Monday, Sept 28th

Solving Equations

ex #1

$5x - 9 = 8$

$+9 \quad +9$

$\frac{5x}{5} = \frac{17}{5}$

$x = \frac{17}{5}$

ex #2

$3x + 2 = 14$

$-2 \quad -2$

$\frac{3x}{3} = \frac{12}{3}$

$x = 4$

ex#3

$$\frac{x}{2} - 8 = 16$$

$+8$ $+8$

$$\frac{x}{2} = 24$$

$$\frac{x}{2} = \frac{24}{1}$$

$$(x)(1) = (2)(24)$$

$$x = 48$$

ex#4

$$\frac{2x}{7} - 5 = 15$$

$+5$ $+5$

$$\frac{2x}{7} = \frac{20}{1}$$

$$(2x)(1) = (7)(20)$$

$$\frac{2x}{2} = \frac{140}{2}$$

$$x = 70$$

Step#1 – Always start with adding or subtraction

Step#2 – Division or cross mult

ex #5

$$3x + 8x = 44$$

$$\frac{11x}{11} = \frac{44}{11}$$

$$x = 4$$

ex #6

some

$$-2x - 8x = -100$$

$$-2x + -8x = -100$$

$$\frac{-10x}{-10} = \frac{-100}{-10}$$

$$x = 10$$

ex #7

$3x = 2x - 8$

$-2x \quad -2x$

$1x$

$x = -8$

ex #8

$7x = 10 + 2x$

$-2x \quad -2x$

$\frac{5x}{5} = \frac{10}{5}$

$x = 2$

ex #9

$9x + 45 = -1x + 135$

$+x \quad +x$

$9x + x + 45 = 135$

$10x + 45 = 135$

$-45 \quad -45$

$\frac{10x}{10} = \frac{90}{10}$

$x = 9$

Note $1x = x$

$-1x = -x$

Step #1- Make sure that all the x's are on the same side, and the #'s are on the same side

Step #2- isolate for x (x alone)

ex #10

$$\frac{5}{x} = \frac{2}{8}$$

$$(5)(8) = (2)(x)$$

$$40 = (2)(1x)$$

$$\frac{40}{2} = \frac{2x}{2}$$

$$20 = x$$

$$x = 20$$

ex #11

$$\frac{5}{2x} = \frac{2}{4}$$

$$(5)(4) = (2)(2x)$$

$$\frac{20}{4} = \frac{4x}{4}$$

$$5 = x$$

$$x = 5$$