Grade 2

Unit 6:
Addition, Subtraction, and the Number System

About this Unit

Throughout this unit, students continue to build their understanding of place value (ones, tens, hundreds). They compose and decompose numbers into tens and ones and work with contexts and models for the base-10 number system. Students apply their work with place value as they play games that involve composing, decomposing, and comparing numbers up to 1000 and solve addition and subtraction problems within 1000. Work continues on developing coin equivalencies and combinations, developing visual images of numbers, and telling time.

Story Problems with Stickers

Students continue to work with the context of sticker problems. This context provides students with a way of visualizing and representing numbers in tens and ones.

These are examples of how students might solve a sticker problem and represent their work.

Addition and Subtraction within 1000

In this unit, students work on strategies for adding and subtracting 2 and 3-digit numbers. These strategies include breaking numbers apart by place value and adding the tens to the tens and ones to the ones and then combining the two sums. Another strategy is to keep one number whole and break the other number apart into tens and ones in order to add ten or multiples of ten and then the ones to the whole number. These are some examples of how students may solve a problem using the these two strategies.

> For a present, Sally got 5 strips of ten stickers and 3 single stickers from her mom and 1 strip of ten and 7 single stickers from her dad. How many stickers does Sally have in all?

Keep one number whole
(and add the other number in parts)

$53 + 17 =$

Strategy A	Strategy B
$53 + 10 = 63$	$53 + 7 = 60$
$63 + 7 = 70$	$60 + 10 = 70$

Strategies for Adding
Two 2-Digit Numbers

Adding tens and ones

$53 + 17 =$

$53 = 50 + 3 \qquad 17 = 10 + 7$

$50 + 10 = 60$

$3 + 7 = 10$

$60 + 10 = 70$

These 2 students kept the 53 intact and added the 17 in parts.

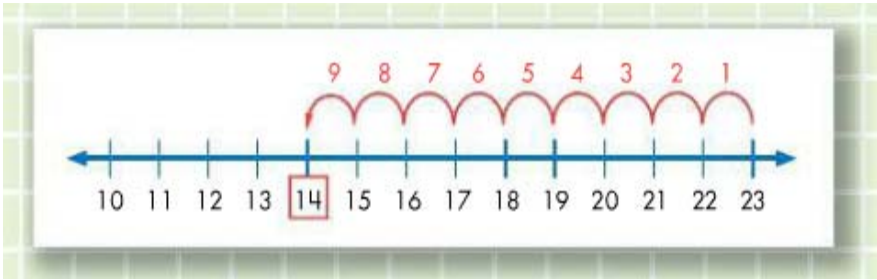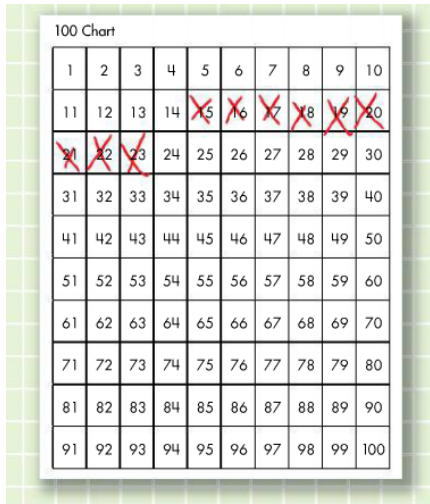This student broke both numbers into tens and ones in order to make it easier to add.
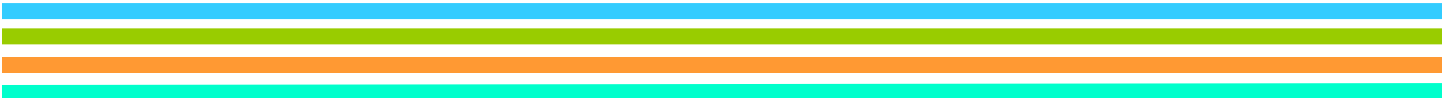
Using the Number Line and Hundred Chart to Solve Problems

Students use the number line and hundred chart to solve problems. Both these tools help students visualize the operations and relationships in addition and subtraction problems.
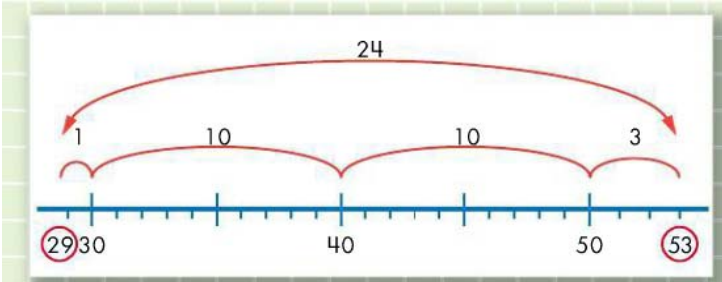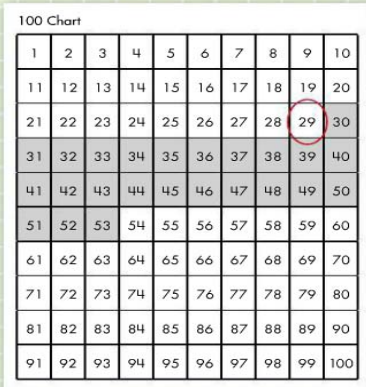
$$23 - 9 = \_\_\_$$

This student found the number 23 on the number line and subtracted 9 by counting back.

This student found the number 23 on the hundred chart and subtracted 9 by crossing out nine numbers starting with 23.

How far is it from 29 to 53?

$$29 + 1 + \underline{10} + \underline{10} + 3 = 53$$

$$29 + \underline{24} = 53.$$

This student added one to get a multiple of ten, 30. Then they added multiples of ten to get to 50 and three more to reach 53. The jumps are then added together to find the difference.

$$29 + \underline{10} + \underline{10} + \underline{4} = 53$$

$$29 + \underline{24} = 53.$$

This student used the hundred chart to add multiples of ten to get close to 53 and then by ones. This is the "think addition" strategy.
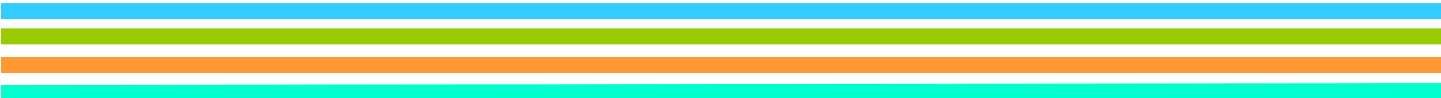
Helping Your Child at Home

- Give your child an addition or subtraction number sentence and ask them to create a story problem to go with the number sentence.
- Add the ages of everyone in your house together.
- Have students guess a mystery number by giving them clues (more or less than _____, the digits added together equal _____, has ____ tens and _____ ones).
- Choose a number that you will call the "Number of the Day." Ask your child to think of different ways to make the number using coins.
- Practice counting by 2s, 5s, and 10s with your child while doing various activities like driving in the car, jumping rope, waiting in line at a store, etc.
- Ask addition or subtraction questions while playing or watching sports. For example, what is the score of both teams combined? How many more points does Team A need to equal Team B?

Visit These Websites for Interactive Math Activities

- Counting Coins (http://www.abcya.com/money_bingo.htm)
Students learn about counting coins.

- Investigations (http://investigations.terc.edu/library/Games_23.cfm)
Students can explore a variety of games leveled for 2-3 students focusing on numbers, addition and subtraction, place value, money, and other mathematical topics.

- Soft Schools (http://www.softschools.com/math/games)
Students can explore many games at different levels of difficulty focusing on addition and subtraction.

- Second Grade Math Games (http://www.ixl.com/math/grade-2)
Students can play a variety of math games for grade 2.

- Shepard Software (http://www.sheppardsoftware.com/mathgames/fruitshoot/fruitshoot_addition.htm)
Students can practice addition through many different games.