You can only combine terms that have the same variable.

$$8a + 6c - 2a + 5c$$
$$8a - 2a + 6c + 5c$$
$$6a + 11c$$

*Remember to keep the sign with the number!!

Examples:

1. $10x - 6y + 5x$ 2. $3y - 9y + 5w + 2w$

Solving - Combining Like Terms

We <u>simplify expressions</u> like $3a + 5a + 2$

We <u>solve equations</u> like $3a + 5a + 2 = 34$

ONLY find solutions by solving when there is an equal sign.

SIMPLIFY   SOLVE
$9x - (3x - 8)$ $9x - (3x - 8) = 20$

3. $4x + 2x = 24$ 4. $5a - 2a = -30$

5. -6x – x + 3 = -4

6. 9 – 2c + 6c = 29

7. 2b + 7 – 3b = -5

8. -19 = 10x + 8 – x

9. The sides of a triangle are (x + 12), (2x + 4), and (x). Find the value of x if the perimeter of the triangle is 180 inches.

10. The sides of a triangle are (x + 3), (x + 4), and (x + 7). Find the length of the longest side if the perimeter of the triangle is 104 inches.