

8.2 Solving Systems of Equations using substitution

Ex 1:

$$y = 3$$

$$y + 2x = 25$$

$$3 + 2x = 25$$

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

$$\frac{2x}{2} = \frac{22}{2}$$

$$\frac{2}{2}$$

$$x = 11$$

$$(11, 3)$$

Ex 2: $y - 3x = 17 \rightarrow y = 3x + 17$

$$x + 5y = 9$$

$$x + 5(3x + 17) = 9$$

$$x + 15x + 85 = 9$$

$$16x = -76$$

$$x = -4.75$$

$$y - 3(-4.75) = 17$$

$$y + 14.25 = 17$$

$$y = 2.75$$

$$(-4.75, 2.75)$$

Try... a) $3x + y = -7$
 $2x - 3y = 21$

b) $x + 7y = -3$
 $2x + 14y = 0$