3.8: Rewriting Equations and Formulas

***Goal:** Rewrite an equation so it is in function form

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*Recall that all functions start with: $y =$

Function form: means to isolate __y___.

*follow same rules as equation solving – get rid of what is bothering y by going in reverse PEMDAS.

Ex: $4x + 2y = 8$

$-4x \qquad -4x$

$\frac{2y}{2} = \frac{8 - 4x}{2}$

$y = 4 - 2x$

Ex: $-2x + y = 6$

$+2x \qquad +2x$

$y = 6 + 2x$

Ex: $3x + 2y = 8$

$-3x \qquad -3x$

$\frac{2y}{2} = \frac{8 - 3x}{2}$

$y = 4 - \frac{3}{2}x$

Ex: $\frac{1}{2}x - y = -5$

$-\frac{1}{2}x \qquad -\frac{1}{2}x$

$-y = -5 - \frac{1}{2}x$

$y = 5 + ½\,x$

Ex: $-2x+3y=6$

$$\frac{3y}{3}=\frac{6+2x}{3}$$

$$y=2+\frac{2}{3}x$$

Ex: $3x-5y=4$

$$\frac{-3x}{}\quad\frac{-3x}{}$$

$$\frac{-5y}{-5}=\frac{4-3x}{-5}$$

$$y=-\frac{4}{5}+\frac{3}{5}x$$

Ex: $-x-3y=-6$

$$\frac{+x}{}\quad\frac{+x}{}$$

$$\frac{-3y}{-3}=\frac{-6+x}{-3}$$

$$y=2+-\frac{1}{3}x$$

Ex: $7x-2y=-8$

$$\frac{-7x}{}\quad\frac{-7x}{}$$

$$\frac{-2y}{-2}=\frac{-8-7x}{-2}$$

$$y=4+\frac{7}{2}x$$