

Properties of Operations as Strategies - Step-by-Step Lesson**Lesson 1 Properties of operations:**

1. Use the commutative property of addition

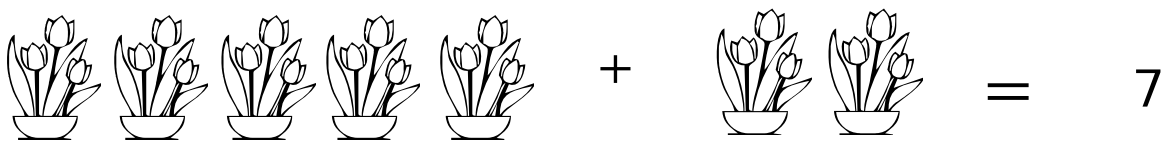
$$2 + 5 = 5 + 2$$

**Explanation:**

Step 1) This is the commutative property of addition.

This means that when adding two numbers, the order in which the two numbers are added does not change the sum (total value).

The example given above will give you the same answer when the left and right side of the equation are added.



Name _____

Date _____

2. Associative property of addition

Suppose I go to the supermarket and buy ice cream for 2 dollars, bread for 5 dollars, and milk for 3 dollars. How much do I owe? How would you set up the problem?

$$2 + 5 + 3$$

$$(2 + 5) + 3$$



+



+



\$2

\$5

\$3

Step 1) "How much money do I owe the cashier?"

Step 2) For calculating the total amount I have to add the price of all the three products.

In Associative property, we can add any two product prices first and then add it with the other product. Such as first we add bread and ice cream price and then add the result to the price of milk.

Both ways of approaching the problem give the same answer.

$$2 + 5 = 7 \text{ (This is adding price of ice cream and bread first)}$$

$$7 + 3 = 10$$

Another way to add is to add not according the order in which they appear.

We conclude that $(2 + 5) + 3 = 2 + (5 + 3)$

