Dialogue Box

Adding with Stickers

In Session 1.1, the teacher presents students with the following story problem:
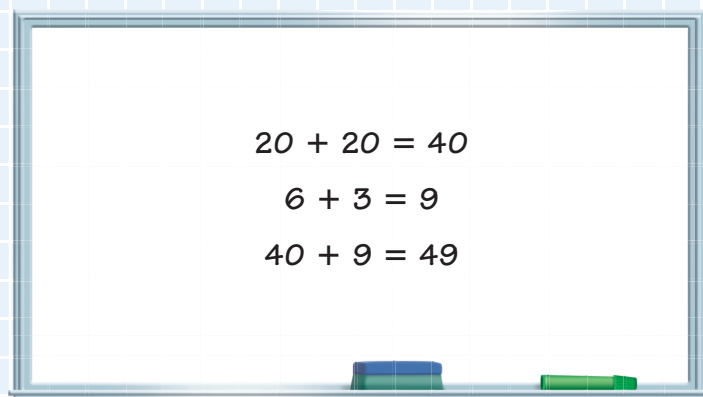
Sally went to Sticker Station. She bought 2 strips of ten star stickers and 6 single star stickers. She also bought 2 strips of ten moon stickers and 3 single moon stickers. How many stickers did Sally buy?

As the students were working, the teacher circulated, taking note of the strategies students use. Knowing that the discussion at the end of the class will focus on adding by place, the teacher identifies students who are using this strategy. The teacher asks Carolina to share first.

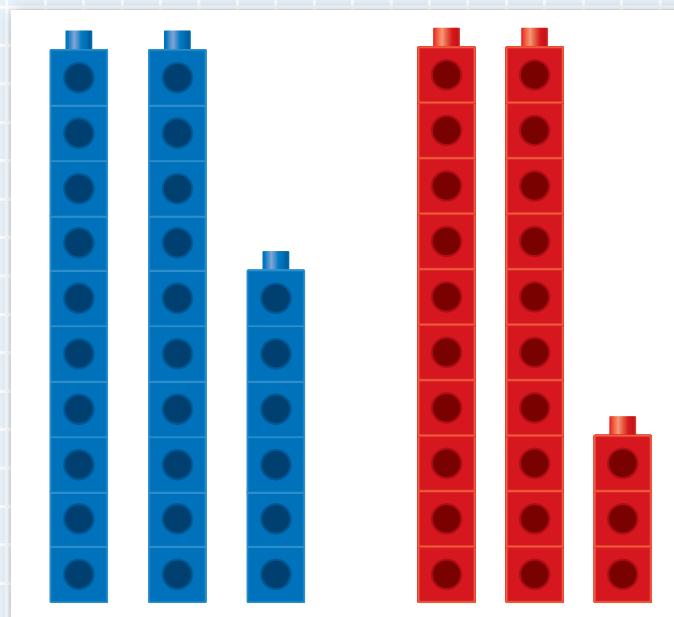**Teacher:** Carolina, how did you solve the problem?

Carolina: I did the strips all at once. I did 20 + 20 equals 40 and 6 + 3 equals 9 and 40 plus 9 equals 49.

The teacher records the following equations on the board:

$$20 + 20 = 40$$
$$6 + 3 = 9$$
$$40 + 9 = 49$$

Teacher: She pulled out the strips of ten stickers to get 40 and then she put the singles together to get 9. And then she added the 40 and the 9 to get 49. Roshaun, can you show us what this strategy would look like with cubes?

Roshaun makes two towers of ten blue cubes, one tower of six blue cubes, two towers of ten red cubes, and one tower of three red cubes.

Roshaun: The blue cubes are the 26 and the red cubes are the 23. Carolina took the towers of ten and put them together for 40. And then she took these [points to the blue tower of six and the red tower of three] and put them together for nine.

Juanita: I did it like Carolina. I took the 20 from the 26 and the 20 from the 23. 20 plus 20 is 40 and 6 plus 3 is 9 and 40 plus 9 equals 49.

Teacher: What did you break the 26 and 23 into?

Juanita: 10s and 1s.

Teacher: Both of them used a strategy we've been calling adding 10s and 1s.

Monisha: I did it a little different. I put 26 + 20 equals 46.

Teacher: Where did you get the 26?

Monisha: That's how many star stickers she had.
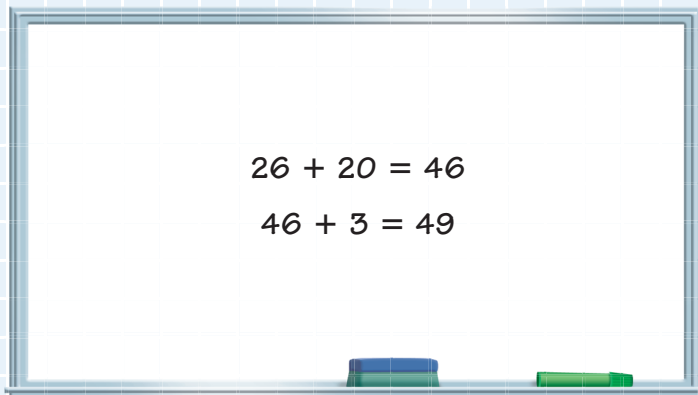
Teacher: And the 20?

Monisha: That's two strips of moon stickers.

Teacher: You first added *some* of the moon stickers, the two strips of ten. Then what did you do?

Monisha: Then I added the three singles and got 49.

The teacher records the following equations on the board:

$$26 + 20 = 46$$
$$46 + 3 = 49$$

Teacher: So Juanita broke apart both numbers into 10s and 1s and Monisha kept one number whole and broke the other number up into 10s and 1s. We are going to talk more about Monisha's strategy tomorrow.

Discussing students' strategies provides an opportunity to explain the strategy of adding by 10s and 1s by combining the 10s and the 1s and then adding the results.