Graph WS

1) $(3, 4)$
5) $(-1, -4)$
9) $(-2, 1)$

3.1b: Solve Systems of Equations Algebraically

Substitution Method : SWITCH OUT

$$-2x + y = -10$$

$$y = (-4x + 8)$$

y IS

SOLUTION IS $\boxed{(\overset{x}{3}, \overset{y}{-4})}$

WE ARE TOLD WHO y IS, KNOWING THAT, SWITCH OUT y

$$-2x + y = -10$$

$$-2x + 1(-4x + 8) = -10$$

$$-2x + -4x + 8$$

$$-6x + 8 = -10$$

$$-8 \qquad -8$$

$$-6x = -18$$

$$x = 3$$

$$y = -4(3) + 8$$

$$y = -12 + 8$$

$$\boxed{y = -4}$$

$$x + y = 2$$

$$2x + y = 3$$

$-2x \qquad -2x$

$$y = -2x + 3$$

* WE AREN'T TOLD WHO X OR Y IS .... BUT WE CAN SOLVE FOR ONE

$$x + 1(-2x + 3) = 2$$

$$x + -2x + 3 = 2$$

$$-1x + 3 = 2$$

$\qquad -3 \qquad -3$

$$\frac{-1x}{-1} = \frac{-1}{-1}$$

$$x = 1$$

$$y = -2(1) + 3$$

$$y = -2 + 3$$

$$y = 1$$

SOLUTION IS

$$\boxed{(1, 1)}$$

Math Practice:
Substitution WS

1) $5x + 5y = 20$

$y = 6$

$5x + 5(6) = 20$

$5x + 30 = 20$

$\quad -30 \quad -30$

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

$x = -2$

SOLUTION IS

$(-2, 6)$

Substitution WS

1) $(-2, 6)$
5) No solution
9) $(2, -1)$

Elimination

(Stack & Add)

$$4x - 3y = 29$$

$$4x + 3y = 35$$

Elimination Method

$$2x + 5y = 7$$

$$x + 4y = 2$$

Math Practice: Elimination WS

1) $-2x - 8y = -12$
$2x - 9y = -5$