

## SOLVING EQUATIONS W/LIKE TERMS



**Do you remember how to combine like terms?**

1.  $a + 6a + 8a =$  \_\_\_\_\_
2.  $b + 2b - 5b - 17 =$  \_\_\_\_\_
3.  $-2c + 8 - 1 - 7c =$  \_\_\_\_\_
4.  $7a^2 - b - c - a^2 - b + c =$  \_\_\_\_\_
5.  $4xy - 4xz + 7xy - 11yz =$  \_\_\_\_\_

**Example:**

$$4x^2 + 3xy - 14x + 7xy + x^2$$

$$4x^2 + 3xy - 14x + 7xy + x^2$$

$$5x^2 + 10xy - 14x$$

**EXAMPLES: Solve each equation showing all steps.**

1)  $5x - 3 + 2x = -31$        $x =$  \_\_\_\_\_

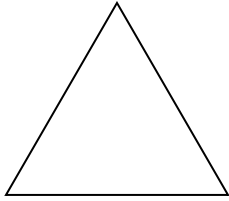
2)  $-7 + 6w + 22 = -45$        $w =$  \_\_\_\_\_

3)  $\frac{2}{7}c - 17 + \frac{8}{7}c = 23$        $c =$  \_\_\_\_\_

4)  $-0.3 = 5f + 12 - 2.4f + \frac{3}{2}f$        $f =$  \_\_\_\_\_

**EXAMPLES: Write an equation for each situation and solve.**

5) The perimeter of a triangle is 87 cm. If the three sides of the triangle are  $x + 1$  cm,  $2x - 1$  cm, and  $4x + 3$  cm, what is the length of each side?



Equation: \_\_\_\_\_

6) The length of a rectangle is 3 more than half of the width. If the perimeter is 60 cm, find the length.



Equation: \_\_\_\_\_

7) Jacob sold 8 more calendars to raise money for athletics than Colton. Together they sold 42 calendars. How many athletic calendars did Jacob sell?

Equation: \_\_\_\_\_

8) Martha takes her niece and nephew to a concert. She buys T-shirts and bumper stickers for them. Martha's niece wants 1 shirt and 4 bumper stickers, and her nephew wants 2 shirts but no bumper stickers. If Martha's total is \$67, what is the cost of one shirt?

Equation: \_\_\_\_\_

