

## Family Support Materials

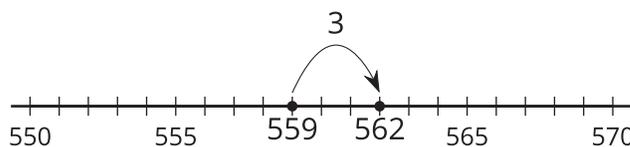
### Adding and Subtracting within 1,000

In this unit, students use place value understanding, the relationship between addition and subtraction, and properties of operations to add and subtract within 1,000.

#### Section A: Add and Subtract within 1,000 without Composition or Decomposition

In this section, students add and subtract within 1,000 using strategies where they do not make or break apart a ten or a hundred. The number line diagram is used to help students recognize that when numbers are relatively close, they can count on or count back to calculate the difference.

For example, students notice that  $562 - 559$  is easier to solve by counting on from 559 to 562 than using a formal procedure to subtract.



Students then engage in problems that encourage them to use the relationship between addition and subtraction to reason about sums and differences. They analyze and connect methods that use number lines, base-ten diagrams, and equations. They calculate sums and differences using methods that make sense to them.

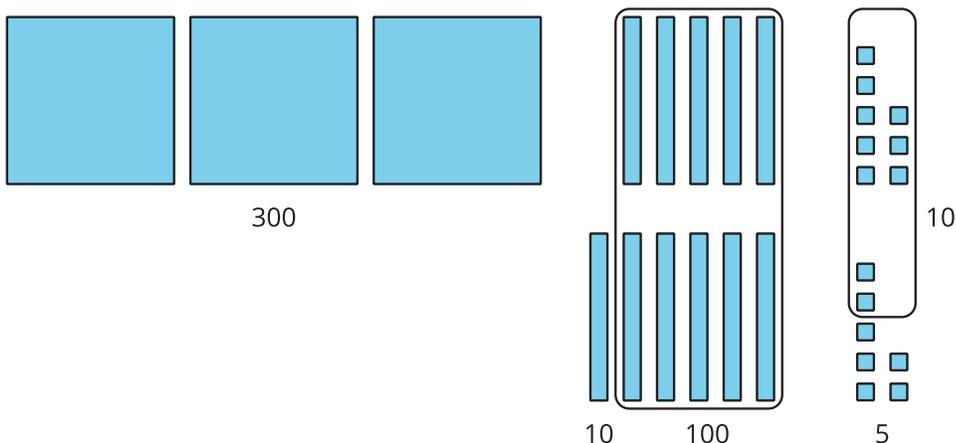
#### Section B: Add within 1,000 using Place Value Strategies

This section introduces the idea that when adding three-digit numbers, it is sometimes necessary to compose (make) a hundred from 10 tens. Students begin the section with sums that allow them to decide when to

make a new ten (for example  $414 + 28$ ). They then work with larger values in the tens place and determine whether to compose a hundred (for example,  $736 + 91$ ). As the section progresses, students compose 2 units to find sums using place value strategies, and experience adding two- and three-digit numbers to three-digit numbers (for example,  $149 + 282$ ). Throughout the section students use base-ten blocks, base-ten diagrams, expanded form, and other equations to build conceptual understanding and show place value reasoning.

*Priya and Lin were asked to find the value of  $358 + 67$ .  
What do you notice about their work?*

*Priya's Work*



$$300 + 100 + 10 + 10 + 5$$

$$400 + 20 + 5 = 425$$

*Lin's Work*

$$3 \text{ hundreds} + 11 \text{ tens} + 15 \text{ ones}$$

$$11 \text{ tens} = 110$$

$$15 \text{ ones} = 15$$

$$300 + 110 + 15 = 425$$

## Section C: Subtract within 1,000 using Place Value Strategies

Similar to their work in the previous section, students subtract numbers within 1,000 using place value strategies that involve decomposing (taking apart) a ten, a hundred, or both. As they subtract by place, hundreds from hundreds, tens from tens, and ones from ones, they experience exchanging a ten for 10 ones or a hundred for 10 tens when needed.

For example, this is a helpful way to represent 244 if you need to subtract a number with more than 4 ones:



Throughout the section, students compare the steps they use when they decompose and the different ways they can represent and record the units they decompose.

### Try it at home!

Near the end of the unit, ask your student to do the following problems:

- $372 + 294$
- $421 - 203$

Questions that may be helpful as they work:

- Do you need to compose (put together) or decompose (take apart) any tens or hundreds?
- Can you show your thinking with a diagram?
- Is there another way to solve this problem?