Alaska

AK STAR

GRADE 4

Math

IN 30 DAYS



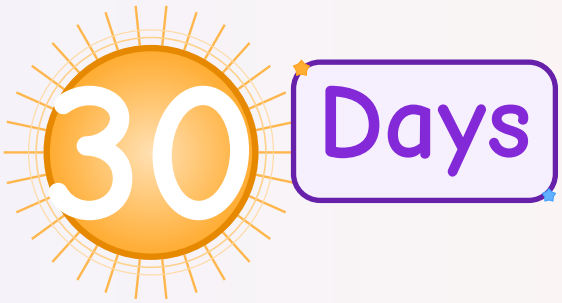


- Focused Daily Lessons
- Practice with Real ACAP Questions
- Step-by-Step Strategies
- Build Confidence & Master Skills

Reza Nazari

Alaska AK STAR Grade 4 Math

in



Everything Students Need to Review, Practice, and Excel on the Alaska AK STAR Math Test

Reza Nazari

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★ Mission Recovery Protocol (After a Mistake) ★

Real spacecraft encounter problems on nearly every mission. Astronauts don't panic — they run the recovery protocol. You have one too!

Phase 1 **Breathe.** A mistake is data. Pilots call it "diagnostic information."

Phase 2 **Locate the error.** Scan each step — where exactly did the problem begin?

Phase 3 **Fix the single broken step.** Don't redo everything — just repair the fault.

Phase 4 **Re-fly the whole problem.** Rework from start to finish with your correction.

Phase 5 **Log it.** Write what went wrong so you never make the same error again.

The astronauts with the best records are not the ones who never had problems. They're the ones who solved them fastest!



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The Ground Crew Handbook

Supporting Your 4th Grader's 30-Day Math Mission

Dear Families,

Every great launch requires a ground crew. In space exploration, the astronauts get the glory — but the engineers, technicians, and support teams on the ground make success possible. In your child's 30-day math mission, **you are the ground crew**.

Alaska AK STAR Grade 4 Math in 30 Days is structured so your child can work through each lesson independently. Your most powerful contribution is not explaining fractions — it is **creating the conditions** for learning: a consistent schedule, quiet space, positive words, and genuine celebration of effort.

This handbook gives you exactly the tools you need for that role.



Mission Control: three links, one goal.

Mission Directive 1: Call for Backup When Needed

Contact your child's teacher or a math tutor if:

- The same topic causes repeated frustration across multiple days
- Study sessions consistently end in crying or complete withdrawal
- Your child shows significant anxiety about the AK STAR test
- A concept is causing confusion you're unsure how to address

Free resources to supplement this book:

- **EffortlessMath.com** — targeted practice by topic, printable worksheets, clear video explanations
- Alaska Department of Education (or your district's) student resources
- Your school's math tutoring or intervention programs
- Study partnerships with other Grade 4 families



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Place Value (Through Hundred Thousands)

Place Value Chart

100,000s	10,000s	1,000s	100s	10s	1s
5	8	3	1	7	4

583,174

Each Digit Has a Value!

- 5 **5** is in the hundred thousands = **500,000**
- 8 **8** is in the ten thousands = **80,000**
- 3 **3** is in the thousands = **3,000**

$500{,}000 + 80{,}000 + 3{,}000 + 100 + 70 + 4$

✎ Practice Questions

Write the value of the underlined digit.

1. $6\underline{3},704$ = _____ **2.** $\underline{5}91,628$ = _____ **3.** $72,\underline{4}93$ = _____

Write each number in expanded form.

4. 48,516 = _____ **5.** 290,347 = _____

Write each number in standard form.

6. $50{,}000 + 6{,}000 + 200 + 80 + 5$ = _____ **7.** $300{,}000 + 40{,}000 + 7 + 2$ = _____

8. $600{,}000 + 20{,}000 + 500 + 60$ = _____ **9.** $80{,}000 + 1{,}000 + 300 + 40 + 6$ = _____

What is the value of the digit 6 in each number?

10. 65,812 = _____ **11.** 416,205 = _____ **12.** 132,609 = _____

What is the value of the digit 3 in each number?

13. 231,456 = _____ **14.** 43,291 = _____ **15.** 903,512 = _____

Challenge!

16. I am a 6-digit number. My hundred thousands digit is 7. My ten thousands digit is 4. My thousands digit is 8. My hundreds digit is 2. My tens digit is 5. My ones digit is 3. What number am I? _____



"Place value is like my tree: climb one branch and every nest holds ten times more acorns—don't drop a digit on the way up!"



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Comparing and Ordering Multi-Digit Numbers

$58{,}104 > 57{,}890$
Greater Than

$34{,}602 < 35{,}100$
Less Than

$61{,}400 = 61{,}400$
Equal To

How to Compare Numbers

1. Check the **number of digits** first
2. If equal, compare from the **left**
3. Find the first different digit

Example: Compare 58,104 and 57,890
Both have 5 digits. Ten-thousands equal (5=5)
Thousands: 8 > 7, so **58,104 > 57,890**

✎ Practice Questions

Compare. Write >, <, or = in each circle.

17. 51,604 ◯ 51,406 **18.** 94,218 ◯ 49,218 **19.** 203,700 ◯ 203,700

20. 8,150 ◯ 9,099 **21.** 412,630 ◯ 412,603 **22.** 70,518 ◯ 70,815

Order from least to greatest.

23. 62,340; 26,430; 63,024

_____ < _____ < _____

24. 150,600; 156,000; 150,060

_____ < _____ < _____

Order from greatest to least.

25. 81,450; 81,054; 81,540

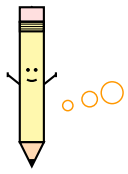
_____ > _____ > _____

26. 318,200; 381,200; 318,020

_____ > _____ > _____

Challenge!

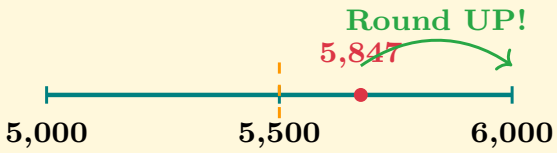
27. Four towns had these populations: Oakdale: 104,320. Maple Ridge: 105,100. Pineview: 104,230. Cedar Creek: 103,950. Write the towns from smallest to largest population. _____, _____, _____, _____



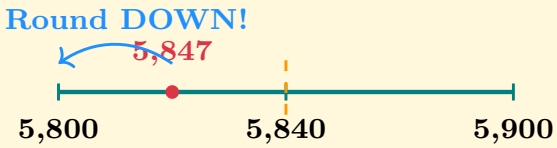
"Comparing numbers is a race from the left: the first digit that isn't tied breaks the tie—no peeking from the cheap seats!"

Rounding to the Nearest 10, 100, and 1,000

Round 5,847 to the nearest 1,000



Round 5,847 to the nearest 100



Rounding Rules

5 or more? Round **UP!** ↑

4 or less? Round **DOWN!** ↓

! Look at the digit to the **RIGHT**!

5,847 to nearest 1,000:

Look at hundreds: **8** $\geq 5 \rightarrow$ Round up to **6,000**

5,847 to nearest 100:

Look at tens: **4** $\leq 4 \rightarrow$ Round down to **5,800**

✎ Practice Questions

Round each number to the nearest 10.

1. 2,863 ≈ _____ **2.** 6,294 ≈ _____ **3.** 4,556 ≈ _____ **4.** 9,341 ≈ _____

Round each number to the nearest 100.

5. 3,672 ≈ _____ **6.** 8,235 ≈ _____ **7.** 7,650 ≈ _____ **8.** 5,428 ≈ _____

Round each number to the nearest 1,000.

9. 8,312 ≈ _____ **10.** 4,621 ≈ _____ **11.** 24,400 ≈ _____ **12.** 76,890 ≈ _____

Challenge!

13. A library has 41,520 books. The librarian says, "We have about 42,000 books." To which place did the librarian round? _____

14. A classroom corner library has 487 brand-new books. The teacher tapes a sign on the door: "Come in—we have about 500 books waiting for you!" To which place did the teacher round? _____



"Rounding is nudging a number to the nearest comfy perch—neighbor 5 or more? Flap up; 4 or less? Stay put!"



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