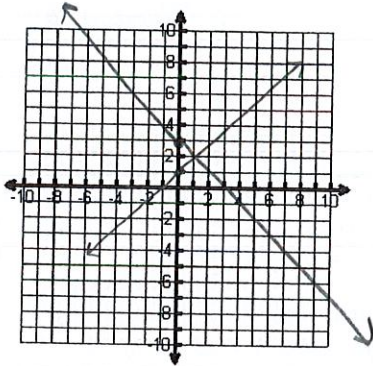


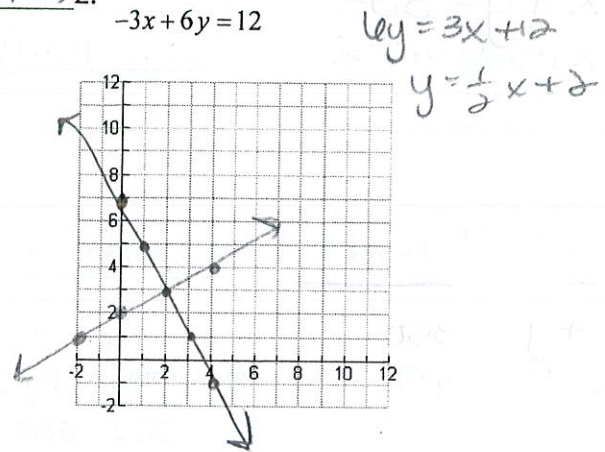
Unit 2B Test Review

Find the solution of the linear system graphically. Write your solution in the blank provided.

(1, 2) 1. $y = -x + 3$
 $y = x + 1$



(2, 3) 2. $y = -2x + 7$
 $-3x + 6y = 12$



Use substitution to solve the linear system. SHOW ALL WORK and write your solution in the space provided.

(2, 2) 3. $y = 2x - 2$ $\rightarrow y = 2(2) - 2 = 4 - 2$
 $6x + 2y = 16$

$$6x + 2(2x - 2) = 16$$

$$6x + 4x - 4 = 16$$

$$10x - 4 = 16$$

$$10x = 20$$

$$x = 2$$

(-2, -2) 4. $4x - y = -6$
 $y = 2x + 2$ $\rightarrow y = 2(-2) + 2 = -4 + 2$

$$4x - (2x + 2) = -6$$

$$4x - 2x - 2 = -6$$

$$2x - 2 = -6$$

$$2x = -4$$

$$x = -2$$

Use elimination to solve the linear system. SHOW ALL WORK and write your solution in the space provided.

(2, 1) 5. $5x - 3y = 7$
 $x + 3y = 5$

$$6x = 12$$

$$x = 2$$

(1, -2) 6. $-3x + 3y = -9$ $\cdot 2$
 $6x + 2y = 2$

$$-6x + 6y = -18$$

$$6x + 2y = 2$$

$$8y = -16$$

$$y = -2$$

$$6x + 2(-2) = 2$$

$$6x - 4 = 2$$

$$6x = 6$$

Systems of Linear Equations Word Problems:

7. A store sold 32 pairs of jeans for a total of \$1050. Brand A sold for \$30 per pair and Brand B sold for \$35 per pair. How many of Brand A were sold? $x = \# \text{ of A}$ $y = \# \text{ of B}$

$$\begin{aligned} x + y &= 32 \\ 30x + 35y &= 1050 \end{aligned}$$

$$\begin{aligned} -35x - 35y &= -1120 \\ \underline{30x + 35y} &= \underline{1050} \\ -5x &= -70 \\ x &= 14 \end{aligned}$$

The Store sold 14 Brand A jeans

8. You are selling tickets for a basketball game. Student tickets cost \$3 and general admission tickets cost \$5. You sell 350 tickets and collect \$1450. How many of each type of ticket did you sell? $x = \# \text{ of ST}$ $y = \# \text{ of GA}$

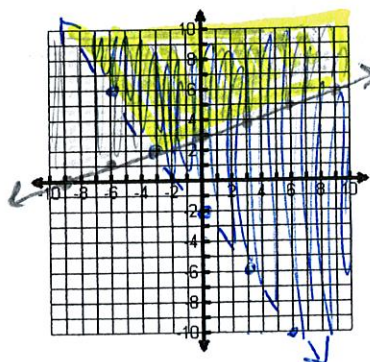
$$\begin{aligned} x + y &= 350 \\ 3x + 5y &= 1450 \end{aligned}$$

$$\begin{aligned} -3x - 3y &= -1050 \\ \underline{3x + 5y} &= \underline{1450} \\ 2y &= 300 \\ y &= 150 \end{aligned}$$

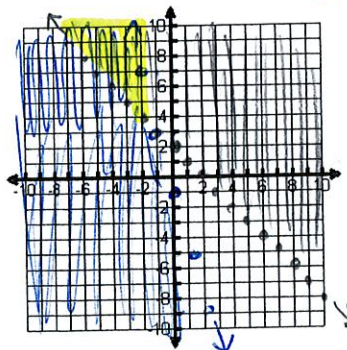
You sell 200 student tickets and 150 general admission

Graph the systems of inequalities, and name a solution.

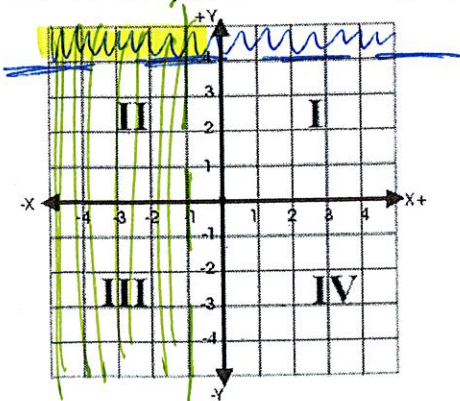
Ex: $(0, 6)$ 9. $x - 3y \leq -9 \rightarrow -3y \leq -x - 9$ Ex: $(-3, 8)$ 10. $y > -x + 2$ ✓
 $4x + 3y > -6 \rightarrow y > \frac{1}{3}x - 2$ $4x + y < -1 \rightarrow y < -4x - 1$



$$\begin{aligned} 3y &> -4x - 6 \\ y &> -\frac{4}{3}x - 2 \end{aligned}$$



11. What quadrant is the graph of the system: $x < -1$ and $y > 4$ predominantly in?



II

✓