

11-15-19 1^{re} Trig

$$\textcircled{1} \begin{cases} y = 3x - 1 \\ x - y = -3 \end{cases}$$

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

$$x - 3x + 1 = -3$$

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

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

$$-2x = -4$$

$$x = 2$$

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

$$y = 5$$

$$\textcircled{2} \begin{cases} 2x + 4y = 8 \Rightarrow 2x + 4y = 8 \\ 7x - y = -2 \xrightarrow{M_4} 28x - 4y = -8 \end{cases}$$

$$\frac{30x = 0}{30} = \frac{0}{30}$$

$$x = 0$$

$$2(0) + 4y = 8$$

$$0 + 4y = 8$$

$$y = 2$$

$$\textcircled{3} \begin{cases} 2x + 11y = -1 \xrightarrow{M_3} -6x - 33y = 3 \\ 3x + 7y = 8 \xrightarrow{M_2} 6x + 14y = 16 \end{cases}$$

$$\frac{-19y = 19}{-19} = \frac{19}{-19}$$

$$y = -1$$

$$3x + 7(-1) = 8$$

$$3x - 7 = 8$$

$$x = 5$$

$$\textcircled{4} \begin{cases} y = 2x + 1 \\ y = 3x - 5 \end{cases}$$

$$\begin{array}{r} 2x + 1 - 3x - 5 \\ -2x \quad \quad -2x \\ \hline 1 = x - 5 \\ +5 \quad \quad +5 \\ \hline 6 = x \end{array}$$

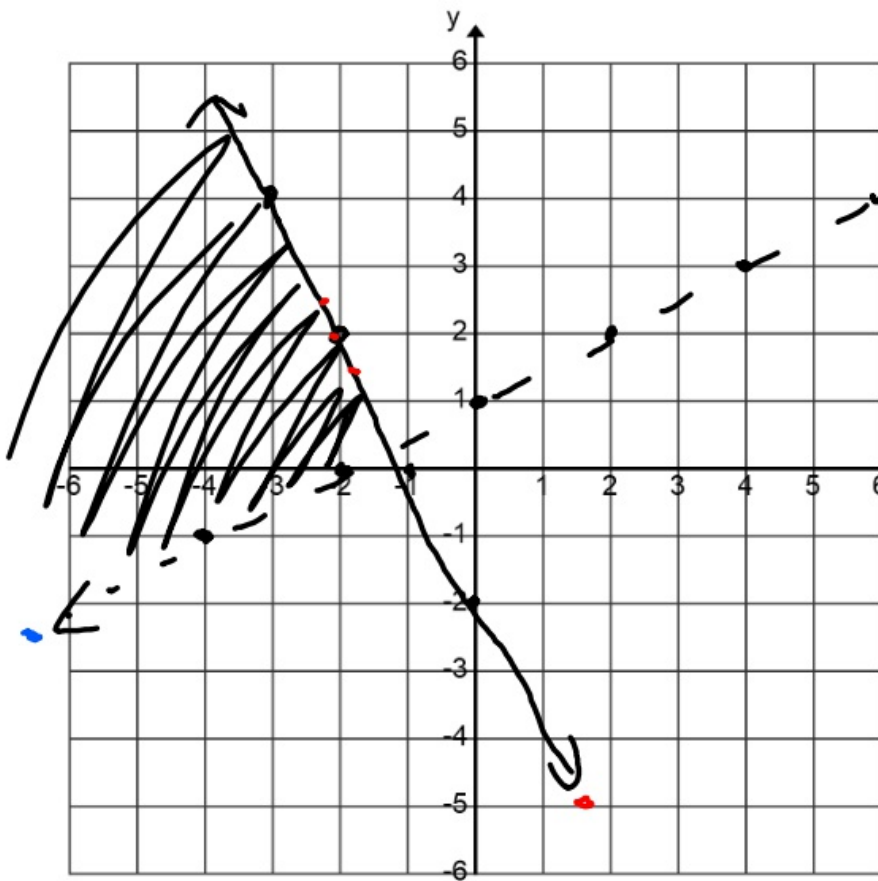
$$\begin{aligned} y &= 2(6) + 1 \\ y &= 13 \end{aligned}$$

$$\textcircled{5} \begin{bmatrix} 1 & 4 & 6 \\ 3 & 2 & 5 \end{bmatrix} \cdot \begin{bmatrix} 2 \\ 1 \\ 5 \end{bmatrix}$$

$2 \times 3 \checkmark 3 \times 1$

Answer

$$\begin{bmatrix} 1 \cdot 2 + 4 \cdot 1 + 6 \cdot 5 \\ 3 \cdot 2 + 2 \cdot 1 + 5 \cdot 5 \end{bmatrix} = \begin{bmatrix} 36 \\ 33 \end{bmatrix}$$



⇒ What is graphed?

$$\left\{ \begin{array}{l} y > \frac{1}{2}x + 1 \\ y \leq -2x - 2 \end{array} \right.$$

$$\textcircled{7} \begin{bmatrix} 2 & 4 \\ -5 & 0 \end{bmatrix} \cdot \begin{bmatrix} 1 & 4 & 6 \\ -1 & -2 & 5 \end{bmatrix}$$

$$\left[\begin{array}{ccc} 2 \cdot 1 + 4 \cdot (-1) & 2 \cdot 4 + 4 \cdot (-2) & 2 \cdot 6 + 4 \cdot 5 \\ -5 \cdot 1 + 0 \cdot (-1) & -5 \cdot 4 + 0 \cdot (-2) & -5 \cdot 6 + 0 \cdot 5 \end{array} \right]$$

$$\begin{bmatrix} -2 & 0 & 32 \\ -5 & -20 & -30 \end{bmatrix}$$

11-15-19 3^o Trig

$$\textcircled{1} \begin{cases} y = 3x - 2 \\ x - y = -2 \end{cases}$$

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

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

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

$$\frac{-2x + 2}{-2 \quad -2}$$

$$-2x = -4$$

$$x = 2$$

$$y = 3(2) - 2 \\ y = 4$$

$$\textcircled{2} \begin{cases} y = 3x - 1 \\ y = 2x + 5 \end{cases}$$

$$3x - 1 = 2x + 5$$

$$\frac{-2x \quad -2x}{x - 1 = 5}$$

$$\frac{+1 \quad +1}{x = 6}$$

$$y = 3(6) - 1 \\ y = 17$$

$$\textcircled{3} \begin{cases} 6x - y = 1 \xrightarrow{\text{mg}} 18x - 3y = 3 \\ 7x + 3y = 22 \Rightarrow \frac{7x + 3y = 22}{25x = 25} \\ x = 1 \end{cases}$$

$$7(1) + 3y = 22$$

$$3y = 15$$

$$y = 5$$

$$\textcircled{4} \begin{cases} 2x + 11y = 10 \xrightarrow{M_1 \cdot 3} -6x - 33y = -30 \\ 3x + 7y = 15 \xrightarrow{M_2} 6x + 14y = 30 \end{cases}$$

$$-19y = 0$$

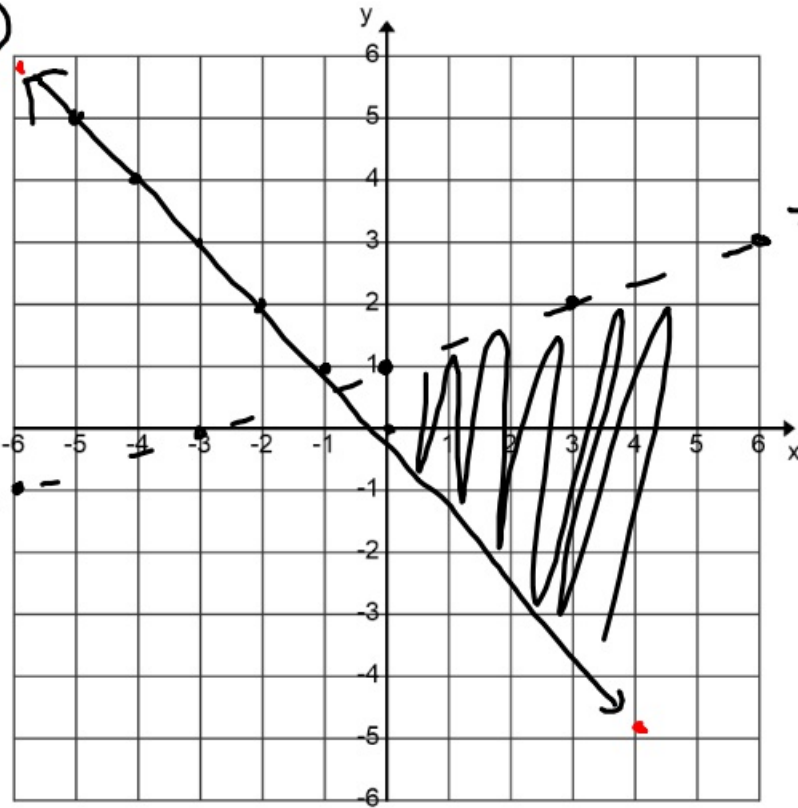
$$y = 0$$

$$2x + 11(0) = 10$$

$$2x = 10$$

$$x = 5$$

5



What is graphed?

$$\left\{ \begin{array}{l} y < \frac{1}{3}x + 1 \\ y \geq -x \end{array} \right.$$

6

$$\begin{bmatrix} 3 & 4 \\ 6 & 1 \end{bmatrix} \cdot \begin{bmatrix} 1 & 0 & 6 \\ 4 & 5 & 2 \end{bmatrix}$$

$2 \times 2 \checkmark 2 \times 3$

Answer

$$\left[\begin{array}{ccc} 3 \cdot 1 + 4 \cdot 4 & 3 \cdot 0 + 4 \cdot 5 & 3 \cdot 6 + 4 \cdot 2 \\ 6 \cdot 1 + 1 \cdot 4 & 6 \cdot 0 + 1 \cdot 5 & 6 \cdot 6 + 1 \cdot 2 \end{array} \right]$$

$$\begin{bmatrix} 19 & 20 & 26 \\ 10 & 5 & 38 \end{bmatrix}$$

⑦ $[4 \ 5 \ 6] \cdot \begin{bmatrix} 1 \\ 4 \\ 7 \end{bmatrix}$

1×3 3×1

$$4 \cdot 1 + 5 \cdot 4 + 6 \cdot 7$$
$$[66]$$

11-15-19 4th Trig

$$\textcircled{1} \begin{cases} y = 3x - 2 \\ x - y = -2 \end{cases}$$

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

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

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

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

$$-2x = -4$$

$$x = 2$$

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

$$y = 4$$

$$\textcircled{2} \begin{cases} y = 3x + 7 \\ y = x - 1 \end{cases}$$

$$3x + 7 = x - 1$$

$$\begin{array}{r} 3x + 7 = x - 1 \\ -x \quad -x \\ \hline 2x + 7 = -1 \end{array}$$

$$\begin{array}{r} 2x + 7 = -1 \\ -7 \quad -7 \\ \hline 2x = -8 \end{array}$$

$$2x = -8$$

$$x = -4$$

$$y = -4 - 1$$

$$y = -5$$

$$\textcircled{3} \begin{cases} 7x - y = 2 \xrightarrow{\times 3} 21x - 3y = 6 \\ 2x + 3y = 17 \Rightarrow 2x + 3y = 17 \end{cases}$$

$$\begin{array}{r} 21x - 3y = 6 \\ 2x + 3y = 17 \\ \hline 23x = 23 \end{array}$$

$$x = 1$$

$$2(1) + 3y = 17$$

$$3y = 15$$

$$y = 5$$

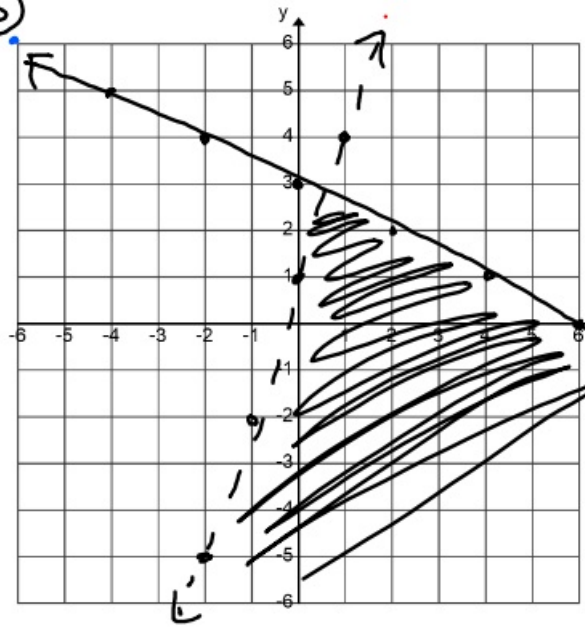
$$\textcircled{4} \begin{cases} 2x + 7y = 10 \xrightarrow{M \cdot (-3)} -6x - 21y = -30 \\ 3x + 11y = 15 \xrightarrow{r_2} \underline{6x + 22y = 30} \\ y = 0 \end{cases}$$

$$2x + 7(0) = 10$$

$$2x = 10$$

$$x = 5$$

5



What is graphed?

$$\begin{cases} y \leq -\frac{1}{2}x + 3 \\ y < 3x + 1 \end{cases}$$

6

$$\begin{bmatrix} 3 & 4 & 5 \\ 1 & 0 & 7 \end{bmatrix} \begin{bmatrix} 1 \\ 2 \\ 7 \end{bmatrix} \begin{bmatrix} 2 \\ 4 \\ 5 \end{bmatrix}$$

$2 \times 3 \checkmark 3 \times 2$

Answer site

$$\begin{bmatrix} 3 \cdot 1 + 4 \cdot 2 + 5 \cdot 7 & 3 \cdot 2 + 4 \cdot 4 + 5 \cdot 5 \\ 1 \cdot 1 + 0 \cdot 2 + 7 \cdot 7 & 1 \cdot 2 + 0 \cdot 4 + 7 \cdot 5 \end{bmatrix}$$

$$\begin{bmatrix} 46 & 47 \\ 50 & 37 \end{bmatrix}$$

7 $[2 \ 4 \ 5] \cdot \begin{bmatrix} 1 \\ 4 \\ 2 \end{bmatrix}$

$1 \times 3 \checkmark 3 \times 1$

Answer

$$\begin{bmatrix} 2 \cdot 1 + 4 \cdot 4 + 5 \cdot 2 \\ 28 \end{bmatrix}$$