Combining Like Terms and More Work with Fractions Notes #3
9/7/17

Algebraic terms - *any term that contains a variable*

Constants – *terms that do Not contain a variable (numbers only)*

Like terms – *terms that have the same variable factors*

Algebraic expression – *an expression that contains variables (algebraic terms)*

Equation- *a mathematical sentence that uses an equal sign*

*When combining like terms you want to group all the "like" variable terms together and all of the constants together. ***Remember: the sign in FRONT of the term goes with that term when you move it.***

EXAMPLE 1

$-5m - 23 + 2m + 5$

List the algebraic terms in the expression above.

★ terms are separated by +/−

$-5m, \ 2m$

★ Keep the corresponding +/− signs in front of its term

List all of the constant terms in the expression above.

$-23, 5$

EXAMPLE 2

Simplify the expression below. *If there is no equal sign, you CANNOT SOLVE for the variable. Your answer will be an expression.

$$-6x+14+5y-8x+20y-3$$

$$-6x-8x+5y+20y+14-3$$

$$\boxed{-14x+25y+11}$$

EXAMPLE 3

Simplify the expression below.

$$5(x+3)-(x-4)$$

$$5x+15-x+4$$

$$5x-x+15+4$$

$$\boxed{4x+19}$$

EXAMPLE 5

Simplify

$$\frac{4}{5}(x+10)$$

$$\frac{4}{5}x+\frac{4}{5}\cdot\frac{\overset{2}{\cancel{10}}}{1} = \boxed{\frac{4}{5}x+8}$$

EXAMPLE 4

$$\frac{2}{3}(x+6)-\frac{3}{4}(8-4y)$$

$$\frac{2}{3}x+\frac{2}{\cancel{3}}\cdot\frac{\overset{2}{\cancel{6}}}{1}$$

$$\frac{2}{3}x+4-\frac{3}{\cancel{4}}\cdot\frac{\overset{2}{\cancel{8}}}{1}-\frac{3}{4}\cdot\frac{4y}{1}$$

$$\frac{2}{3}x+4-6-3y$$

$$\boxed{\frac{2}{3}x-3y-2}$$

★ write variable terms first in alphabetical order, constants go last.