

1. Is $(-3, 2)$ a solution to the system below?

$$\begin{aligned} -4x + 2y &= 14 \\ -x + y &= 1 \end{aligned}$$

NO

$$\begin{aligned} -4(-3) + 2(2) &= 14 \\ 12 + 4 &= 14 \\ \text{NO} \end{aligned}$$

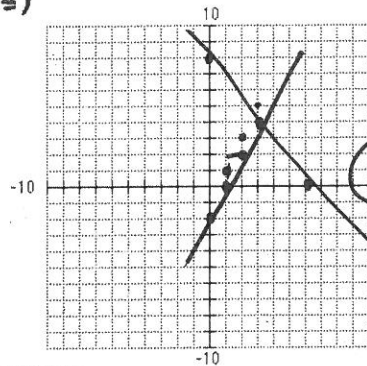
$$\begin{aligned} -(-3) + 2 &= 1 \\ 3 + 2 &= 1 \\ \text{NO} \end{aligned}$$

2. Solve this system by graphing.

$$\begin{aligned} 2x - y &= 2 \\ 4x + 3y &= 24 \end{aligned}$$

$$\begin{aligned} -y &= 2 - 2x \\ y &= -2 + 2x \\ y &= 2x - 2 \end{aligned}$$

$$\begin{aligned} 4x + 3y &= 24 \\ 3y &= 24 - 4x \\ \frac{3y}{3} &= \frac{24 - 4x}{3} \\ y &= 8 - \frac{4}{3}x \end{aligned}$$



(3, 4)

3. Solve this system using substitution.

$$\begin{aligned} -x + y &= 1 \\ 2x + y &= -2 \end{aligned}$$

$$y = 1 + x$$

$$\begin{aligned} 2x + (1 + x) &= -2 \\ 3x &= -3 \end{aligned}$$

$$x = -1$$

(-1, 0)

$$\begin{aligned} 2(-1) + y &= -2 \\ -2 + y &= -2 \end{aligned}$$

4. Solve using Elimination

$$\begin{aligned} 2x - 4y &= 8 \\ -2(x + 2y) &= 5 \end{aligned}$$

$$\begin{aligned} 2x - 4y &= 8 \\ -2x - 4y &= -10 \\ \hline -8y &= -2 \\ -8 & \end{aligned}$$

$$y = \frac{1}{4}$$

(\frac{9}{2}, \frac{1}{4})

$$\begin{aligned} 2x - 4(\frac{1}{4}) &= 8 \\ 2x - 1 &= 8 \\ 2x &= 9 \end{aligned}$$

OR (4.5, .25)

5. Determine how many solutions each system has

a. $\begin{aligned} y &= 4x - 1 \\ 2x + y &= 11 \end{aligned}$
 $y = -2x + 11$

intersect **one**

b. $\begin{aligned} 3x - 2y &= 6 \\ -6x + 4y &= -12 \end{aligned}$
 $4y = -12 + 6x$
 $y = -3 + \frac{3}{2}x$

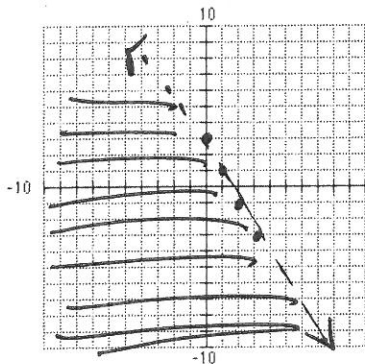
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c. $\begin{aligned} -2x + 4y &= 1 \\ x - 2y &= 3 \end{aligned}$
 $-4 + 2x = y$
 $-2y = 3 - x$
 $y = \frac{2}{3} - \frac{1}{2}x$

None

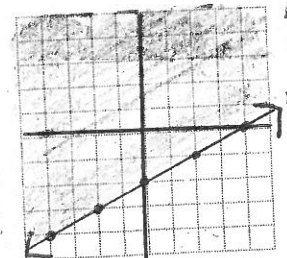
6. Graph the inequality

$$\begin{aligned} 2x + y &< 3 \\ y &< 3 - 2x \end{aligned}$$



7. Write the inequality graphed

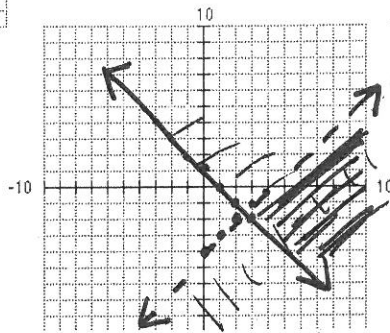
$$y \geq \frac{1}{2}x - 2$$



8. Graph the system of inequalities

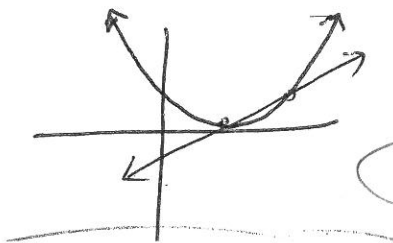
$$\begin{aligned} y &\geq -x + 1 \\ x - y &> 4 \end{aligned}$$

$$\begin{aligned} x - y &> 4 \\ -y &> 4 - x \\ y &< -4 + x \end{aligned}$$



9. Graph on Calculator

$$\begin{aligned} y &= \frac{1}{4}(x-3)^2 \\ y &= -6.5 + \frac{3}{2}x \end{aligned}$$



Find intersections

(5, 1) & (7, 4)