



ASSOCIATIVE PROPERTY

The *associative property* states that when you are adding or multiplying numbers, it does not matter how the numbers are grouped, meaning it doesn't matter where you put the parenthesis.

The *associative property* cannot be used for subtraction or division.

Example of associative property in addition:

$$a + (b + c) = (a + b) + c$$

When 3 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 hand side, adding $14 + 6$ gives you the sum of 20. We then add 20 to 7 for a sum of 27. On the right hand side, we add $6 + 7$ to get 13. We then add $13 + 14$ together to get the sum of 27.

Example of associative property in multiplication:

$$a (b \times c) = (a \times b) c$$

When 3 or more numbers are multiplied together, any two or more can be grouped together and the product will be the same.

$$(3 \times 5) \times 6 = 3 \times (5 \times 6)$$

$$15 \times 6 = 3 \times 30$$

$$90 = 90$$

On the left hand side, multiplying 3×5 gives you the product of 15. We then multiply 15×6 for a product of 90. On the right hand side, we multiply 5×6 to get 30. We then multiply 3×30 to get the product of 90.

You can see that the left side is written differently than the right side, but we still get the same answer as the right hand side.