

7-2 Systems of Linear Equations in Two Variables

Day 1

I. **Elimination**-Steps are on page 464, if needed. Remember what Consistent and Inconsistent mean?

$$\begin{array}{l} \text{Ex 1) } (4) \ 5x + 3y = 9 \\ \quad \quad (3) \ 2x - 4y = 14 \end{array}$$

$$\begin{array}{r} 20x + 12y = 36 \\ \underline{6x - 12y = 42} \\ 26x = 78 \end{array}$$

$$\frac{26x}{26} = \frac{78}{26}$$

$$x = 3$$

$$5(3) + 3y = 9$$

$$15 + 3y = 9$$

$$3y = -6$$

$$y = -2$$

$$(3, -2)$$

You can check your solutions algebraically and graphically!!

$$\begin{array}{l} \text{Ex 2) } (2) \ x - 2y = 3 \\ \quad \quad \quad -2x + 4y = 1 \end{array}$$

$$\begin{array}{r} 2x - 4y = 6 \\ \underline{-2x + 4y = 1} \\ 0 = 7 \end{array}$$

$0 = 7$  false, then no solutions

$$\begin{array}{l} \text{Ex 3) } \quad (-2) \quad 2x - y = 1 \quad (-2) \\ \quad \quad \quad \quad \quad 4x - 2y = 2 \end{array}$$

$$\begin{array}{r} \text{Σ} \quad -1x + 2y = -2 \\ \text{Σ} + \quad 4x - 2y = 2 \\ \hline \end{array}$$

$0 = 0$  true, infinitely many solutions