

Discovering Addition and Subtraction

Family Guide | Grade K | Unit 4

Your student is exploring that addition and subtraction are the mathematics of parts and totals.

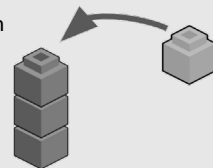


Key Math Ideas

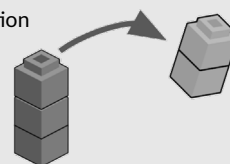
In Unit 3, students put parts together to find the total. In this unit, students explore **active addition and subtraction**, where they begin with one amount and then a change occurs, such as adding or removing a cube from a stack, to get a new amount.

Students progress to representing active addition and subtraction with equations and drawings. They learn to determine whether a situation uses addition or subtraction.

Active Addition
 $3 + 1 = 4$

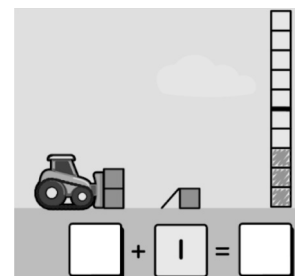


Active Subtraction
 $5 - 2 = 3$



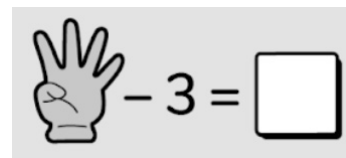
→ In the first part of the unit, your student will learn to

- use informal language to describe active addition scenarios;
- use objects, drawings, the number path, and equations to represent active addition scenarios.



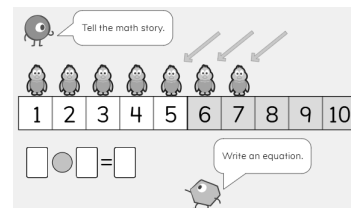
→ In the middle of the unit, your student will learn to

- use informal language to describe active subtraction scenarios;
- use objects, drawings, the number path, and equations to represent active subtraction scenarios.



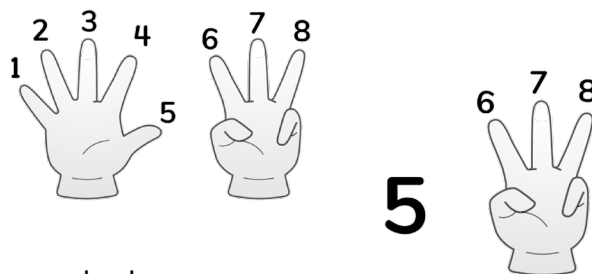
→ In the last part of the unit, your student will learn to

- explain that addition and subtraction are opposite actions and can undo each other ("There were 4 birds. Then 3 birds came. Then 3 birds flew away. $4 + 3 - 3 = 4$.");
- determine whether a situation requires addition or subtraction and represent it with drawings, equations, and objects.



Helpful Hint

When asked to combine two amounts, students will initially count each group, then start over from 1 to count them all. In this unit, students will begin to transition to counting on, starting from the total for one group instead of re-counting both amounts. Support counting on by encouraging your student to whisper count the first amount and then count the second amount at a normal volume.



Tips for Supporting Your Student at Home

Questions to Ask Your Student



→ In the first half of the unit:

- How does this equation match this math story?
- What strategy did you use to find the total? (addition)
- What strategy did you use to find how much is left? (subtraction)
- How could you tell this math story with words?

→ In the last half of the unit:

- Should we use addition or subtraction? How do you know?

If...

your student is incorrectly identifying whether to add or to subtract . . .

Try...

act it out with a household object, like dried beans or rocks.

Student Strengths Spotlight

We learn from our mistakes.

Students practice identifying mistakes and recognizing that a mistake is an opportunity to learn.

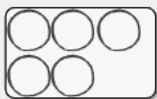
We try our best.

Students solve word problems by using a range of problem-solving skills, even when it feels difficult or confusing.

Try This Together!

- **Block Towers.** Tell addition and subtraction stories with your student about building or knocking down block towers ("My tower had 5 blocks. Then 2 blocks fell off.") Act out each story to answer, "How many blocks are there now?"
- **Drawing Stories.** Tell a story about something round (grapes, tires, bagels) or straight (pencils, sticks). Write an addition or subtraction equation and have your student draw a math picture to match the story.
- **Counting On Challenge.** Say a number between 1 and 5 and hold up some numbers on one hand, while your student counts on to find the total. For example, say "three" and hold up four fingers. Your student will count on, "I have 3. 4, 5, 6, 7."
- **Number Path.** Make a number path and put small objects or toys over some numbers starting from 1. Roll a die and either add or subtract that number of objects. Notice how the last number with an object helps students to figure out how many.

$$3 + 2 = 5$$



$$3 - 2 = 1$$

