

What does it mean for two (or more) terms to be **Like Terms**?

**Like Terms** are terms that have the same variables with the same exponents

$$3xy \text{ \& } 4yx$$

$$3x^2 \text{ \& } 4x^2$$

$$7xw^3 \text{ \& } -8xw^3$$

Simplify each of the following:

$$1. \quad -x^2 + \overbrace{5x - 4}^{2x} - 3x + 2$$
$$= -x^2 + 2x - 2$$

$$2. \quad -5x^2 - \overbrace{x + 8} + 6x - 10$$
$$= -5x^2 + 5x - 2$$

Simplify each of the following:

3.  $-3x^2 + 2x + x^2 - 4 + 7x$

$$= 2x^2 + 9x - 4$$

4.  $x^2 - 3x + 2x^2 - 5 + 4x$

$$3x^2 + 1x - 5$$

Simplify each of the following:

$$5. \quad 2y^2 + 7y^2 - y^2 + 2$$

*Handwritten solution:*

$$= 8y^2 + 2$$

$$6. \quad 8 - 2(x + 4)$$

*Handwritten solution:*

$$8 - 2x - 8 = -2x$$

Simplify each of the following:

$$7. \quad 2(x + 3) + 3(5 - x)$$

$$2x + 6 + 15 - 3x$$
$$= -x + 21$$

$$8. \quad (4y^3 - 2y^2 + 2) - (y^3 - 4y^2 - 8)$$

$$= \cancel{4y^3} - \cancel{2y^2} + 2 - \cancel{y^3} + \cancel{4y^2} + 8$$
$$= 3y^3 + 2y^2 + 10$$

Simplify each of the following:

9.  $(8m - m) + (-3m + 5)$

$$\begin{array}{r} \underline{8m} - \underline{m} \quad \underline{-3m} + \underline{5} \\ 4m + 5 \end{array}$$

10.  $(5x + x^2) - x^2$

$$\begin{array}{r} 5x + \cancel{x^2} - \cancel{x^2} \\ = 5x \end{array}$$

Simplify each of the following:

11.  $3(y + 2) - 4y$

$$3y + 6 - 4y$$
$$\underline{-y + 6}$$

12.  $9x - 4(2x - 1)$

$$9x - 8x + 4$$
$$x + 4$$

Simplify each of the following:

$$13. \quad -(z + 2) - 2(1 - z)$$
$$-z - 2 - 2 + 2z$$
$$= z - 4$$

$$14. \quad 1 - 4(1 - 2x)$$

$$1 - 4(1 - 2x)$$
$$1 - 4 + 8x = -3 + 8x$$

Find the Perimeter of...  
(be sure to simplify your answer)

$$x + x - 7 + x + x - 7 = 4x - 14$$

