Objectives

♦ Review addition and subtraction facts within 10.
♦ Review mental math strategies for addition within 20.
♦ Review mental math strategies for subtraction within 20.

Note

Students should already know addition and subtraction facts through 10, and probably through 20. However, the strategies shown in this lesson, which were taught in *Primary Mathematics* 1A, will help them if they forget a fact and are applicable to strategies which will be taught later. They enhance a student's number sense and understanding of place-value. Some students are very good at math concepts, but do not memorize math facts well. These strategies will allow them to quickly add and subtract within 20 by using facts within 10.
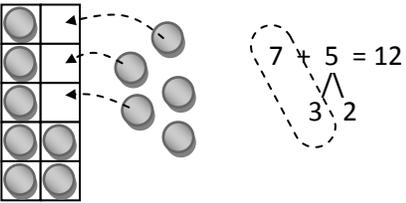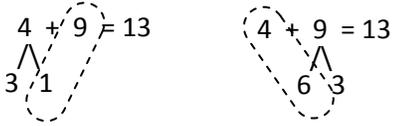
Review: Facts to 10	Mental Math 2-4
Make sure students know the addition and subtraction facts to ten. You can quiz them orally or use Mental Math 2-4 in the appendix.	
Add by making a ten	
Write the expression **7 + 5** on the board. Draw a 2 by 5 grid and draw circles or place counters in 7 spaces (filling up 5 in a row first). Draw or show 5 more counters outside of the grid. Ask students how many more are needed to make a ten. Three more are needed, so move three counters into the empty spaces. Ask students how many counters are left over as ones. There are two. So 7 + 5 is the same as 10 and 2. Show students the working with a number bond, splitting 5 into 3 and 2.	7 + 5
Write the expression **4 + 9** on the board. Ask for suggestions on how to make a ten. Point out that we can either make a ten with the 4 or with the 9 and show both ways with number bonds. Usually it is easier to make a ten with the larger number.	4 + 9
Repeat with other examples as needed, allowing students to use a grid and counters if needed. Write some addition problems and ask how many are needed to make a ten with one of the digits, and how many are left over.	$8 + 5 = 10 +$ ____ (3) $7 + 4 = 10 +$ ____ (1) $6 + 9 = 10 +$ ____ (5)
Subtraction strategies	
Write the expression **18 − 5**. Illustrate the number 18 with ten counters on a grid and 8 off the grid. Ask students how we can subtract 5. We can simply subtract 5 ones from 8 ones. 8 − 5 is 3, so 18 − 5 is the same as 10 and 3. The answer includes the ten that we still have. Show the process with a number bond, splitting 18 into 10 and 8.	18 − 5