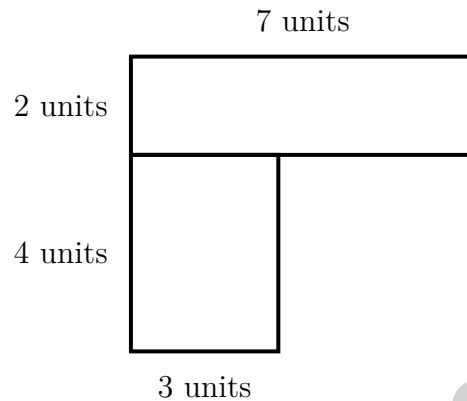
D. 16 sq ft

4) Find $\frac{1}{3} + \frac{1}{3}$.



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- 5) An L-shaped kitchen floor plan shows two rectangular sections. Upper: 7 units by 2 units. Lower left: 3 units by 4 units. What is the total floor area?



- A. 26 sq units C. 12 sq units
 B. 14 sq units D. 56 sq units
- 6) Mia's rectangular bedroom needs new carpet tiles. The room is 10 units by 4 units. How many unit square tiles will cover the entire floor?
- A. 14 tiles C. 40 tiles
 B. 28 tiles D. 80 tiles
- 7) A picture graph shows pencils. Each pencil symbol means 5 pencils. Maya has 4 symbols. How many pencils does Maya have?
- A. 9 C. 20
 B. 15 D. 25



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

- 1) **Choice B is correct.** **(3.NF.3)** The numerator was multiplied by 2 (from 1 to 2). Multiply the denominator by 2: $3 \times 2 = 6$. So $\frac{1}{3} = \frac{2}{6}$.
- 2) **The correct answer is trapezoid.** **(3.G.1)** There are many quadrilaterals beyond rectangles, squares, and rhombuses. A trapezoid (with one pair of parallel sides) is one example. Students may also draw an irregular quadrilateral with no parallel sides.
- 3) **Choice D is correct.** **(3.NF.2)** Point Q is at the first tick of 4 equal divisions from 0 to 3. That is $\frac{1}{4}$.
- 4) **Choice C is correct.** **(3.MD.8)** A 6×2 arrangement of unit squares has area $6 \times 2 = 12$ square units.
- 5) **Choice B is correct.** **(3.MD.2)** Divide: $600 \div 3 = 200$ g per bag.
- 6) **Choice C is correct.** **(3.MD.7)** $11 \times 3 = 33$ unit square patches.
- 7) **Choice D is correct.** **(3.NBT.2)** Start at 0, jump 150 to get to 150, then jump 300 more to get to 450.
- 8) **Choice D is correct.** **(3.OA.4)** Divide: $15 \div 3 = 5$. Each unknown weight is 5. Check: $5 \times 3 = 15$.
- 9) **Choice C is correct.** **(3.MD.4)** Pilar: $6 \times 5 = 30$ coins. Quinn: $4 \times 5 = 20$ coins. Difference: $30 - 20 = 10$ coins.
- 10) **Choice A is correct.** **(3.MD.9)** Area = $8 \times 3 = 24$ square feet.
- 11) **Choice A is correct.** **(3.MD.7)** Count: 5 units wide and 3 units tall. $5 \times 3 = 15$ square units.
- 12) **The correct answer is 2 scores.** **(3.MD.5)** The scores 81 and 82 points each occur once, so there are 2 scores occurring exactly once.
- 13) **Choice A is correct.** **(3.MD.9)** Width is 4. Heights are 4 and 3, totaling 7. Distributive: $4 \times (4 + 3) = 28$.
- 14) **Choices A and C are correct.** **(3.OA.8)** Multiply tables by chairs per table: $9 \times 4 = 36$. Then add: $36 + 8 = 44$. Choices A and C both correctly compute $(9 \times 4) + 8 = 44$. Choice B adds all three numbers (incorrect order). Choice D applies order of operations wrong. Choice E adds first then multiplies (wrong method).
- 15) **The correct answer is 8.** **(3.OA.7)** $72 \div 9 = 8$.
- 16) **Choice A is correct.** **(3.OA.2)** $18 \div 3 = 6$. Divide the total number of pencils by the number of boxes.
- 17) **Choice D is correct.** **(3.OA.1)** Area = length \times width = $6 \times 4 = 24$ square meters.
- 18) **Choice A is correct.** **(3.NF.3)** Both pies show the same shaded amount. $\frac{2}{3}$ and $\frac{4}{6}$ are equivalent.
- 19) **Choice A is correct.** **(3.NF.1)** Fewer parts mean larger individual pieces. $\frac{1}{2} > \frac{1}{4}$.
- 20) **Choice C is correct.** **(3.NBT.3)** The pattern shows: each time we multiply by a multiple of 10 that is 10 more, the product increases by 30. From $3 \times 60 = 180$ to 3×70 , we add another 30 to get 210. Or: $3 \times 7 = 21$, then multiply by 10 to get 210.
- 21) **Choice D is correct.** **(3.OA.9)** Multiples of 4 follow the pattern 4, 8, 12, 16, 20, increasing by 4 each time.
- 22) **Choice D is correct.** **(3.NBT.1)** The ones digit is 3. Since $3 < 5$, round down: 513 rounds to 510.
- 23) **Choice A is correct.** **(3.MD.8)** Area = $8 \times 4 = 32$ square centimeters.
- 24) **Choice C is correct.** **(3.MD.1)** From 3 : 14 to 3 : 56: $56 - 14 = 42$ minutes.
- 25) **Choice A is correct.** **(3.OA.5)** By the associative property, $(3 \times 4) \times 2 = 3 \times (4 \times 2) = 24$. Both ways of grouping give the same product.
- 26) **Choice A is correct.** **(3.G.2)** A single vertical line through the middle divides this rectangle into 2 equal parts.
- 27) **Choice C is correct.** **(3.NF.2)** $\frac{3}{4} = \frac{6}{8}$ because both represent three-fourths of their circles.
- 28) **Choice A is correct.** **(3.MD.7)** Left: $4 \times 6 = 24$ sq units. Right: $3 \times 4 = 12$ sq units. Total: $24 + 12 = 36$ sq units.
- 29) **Choice D is correct.** **(3.OA.3)** Multiply: 8 bags \times 3 candies per bag = 24 candies.
- 30) **Choice C is correct.** **(3.G.2)** $\frac{8}{8} = 1$ whole. When numerator = denominator, you have one whole unit.

Practice Test 2 Answers and Explanations



A Quiet Word From Your Mentor

Hi, Thoughtful Student,

◇ I want to take a moment to tell you something true: you did excellent work. 8 practice tests is a real promise that you kept to yourself. That matters. ◇

★ **Mentors notice:** growth is quiet. It doesn't shout. But it shows up in how you handle a problem today vs how you did weeks ago. That growth is your real prize. ★

What I See in You

- **Hard Work:** You don't quit when problems are tough.
- **Curiosity:** You wonder why and how.
- **Kindness:** You are patient with yourself.
- **Brave Heart:** You try things that scare you.

Mentor's note: on test day, treat yourself like you would a friend. Be kind. Be patient. Be encouraging. The skills are inside you!

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

Jay Daie

Your Math Mentor

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PRACTICE TODAY. MASTER TOMORROW.

This book is designed to help **Grade 3** students strengthen their math skills through focused practice and real progress.

- ✓ 8 full-length practice tests
- ✓ Aligned to Grade 3 standards
- ✓ Build confidence and achieve success



EACH PRACTICE TEST INCLUDES:



Standards-
Aligned
Questions



Variety of
Question
Types



Real-World
Math
Applications



Step-by-Step
Progress
Tracking



Build Skills
and Boost
Confidence

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- ✓ Fractions & Decimals
- ✓ Algebraic Thinking
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- ✓ Measurement & Data
- ✓ Number Patterns
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- ✓ Perimeter, Area & Volume
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