

Tools for Instruction

Sums of Ten

Objective Find the different pairs of addends with a sum of 10.

Materials 10 each of two different-color counters, **Sums of 10 Tables** (page 3)

Counting is the basic skill that leads to the understanding of numbers and operations. Once students are able to use one-to-one correspondence to count items in groups, they are ready to examine what happens when items are added to or taken away from a group. This activity focuses on combining groups using the part-part-whole relationship. Students find all of the pairs of numbers that add to 10, and see that the two numbers can be added in either order. Work with the meaning of addition and informal use of the commutative property of addition supports an algebraic understanding of basic facts and mental math skills.

This is intended to be a challenge activity, so refrain from providing answers. If the student is not successful, let him or her know there will be an opportunity to return to try this challenge again at a later date.

Step by Step 20–30 minutes

1 Model using counters to show sums.

- Demonstrate with counters how to show that 4 and 6 is 10. Use 4 counters of one color and 6 counters of a different color.

2 Find pairs with sums of 10.

- Give the student a copy of **Sums of 10 Tables** (page 3). Show the student Table A and the counters, and explain that she will use this table to show all of the different ways that two groups can be added to make 10. Point to the 1 in the table and then pull one counter. Ask the student to use different colored counters to show how many more counters are needed to make 10.
- Show the student where to write 9 in the table. Be sure she makes the connection between the single counter and the numeral 1, and the 9 counters and the numeral 9.
- Challenge the student to use the counters and the table to find all of the other addend pairs for 10. Remind her to start with the number given in each row of the table. Assist as necessary.

Table A

Whole = 10	
Part	Part
1	
2	
3	
4	
5	

3 Find other pairs.

- Show the student Table B. Ask her to repeat what she did in Step 2 to fill in this new table. Support where appropriate.

Table B

Whole = 10	
Part	Part
9	
8	
7	
6	
5	

4 Compare the tables.

- Have the student examine the tables side-by-side. Ask: *How are the tables the same? How are they different?* Discuss the idea that the pairs of numbers in both tables are the same, but the order of the numbers in each pair is different.
- Ask the student to describe what happens to the sum if the numbers are added in a different order. Look for an understanding that the order does not change the sum, supported by modeling sums with counters.

Check for Understanding

Give the student different-color counters and ask her to demonstrate and explain how to find all of the different number pairs that sum to 8.

Use the chart below to support the student as needed.

If you observe...	the student may...	Then try...
the student does not find all of the pairs	not have thought through a strategy to accomplish this task.	letting the student know that there is one (or more) additional pair(s). Ask her to think about how she can organize her answers, or you might provide a blank table as a starting point.

Name _____

Sums of 10 Tables

Table A

Whole = 10	
Part	Part
1	
2	
3	
4	
5	

Table B

Whole = 10	
Part	Part
9	
8	
7	
6	
5	