

6

Alaska AK STAR

GRADE 3

MATH

PRACTICE TESTS

Standards-Aligned Practice with
Review, Answer Keys, and Explanations



6 Full-Length
Practice Tests



Detailed Answer Keys
and Explanations



Master Skills.
Boost Scores.
Succeed!

6 Alaska AK STAR Grade 3 Math Practice Tests

Standards-Aligned Review with Mixed Practice and Answer Key



Six complete 30-question practice labs 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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Welcome to the Six Skill Labs

Six full tests, six focused resets, and a stronger Grade 3 problem solver



Notice the pattern. Choose a tool. Explain the answer.

To the Grade 3 Math Builder

This book gives you six practice labs for the Alaska AK STAR. Each lab is a complete 30-question test, so students can practice accuracy, stamina, and clear mathematical thinking.

Alaska brings glacier paths, salmon streams, mountain air, and long winter skies. Strong math uses that same care: read the task, select a strategy, build the solution, and track details carefully from start to finish.

Decode

Find the question, the units, and the useful numbers.

Design

Use an equation, array, number line, graph, or sketch.

Confirm

Make sure the answer matches the question.

Six-lab promise: I will work with patience, show useful thinking, and treat corrections as part of learning.

How to Use This Book

A six-lab routine for steady Grade 3 growth

Use one practice lab at a time. The goal is not only to finish more pages. The goal is to finish, review, repair, and bring a smarter habit to the next test. For Alaska students, each lab is a short route through glacier paths, salmon streams, mountain air, and long winter skies: steady, alert, and ready for the next clue.

1. **Warm up.** Skim the reference materials and remind yourself of common tools.
2. **Take one test.** Work steadily and mark problems that need a second look.
3. **Check answers.** Use the compact answer keys first.
4. **Read explanations.** Study missed items and any lucky guesses.
5. **Redo two problems.** Rewrite the work cleanly without peeking.
6. **Set the next lab goal.** Choose one skill or habit to improve.

Best review habit: A mistake is most useful when you can say why it happened and what you will do differently next time.



What Is Inside?

Six complete practice tests with review support

Part	What You Do	Why It Helps
Practice Tests 1–6	Solve six different 30-question tests.	Build stamina and see Grade 3 skills mixed together.
Answer Keys	Check each answer in compact boxes.	Find mistakes quickly without losing your place.
Explanations	Read why each answer works.	Turn missed items into a clear next step.
Standards Reference	See how Alaska Grade 3 standards connect to practice.	Understand the skills behind the questions.

Each test has 26 multiple-choice questions, 1 select-all question, and 3 open-ended questions. This gives students practice with quick decisions, careful reading, and short written math answers for the Alaska AK STAR path.

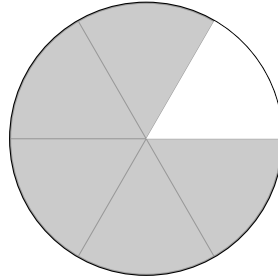


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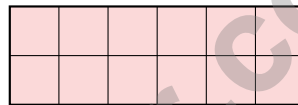
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- 1) A cake is divided into 6 equal pieces. Ava takes one piece. Which fraction is left?



- A. $\frac{1}{6}$ C. $\frac{5}{6}$
 B. $\frac{2}{6}$ D. $\frac{6}{6}$
- 2) 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
- 3) Find $30 \div 5$.



4) A candy bar is divided into 2 equal pieces. You eat one piece. What fraction of the candy bar do you eat?

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

C. $\frac{1}{2}$

B. $\frac{2}{2}$

D. $\frac{2}{1}$

5) A bottle holds 2000 milliliters of juice. A glass holds about 250 milliliters. Which is the BEST estimate of how many glasses can be filled from the bottle?

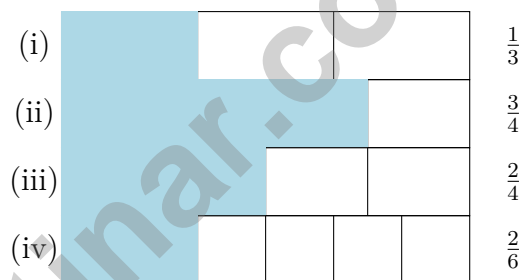
A. 2

C. 8

B. 4

D. 12

6) Look at the fraction bars below. Which pair shows equivalent fractions (same-size shaded regions)?



A. (i) and (ii)

C. (ii) and (iii)

B. (iii) and (iv)

D. (i) and (iv)

7) Ava has 72 stickers. She puts them in albums with 8 stickers on each page. How many pages does she fill?

A. 8 pages

C. 10 pages

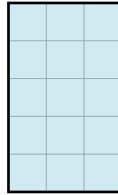
B. 12 pages

D. 9 pages



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8) This rectangle is divided into unit squares on a grid.



What is the area?

- A. 8 sq units C. 20 sq units
 B. 15 sq units D. 25 sq units

9) Ava skip-counts by thirds from 0 on a number line from 0 to 3 divided into thirds. She says: $0, \frac{1}{3}, \frac{2}{3}, 1, \frac{4}{3}, \dots$ At what point does she say $\frac{7}{3}$?

- A. At 1 C. At 3
 B. Between 2 and 3 D. Before $\frac{1}{3}$

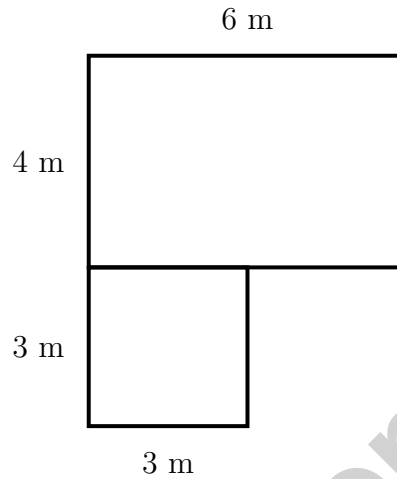
10) This number line shows 0 to 1 split into 2 equal parts. What is the fraction at the right end?



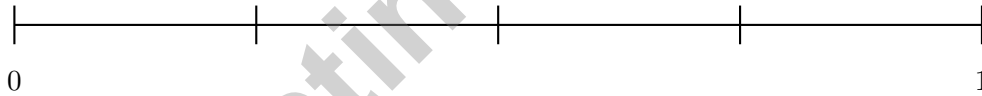
- A. $\frac{1}{2}$ C. $\frac{2}{1}$
 B. $\frac{2}{2}$ D. $\frac{3}{2}$



- 4) Mia's bedroom floor is shaped like an L. One part is 6 m by 4 m. The other part is 3 m by 3 m. What is the total area?



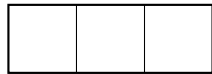
- A. 24 sq m C. 33 sq m
 B. 9 sq m D. 144 sq m
- 5) On a number line from 0 to 1 split into 4 equal parts, what fraction comes after $\frac{2}{4}$?



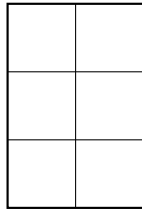
- A. $\frac{1}{4}$ C. $\frac{3}{4}$
 B. $\frac{2}{4}$ D. $\frac{4}{4}$
- 6) What is 7×6 ?



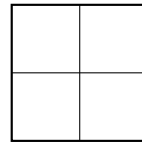
1) Which shape is made of exactly 6 unit squares?



A



B



C



D

A. Option A

B. Option B

C. Option C

D. Option D

2) What is $56 \div 7$?

A. 7

B. 10

C. 9

D. 8

Equal



Equal

3)

In this square, the green sides are equal and the blue sides are equal. Are all 4 sides equal?

A. Yes, all 4 sides are equal

C. No, only the blue sides are equal

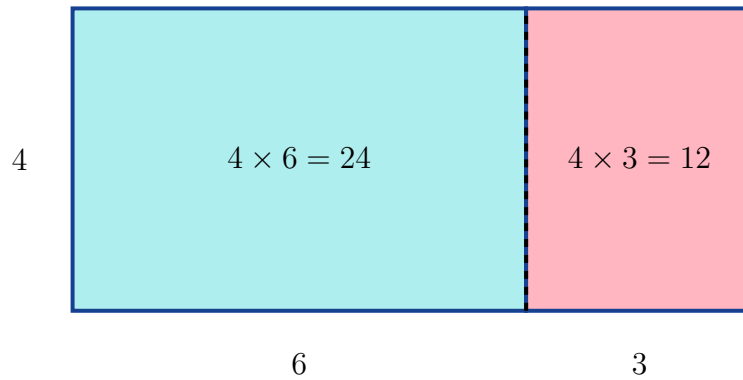
B. No, only the green sides are equal

D. The sides have no equal length



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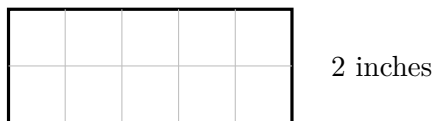
4) Sam splits a rectangle to show $4 \times 9 = 4 \times (6 + 3)$.



What is the total product?

- A. 24
- B. 32
- C. 40
- D. 36

5) A square tile has sides of 6 centimeters. How many unit squares cover the tile?
Explain how you counted: did you count by rows or skip-count?



6) 5 inches

How many unit squares fit in this rectangle?

- A. 7 units
- B. 9 units
- C. 15 units
- D. 10 units

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 C is correct.** **(3.G.2)** If one piece is taken from 6 equal pieces, 5 pieces remain, which is $\frac{5}{6}$.
- 2) **Choice C is correct.** **(3.MD.8)** The garden is $6 \text{ m} \times 2 \text{ m} = 12 \text{ m}^2$, which equals 12 unit squares of 1 m by 1 m.
- 3) **The correct answer is 6.** **(3.OA.3)** $30 \div 5 = 6$.
- 4) **Choice C is correct.** **(3.NF.1)** A candy bar divided into 2 equal pieces means each piece is a unit fraction of $\frac{1}{2}$ (one-half).
- 5) **Choice C is correct.** **(3.MD.2)** Divide: $2000 \div 250 = 8$ glasses.
- 6) **Choice D is correct.** **(3.NF.2)** (i) $\frac{1}{3}$ and (iv) $\frac{2}{6}$ are equivalent because $\frac{2}{6} = \frac{1}{3}$. Both show one-third shaded.
- 7) **Choice D is correct.** **(3.OA.7)** $72 \div 8 = 9$. Each page holds 8 stickers, so 72 stickers fill 9 pages.
- 8) **Choice B is correct.** **(3.MD.8)** $3 \times 5 = 15$ unit squares.
- 9) **Choice B is correct.** **(3.NF.2)** $\frac{7}{3} = 2\frac{1}{3} \approx 2.33$. This is between 2 and 3, closer to 2.
- 10) **Choice B is correct.** **(3.NF.2)** The right end is at all 2 parts, so the fraction is $\frac{2}{2}$, which equals 1.
- 11) **Choice B is correct.** **(3.MD.1)** One hour is 60 minutes.
- 12) **Choice B is correct.** **(3.NF.3)** The shaded regions match. $\frac{1}{3}$ and $\frac{2}{6}$ are equivalent.
- 13) **Choice D is correct.** **(3.OA.1)** The grid has 3 columns and 4 rows of small squares. So $3 \times 4 = 12$ squares.
- 14) **Choice D is correct.** **(3.OA.4)** Multiply: $5 \times 7 = 35$ hours.
- 15) **Choice C is correct.** **(3.OA.8)** Step 1: Total shells: $5 \times 8 = 40$ shells. Step 2: Subtract given away: $40 - 12 = 28$ shells kept.
- 16) **Choice C is correct.** **(3.OA.9)** $5 \times 7 = 35$, which is odd. Choices A, B, D all have an even factor, so they give even products.
- 17) **Choices C and D are correct.** **(3.G.1)** Rhombuses and squares both have all 4 sides equal in length. A square is a special rhombus with right angles. Rectangles can have unequal sides (length and width). Trapezoids and general parallelograms do not require equal sides.
- 18) **Choice C is correct.** **(3.MD.7)** One part: $10 \times 2 = 20$ sq units. Other part: $4 \times 3 = 12$ sq units. Total: $20 + 12 = 32$ sq units.
- 19) **The correct answer is 15.** **(3.OA.5)** $3 \times 5 = 15$.
- 20) **Choice C is correct.** **(3.MD.7)** Square: $8 \times 8 = 64$ square units. Rectangle: $4 \times 16 = 64$ square units. Many different shapes can have the same area.
- 21) **Choice C is correct.** **(3.MD.9)** 3×5 and 2×4 do not share a matching side length. To use this area model, the two smaller rectangles need one matching dimension.
- 22) **Choice D is correct.** **(3.NBT.2)** Ones: $7 + 5 = 12$ (write 2, carry 1). Tens: $6 + 1 + 1 = 8$. Hundreds: $3 + 2 = 5$. Answer: 582.
- 23) **Choice A is correct.** **(3.NF.3)** All have numerator 1. Larger denominators mean smaller pieces. So eighths < fourths < halves.
- 24) **Choice B is correct.** **(3.NBT.1)** Numbers from 45 to 54 round to 50. Choice A (48) rounds to 50, but is not between 50–60. Choice B (52) is in range 50–60 and rounds to 50 (ones digit $2 < 5$). Choice C (56) rounds to 60. Choice D is 60 itself, rounds to 60.
- 25) **Choice C is correct.** **(3.OA.1)** Area = length \times width = $12 \times 4 = 48$ square feet.
- 26) **Choice D is correct.** **(3.OA.6)** $45 \div 9 = \square$ means $\square \times 9 = 45$. Since $5 \times 9 = 45$, each row has 5 stickers.
- 27) **Choice D is correct.** **(3.G.2)** Both parts are shaded, so it is $\frac{2}{2}$, which equals 1 whole. (A) is only one shaded part. (B) and (C) are not written with correct denominator 2.
- 28) **The correct answer is $70\frac{1}{2}$.** **(3.MD.5)** The value with the most X marks is $70\frac{1}{2}$, with 3 X's.
- 29) **Choice B is correct.** **(3.NBT.3)** Each base-ten rod represents 10. With 4 rods, we have $4 \times 10 = 40$.
- 30) **Choice B is correct.** **(3.NF.3)** Pie 2 shows $\frac{1}{2}$ (half shaded) and Pie 3 shows $\frac{4}{8}$ (half shaded). These are equivalent because $\frac{1 \times 4}{2 \times 4} = \frac{4}{8}$.



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Star Player Pep Talk

Hi, Star Player!

◇ 6 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 6 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

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This **Grade 3 Math Practice Tests** book is the perfect companion for students who want to strengthen their math skills and excel in school. With **6** full-length practice tests designed to reflect real test formats, students get the practice they need to understand key concepts, build problem-solving skills, and tackle any challenge with confidence.

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