

3

Alaska AK STAR

GRADE 3

MATH PRACTICE TESTS

Standards-Aligned
Practice for Stronger
Math Skills and
Test Readiness



Build Confidence
with Targeted Practice

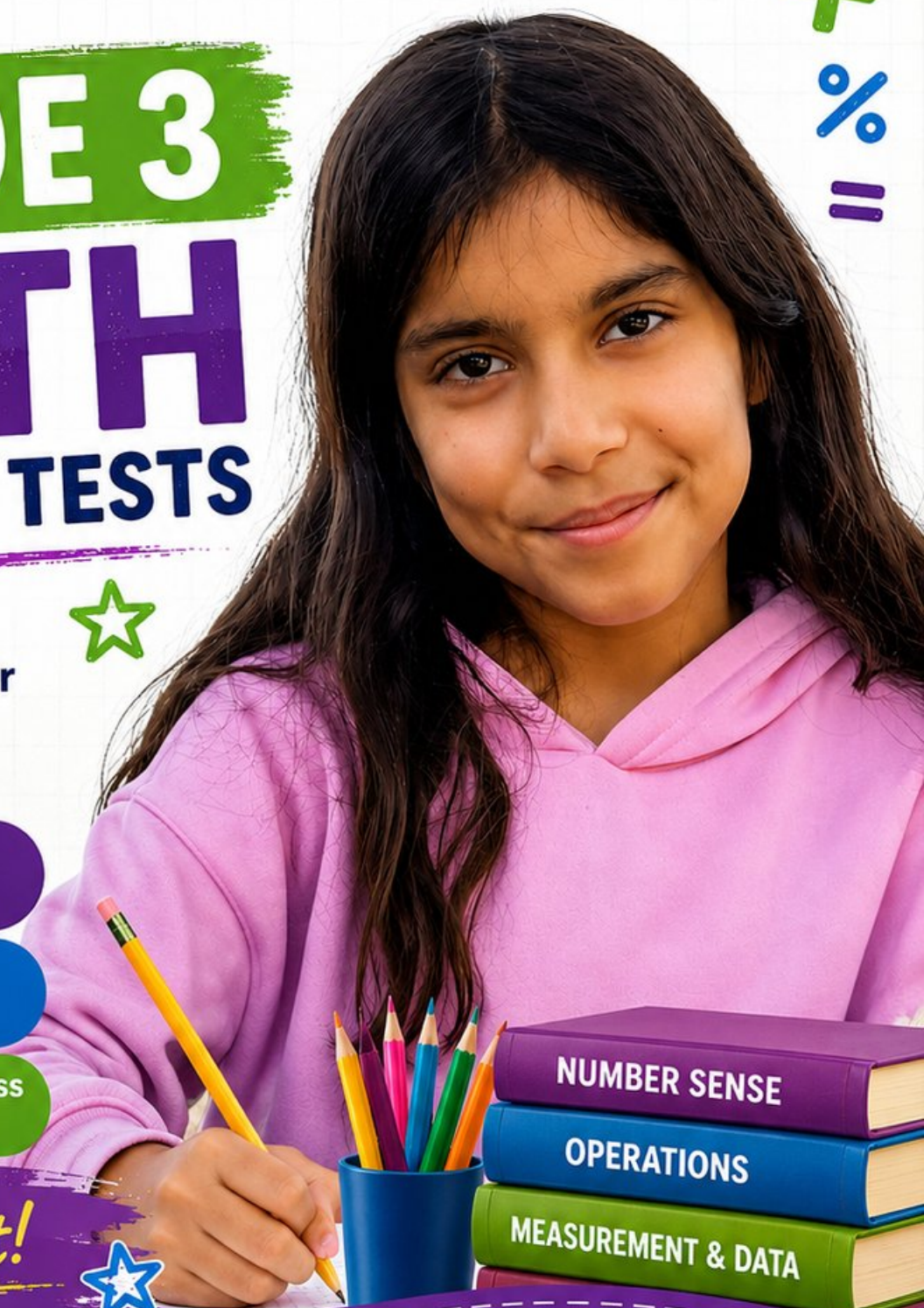


Strengthen Skills
in Key Math Concepts



Improve Test Readiness
with Realistic Practice

Be Ready.
Do Your Best!



3 Alaska AK STAR Grade 3 Math Practice Tests

Standards-Aligned Practice for Stronger Math Skills and Test Readiness



Three 30-question trail tests packed with Grade 3 review, Alaska AK STAR strategy tips, answer keys, and step-by-step explanations that turn every miss into the next move.

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How to Use This Book

A four-step trail plan that turns practice into progress

Step 1: Pack Your Pack

Read the Quick Review first.
Wake up the Grade 3 ideas you will need before you set foot on the trail.

Step 2: Hit the Trail

Take one full test.
Thirty questions. Pencil sharp, work shown, calm pace – one marker at a time.

Step 3: Campfire Check

Check answers honestly.
Circle missed questions. Star any problem that felt confusing – those are tomorrow’s clues.

Step 4: Track Back

Fix a few mistakes.
Read the explanation, rework the problem, and carry that lesson up the next stretch of trail.

A Three-Week Trail Plan

Week 1	Hike Test 1. Map what feels strong and what needs a second look.
Week 2	Hike Test 2. Sharpen the habits: read slow, sketch the model, label every number.
Week 3	Hike Test 3. Bring everything – facts, models, checks, and calm focus.

Best trail habit: Do not only ask, “What did I score?” Ask, “What did I learn how to do better?”



Test Overview

What waits on the trail and what each practice test builds

Each practice test has 30 questions. Together they walk you through the kind of math thinking the Alaska AK STAR asks Grade 3 students to use: read carefully, choose a strategy, show work, and check whether an answer makes sense.

Selected-Response Questions

Pick the best answer from the choices. Strong scouts estimate first, cross out answers that cannot be right, and reread the question before circling.

Open-Ended Questions

Write the answer and show the thinking. A clear response uses neat numbers, helpful labels, and a short model or explanation.

Grade 3 Ideas You Will Meet on the Trail

- multiplication, division, arrays, equal groups, and fact fluency
- rounding, adding, subtracting, and multiplying by multiples of 10
- 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 shapes
- two-step word problems and explaining a solution path

What strong AK STAR work looks like: the scout reads the whole problem, picks a sensible strategy, writes numbers neatly, labels the answer, and checks that the answer truly fits the question.



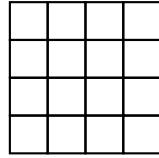
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1) Look at this grid of unit squares:



Which is the area?

- A. 8 sq units C. 16 sq units
 B. 12 sq units D. 20 sq units
- 2) Jacob has 32 toy cars. He stores them in 4 boxes with the same number in each box. How many cars are in each box?
- A. 6 cars C. 9 cars
 B. 7 cars D. 8 cars
- 3) A picture graph shows colored beads. Red: 5 symbols (scale: 4). Blue: 6 symbols (scale: 4). Green: 4 symbols (scale: 4). What is the total number of beads?
- A. 15 C. 60
 B. 48 D. 64
- 4) 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. $(3 \times 4) + (3 \times 5)$



8) Which fraction equals $\frac{2}{4}$?

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

B. $\frac{2}{3}$

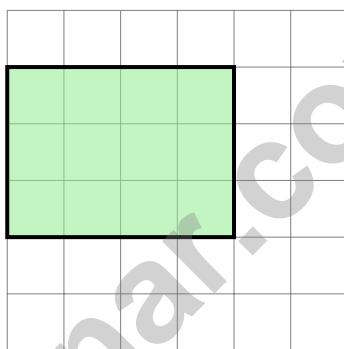
C. $\frac{3}{4}$

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

9) At a park, there are 6 benches. Each bench seats 5 people. How many people can sit if all benches are full?

 A. 36 people B. 35 people C. 11 people D. 30 people

10) Look at the shaded region on the grid. Count all unit squares to find the area.

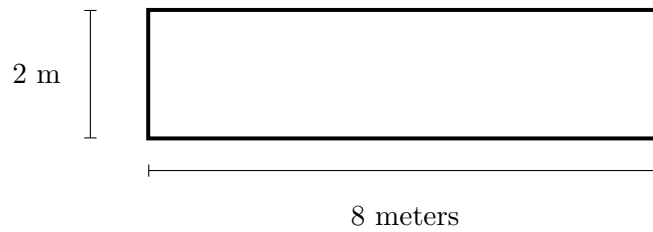
 A. 9 square units B. 12 square units C. 10 square units D. 15 square units

11) Ava has 40 strawberries. She puts 5 strawberries in each cup. How many cups does she fill?

 A. 8 B. 7 C. 9 D. 35

12) Which statement is true about a unit square measured in centimeters?

 A. It has side length 2 cm and area 4 square cm B. It has side length 1 cm and area 1 square cm C. It has side length 1 cm and area 2 square cm D. It has side length 5 cm and area 5 square cm



1)

Find the perimeter.

A. 10 m

C. 20 m

B. 16 m

D. 24 m

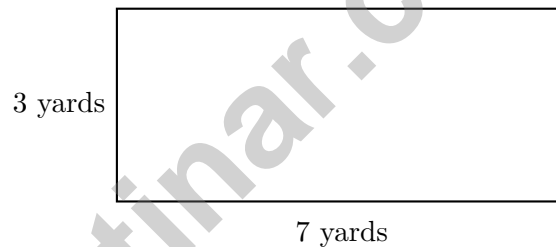
2) Sam has fact cards for $3 \times 6 = 18$. Which division fact is related?

A. $18 \div 3 = 6$

C. $6 \div 3 = 2$

B. $18 \div 2 = 9$

D. $18 + 3 = 21$



3)

A rectangular garden plot is 7 yards long and 3 yards wide. What is the area?

A. 10 sq yd

C. 20 sq yd

B. 21 sq yd

D. 42 sq yd

4) Kai skip counts by 6: 6, 12, 18, 24, 30.

Which number should come next?

A. 32

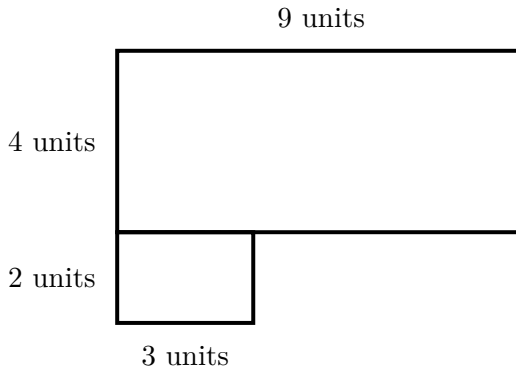
C. 36

B. 35

D. 40



- 5) Eli has an L-shaped rug. The longer side is 9 units by 4 units. The shorter side is 3 units by 2 units. What is the total area of the rug?



- A. 36 sq units C. 42 sq units
 B. 6 sq units D. 216 sq units
- 6) Ava sorts apples into 5 equal groups. There are apples in each group. There are 40 apples in total.

$$5 \times \square = 40$$

- A. 7 C. 9
 B. 6 D. 8
- 7) Noah organizes his toy train cars in 4 equal rows. If he has 20 cars, how many cars are in each row?

- A. 5 C. 24
 B. 16 D. 80



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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 builds stronger math habits.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice C is correct.** **(3.MD.7)** $4 \times 4 = 16$ unit squares, area is 16 square units.
- 2) **Choice D is correct.** **(3.OA.6)** $32 \div 4 = \square$ means $\square \times 4 = 32$. Since $8 \times 4 = 32$, each box has 8 cars.
- 3) **Choice C is correct.** **(3.MD.4)** Red: $5 \times 4 = 20$. Blue: $6 \times 4 = 24$. Green: $4 \times 4 = 16$. Total: $20 + 24 + 16 = 60$.
- 4) **Choice C is correct.** **(3.MD.9)** Adding the numbers instead of multiplying does not use the distributive property or find the area correctly.
- 5) **Choice D is correct.** **(3.OA.4)** Divide: $21 \div 3 = 7$ columns. Check: $3 \times 7 = 21$.
- 6) **The correct answer is $\frac{1}{2}$.** **(3.NF.3)** $\frac{2}{4} = \frac{1}{2}$.
- 7) **Choice C is correct.** **(3.MD.7)** Top: $8 \times 3 = 24$ sq units. Bottom: $5 \times 2 = 10$ sq units. Total: $24 + 10 = 34$ sq units.
- 8) **Choice A is correct.** **(3.NF.3)** Divide the numerator and denominator of $\frac{2}{4}$ by 2: $\frac{2 \div 2}{4 \div 2} = \frac{1}{2}$.
- 9) **Choice D is correct.** **(3.OA.1)** 6 benches with 5 people each means 6 groups of 5. So $6 \times 5 = 30$ people.
- 10) **Choice B is correct.** **(3.MD.7)** The shaded rectangle is 4 units wide and 3 units tall. $4 \times 3 = 12$ square units.
- 11) **Choice A is correct.** **(3.OA.3)** Divide: $40 \div 5 = 8$ cups.
- 12) **Choice B is correct.** **(3.MD.8)** A unit square by definition has side length 1 unit. In centimeters, that is 1 cm by 1 cm, giving area $1 \text{ cm} \times 1 \text{ cm} = 1$ square cm.
- 13) **Choices A and B are correct.** **(3.NF.2)** $\frac{2}{6} = \frac{1}{3}$ because $\frac{2}{6}$ simplifies to $\frac{1}{3}$. They represent the same point, one-third of the way from 0 to 1. The other choices name different points.
- 14) **Choice D is correct.** **(3.NF.1)** Eighths are the smallest pieces listed, so the first tick at $\frac{1}{8}$ is closest to 0.
- 15) **Choice A is correct.** **(3.NF.3)** Three halves equals 1.5 (greater than one whole). Three thirds equals 1 (exactly one whole). So $\frac{3}{2} > \frac{3}{3}$.
- 16) **Choice A is correct.** **(3.MD.1)** The minute hand on 2 means 10 minutes. The hour hand on 7 means 7 o'clock. So the time is 7 : 10.
- 17) **Choice C is correct.** **(3.G.1)** The red sides (top and bottom) appear parallel to each other, and the blue sides (left and right) appear parallel to each other. This is a parallelogram.
- 18) **Choice A is correct.** **(3.NF.1)** The denominator (bottom number) tells us how many equal parts the whole is divided into. For example, in $\frac{1}{4}$, the 4 means the whole is divided into 4 equal parts.
- 19) **The correct answer is 1 inch.** **(3.MD.5)** Range = max - min = $8 - 7 = 1$ inch.
- 20) **Choice B is correct.** **(3.OA.4)** Playground: $6 \times 5 = 30$ tiles. Real-world context.
- 21) **Choice C is correct.** **(3.NF.2)** $\frac{1}{2} = \frac{3}{6}$ because both represent one-half of the ribbon.
- 22) **Choice A is correct.** **(3.NF.2)** $\frac{5}{6}$ is much closer to 1 (the right end) than $\frac{1}{6}$ is.
- 23) **Choice D is correct.** **(3.OA.1)** Area = length \times width = $10 \times 3 = 30$ square feet.
- 24) **Choice B is correct.** **(3.MD.8)** 7 columns \times 4 rows = 28 unit squares.
- 25) **Choice A is correct.** **(3.MD.2)** 800 g is more than 500 g, so the left side is heavier.
- 26) **Choice B is correct.** **(3.G.2)** 6 halves divided by 2 halves per whole = $6 \div 2 = 3$ wholes.
- 27) **Choice A is correct.** **(3.OA.9)** The pattern shows 1, 2, 3, 4, so the next number is 5.
- 28) **Choice C is correct.** **(3.NBT.3)** Multiply $9 \times 3 = 27$, then multiply by 10: $9 \times 30 = 270$. Add exactly one zero—not zero zeros, and not two zeros.
- 29) **The correct answer is 15 centimeters.** **(3.MD.10)** $44 = 2\ell + 2(7) = 2\ell + 14$, so $2\ell = 30$ and $\ell = 15$ cm.
- 30) **Choice D is correct.** **(3.OA.7)** If $8 \times 8 = 64$, then $64 \div 8 = 8$. Multiplication and division are related.

Practice Test 2 Answers and Explanations



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A Quiet Word From Your Mentor

Hi, Thoughtful Student,

◇ I want to take a moment to tell you something true: you did excellent work. 3 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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3 GRADE 3 MATH PRACTICE TESTS

Practice Today. *Succeed* Tomorrow!



Give your child the tools to build strong math skills and test confidence!

This book includes 3 full-length Grade 3 Math practice tests that mirror real test formats and cover all key math standards. With a wide range of question types and real-world problems, students will gain the practice and confidence they need to do their best!

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Questions designed to cover essential Grade 3 math standards.



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Multiple-choice, short answer, and more to build well-rounded skills.



Real-World Applications

Engaging problems that connect math to everyday life.



Step-by-Step Progress

Track improvement and build confidence with every test.



Build Skills & Boost Confidence

Strengthen understanding and feel prepared for test day.

COVERS ALL ESSENTIAL TOPICS

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- ✓ Fractions & Decimals
- ✓ Algebraic Thinking
- ✓ Geometry
- ✓ Measurement & Data
- ✓ Number Patterns
- ✓ Word Problems
- ✓ Ratio & Proportion
- ✓ Perimeter, Area & Volume
- ✓ Graphing & Data Analysis
- ✓ And More!



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