

Combining Like Terms & Distributing

Vocabulary:

- Expression (simplify) - mathematical phrase that contains operations, numbers, and/or variables
No equal sign!
Ex: $3x + 2x + 5$

- Equation (solve) - mathematical statement where two expressions are equivalent/equal
Has an equal sign!
Ex: $3x + 2x + 5 = 4 + x$

- Variable - a symbol used to represent a quantity that can change

- Coefficient - a number multiplied by a variable

- Like Terms - terms that contain variables, with corresponding variables having the same power

$$x + x$$

$$y + 3y$$

$$3 + 2$$

$$x^2 + x^2$$

Combining Like Terms:

1) What are my terms?

2) Add/subtract the coefficients of like terms

Ex 1: Simplify the expression (combine like terms)

$$4x + 3y - x$$

① $x, y \Rightarrow$ terms

$$\frac{4x + 3y}{-x}$$

$$4x - 1x + 3y$$

always an invisible 1 in front of any variable

② $3x + 3y$ or $3y + 3x$

Distributing:

1) When you see parenthesis, think distribute first

2) step 1 above

3) step 2 above

Ex 2: $2x - 7 - 3(5x + 6)$

① $2x - 7 - 15x - 18$

② x , number \rightarrow terms

③ $2x - 7 - 15x - 18$

$2x - 15x - 7 - 18$

$-13x - 25$ or $-25 - 13x$

Ex 3: $3(5m - 1) - 7m + 4(m - 2)$

① $15m - 3 - 7m + 4m - 8$

② m , number \rightarrow terms

$15m - 3 - 7m + 4m - 8$

$15m - 7m + 4m - 3 - 8$

③ $12m - 11$