

# Solving Two-Step Equations...

\* To Solve Two-Step Equations You must follow the Order of Operations (PEMDAS) Backwards! \* So it would be SADMEP \*

Solve:  $2x + 3 = 13$

This means:  $x \cdot 2 + 3 = 13$

To Solve we use Reversed Order of Operations:

$$x \cdot 2 + 3 = 13$$

$$\div 2 - 3$$

$$\text{So: } 13 - 3 = 10$$

$$10 \div 2 = 5$$

$$x = 5$$

$$2x + 3 = 13$$

$$\begin{array}{r} -3 \quad -3 \\ \hline \end{array}$$

$$2x = 10$$

$$\begin{array}{r} \div 2 \quad \div 2 \\ \hline \end{array}$$

$$x = 5$$

Solve:  $4x + 6 = 14$

$$\begin{array}{r} -6 \quad -6 \\ \hline \end{array}$$

$$4x = 8$$

$$\begin{array}{r} \div 4 \quad \div 4 \\ \hline \end{array}$$

$$x = 2$$

Solve:  $3x - 8 = 19$

$$\begin{array}{r} +8 \quad +8 \\ \hline \end{array}$$

$$3x = 27$$

$$\begin{array}{r} \div 3 \quad \div 3 \\ \hline \end{array}$$

$$x = 9$$

\* To Solve multi-Step Equations, Complete the Same Steps or Combine Like terms.

ex. 2)  $3y + 4 = y = 8$

$$* 3y - y = 2y$$

$$\text{So } 2y + 4 = 8$$

$$\begin{array}{r} -4 \quad -4 \\ \hline \end{array}$$

$$2y = 4$$

$$\begin{array}{r} \div 2 \quad \div 2 \\ \hline \end{array}$$

$$y = 2$$

ex. 1)  $4x + 3 - 2x - 1 = 20$

$$* 4x - 2x = 2x$$

$$* +3 - 1 = 2$$

$$\text{So } 2x + 2 = 20$$

$$\begin{array}{r} -2 \quad -2 \\ \hline \end{array}$$

$$2x = 18$$

$$\begin{array}{r} \div 2 \quad \div 2 \\ \hline \end{array}$$

$$x = 9$$