ASSOCIATIVE PROPERTY

The **associative property** states that when you are adding or multiplying numbers, it does not matter how the numbers are group. This means that it doesn't matter where you place the parentheses.

This property can only be used for addition and multiplication.

Addition	**Multiplication**
$a + (b + c) = (a + b) + c$	$a \cdot (b \cdot c) = (a \cdot b) \cdot c$

EXAMPLE USING ADDITION:

When three or more numbers are added together, any two or more can be grouped together and the sum will be the same.

$$(14 + 6) + 7 = 14 + (6 + 7)$$
$$20 + 7 = 14 + 13$$
$$27 = 27$$

On the left, adding 14 + 6 gives us 20. Then adding 20 + 7 gives us 27. On the right, adding 6 + 7 gives us 3. Then adding 13 + 14 gives us 27.

EXAMPLE USING MULTIPLICATION:

When three or more numbers are multipied, any two or more can be grouped together and the sum will be the same.

$$(3 \cdot 5) \cdot 6 = 3 \cdot (5 \cdot 6)$$
$$15 \cdot 6 = 3 \cdot 30$$
$$90 = 90$$

On the left, multiplying 3 · 5 gives us 15. Then multiplying 15 · 6 gives us 30. On the right, multiplying 5 · 6 gives us 30. Then multiplying 3 · 30 gives us 90.

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