Relationship Between Addition and Subtraction

Lesson 6: Balancing Equations II

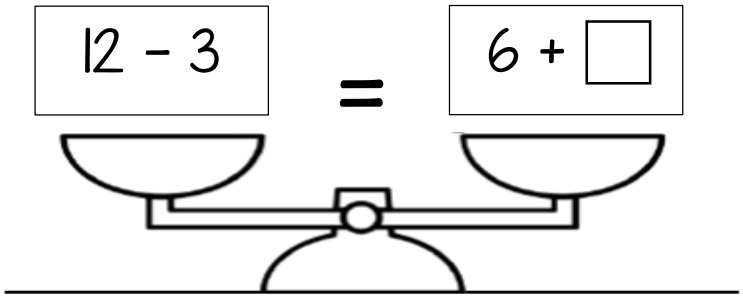
Rationale: Students should be using concrete tools to solve all these problems, whenever needed. This is a good opportunity for students to choose their favorite tool to solve problems. Please have students be flexible with the placement of the equal sign and show it in multiple places within each equation.

Objective: I can balance number sentences using tools and strategies

Vocabulary: Add, subtract, equals, the same as

Materials: Math tools, dry erase board and marker

1. Project on the board:



2. Ask students what equal means. It means "is the same as" and it's also a way to make sure there is a balance on each side of the number sentence. Each side does not need to look the same, but it does need to have the same value.

3. Say, "Let's balance this scale. Right now, it's not balanced. Turn and tell your partner why the scale is not balanced."

4. Which side can you solve? (12 - 3)

5. Write 9 above the equation 12 - 3 and circle it. "That means the right side must also have a value of 9." Write 9 above 6 + □ and circle it.

6. "If we are going to balance this scale, what do we need to do to make this side equal 9?" Point out the MYSTERY. "We have another math job to do."

REMIND STUDENTS:

When we add, we only add our parts.

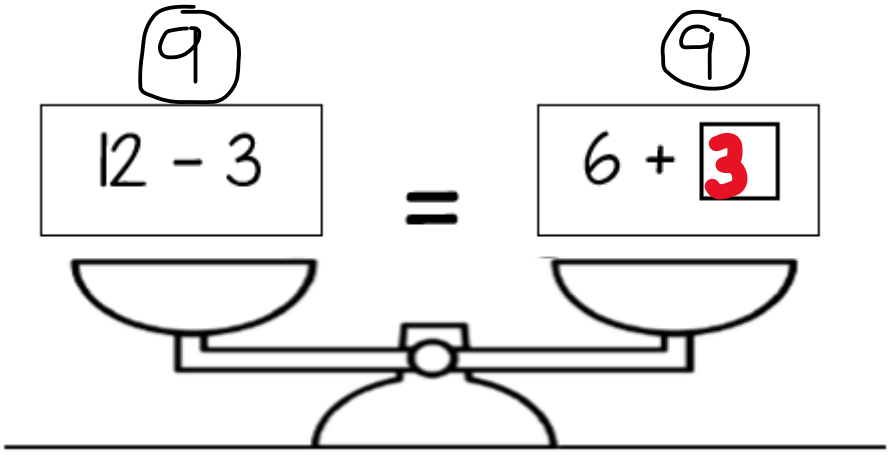
When we subtract, we start with the whole.

Each side of the equal sign must have the same value.

7. When we add, we only add our parts. We must be missing a part.

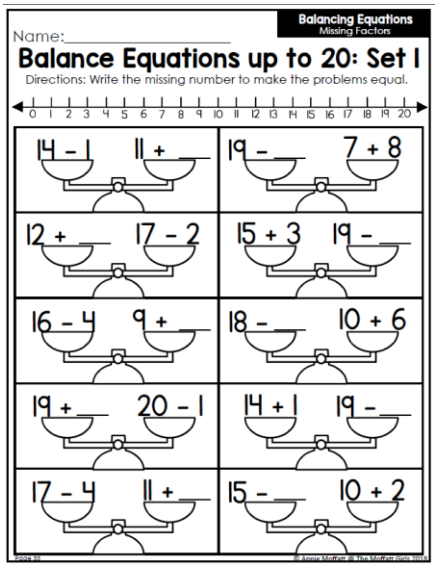
8. "What part do we add to 6 to get a whole group of 9? (3)

9. Replace the "□" with a 3. Have students chorally read the number sentence that is now balanced.



10. Repeat with other examples.

11. Must Do Worksheet


Name:_____

Balancing Equations
Missing Factors

Balance Equations up to 20: Set I

Directions: Write the missing number to make the problems equal.

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

14 - 1 = 11 + ___	19 - ___ = 7 + 8
12 + ___ = 17 - 2	15 + 3 = 19 - ___
16 - 4 = 9 + ___	18 - ___ = 10 + 6
19 + ___ = 20 - 1	14 + 1 = 19 - ___
17 - 4 = 11 + ___	15 - ___ = 10 + 2