

6.7 Equivalent Expressions & Combine Like Terms

Objective: To use the recognize equivalent expressions and combine like terms





Coefficient - The **numerical** factor of a term that contains a variable

Ex.: $3x \rightarrow 3$ is the **coefficient**

$-2n \rightarrow -2$ is the **coefficient**

$x \rightarrow 1$ is the **coefficient**

Constant - A term without a variable

Ex: $2x + 5 \rightarrow 5$ is the **constant**

Term - Part of an algebraic expression separated by addition or subtraction.

Ex: $2x + 5 \rightarrow 2x, 5$ are both **terms**

Like Terms - Terms that contain the same variable (raised to the same power)

Ex: $6x + 4 + 5x \rightarrow 6x$ & $5x$ are **like terms**

$$3x + 2y + x + 6$$

Identify the following:

Terms: $3x$, $2y$, x , 6

Like Terms: $3x$ & x

Coefficients: 3 , 2 , & 1

Constants: 6



Like Terms

$$7x, -3x$$

$$5y, -y$$

$$10xy, 2yx$$

$$4p^2, -p^2$$

Unlike Terms

$$7x, -3y$$

$$5y, -5yx$$

$$2a, 3ab$$

$$4p^2, -p$$

Simplify the expression

1) $3x + 5 + 8x$
 $11x + 5$

2) $4e + 5f + 3f + 6e + 7$
 $10e + 8f + 7$

3) $12 + 25x + 18y + 15x$
 $40x + 18y + 12$

4) $5(6x + 4) + 12x$
 $42x + 20$

5) $0.5(24x + 18) + 10$
 $12x + 19$