

The Distributive Property

Step 1: Identify the number you are distributing

(it's always the # on the outside of the parenthesis)

$$6(4 + 5)$$

Step 2: Distribute that number to each term in the ().

$$6(4 + 5)$$
$$6 \cdot 4 + 6 \cdot 5$$

Step 3: Solve both multiplication problems

$$6(4 + 5)$$
$$6 \cdot 4 + 6 \cdot 5$$
$$24 + 30$$

Step 4: Finish solving the problem (as much as you can)

$$6(4 + 5)$$
$$6 \cdot 4 + 6 \cdot 5$$
$$24 + 30$$

$\textcircled{54}$ final answer

Additional Examples

(with variables)

$$7(3y + 2)$$

$$7 \cdot 3y + 7 \cdot 2$$

$$21y + 14$$

this is your final answer - why?

You cannot solve this problem any further because you do not know the value of the variable

$$(10b - 5)12$$

$$12 \cdot 10b - 12 \cdot 5$$

$$120b - 60$$

You can't simplify your answer any further because you do not know the value of the variable!

* Note: the outside term does not always come at the beginning of the problem - it can also come at the end of the problem but the process does not change!