Addition and Subtraction Within 200 with Word Problems to 100

In this 31-lesson module, students will work on fluency in addition and subtraction up to 100. They will also build conceptual understanding of adding and subtracting multi-digit numbers to 200, and will apply their skills when solving problems.

Building the number 234 with place value cards showing the following:
2 = 2 hundreds = 200
3 = 3 tens = 30
4 = 4 ones = 4

So 234 = 200 + 30 + 4!

Key Vocabulary:

Minuend: A quantity or number from which another number is to be subtracted

Subtrahend: A quantity or number being subtracted from another

Difference: The solution to a subtraction problem

Place value: Referring to the unit value of each digit in a given number

Place Value Chart: (see reverse): A graphic organizer that students can use to see the coherence of place value and operations between different units.

This is a picture of the method known as "*totals below*", in which students decompose multi-digit numbers into like place-value groups as they add.

What Came Before this Module:
Students expanded their understanding of unit and of place value by bundling ones, tens, and hundreds with sticks.

What Comes After this Module:
In Module 5, we will continue to strengthen and deepen our conceptual understanding of addition and subtraction, working with numbers up to 1000.

How you can help at home:

- Continue to ask how many ones, tens, and hundreds are in numbers that you and your student come across

- When possible, encourage your student to explain their mathematical thinking by drawing a diagram or picture that links to their addition and subtraction problems

Key Common Core Standards:

- **Represent and solve problems involving addition and subtraction**

- **Use place value understanding and properties of operations to add and subtract, including:**

  o Fluently add and subtract within 100

  o Add and subtract within 200, using concrete models or drawings and strategies based on place value, and explaining chosen strategies in writing

Place Value Chart Without Headings
(Used with labeled materials such as disks)

Hundreds	Tens	Ones

Place Value Chart with Headings
(Used with unlabeled materials such as base-ten blocks or bundles)

Spotlight on Math Models:

Place Value Charts

You will see this mathematical representation throughout the grades in *A Story of Units*.

A Story of Units has several key mathematical "models" that will be used throughout a student's elementary years.

The place value chart is a graphic organizer that students can use to see the coherence of place value and operations between different units. It enables students to discover the value of each digit in a given number at the concrete level, as they represent numbers with place value disks or bundles. Use of the place value chart begins in Grade 1 as students learn about tens and ones, and continues through the use of decimals in Grade 5. The place value chart is a flexible tool.

Young students can place chips on the chart, and physically move them as they bundle and group numbers. Older students can quickly create their own place value charts to illustrate their thinking for a problem and show their understanding of more complex numbers. In second grade, students use the chart extensively as they work to build their understanding of numbers up to 1000, and will often be asked to use the chart to illustrate how to compose and decompose numbers.

Module 4 Sample Problem (Lesson 15): Model 172 – 48 using the place value chart.