

4.1

$$\textcircled{1} \begin{aligned} 5x - 2y &= -36 \\ -x + 7y &= 27 \end{aligned}$$

Is $(\underset{x}{-6}, \underset{y}{3})$ a solution?

$$5(-6) - 2(3) = -36$$

$$-30 - 6 = -36$$

$$-36 = -36 \checkmark$$

$$-(-6) + 7(3) = 27$$

$$6 + 21 = 27$$

$$27 = 27 \checkmark$$

yes

Solve by Graphing

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

calc:

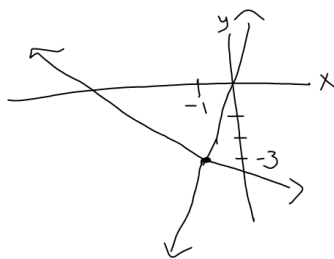
$$y = \text{zoom } 6$$

2nd

trace

5 - intersect
enter x3

$$\boxed{(-1, -3)}$$



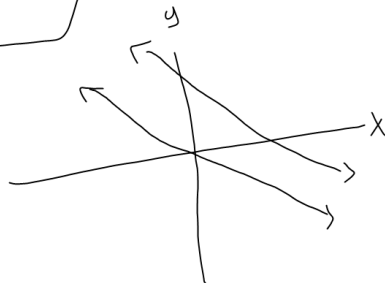
$$\textcircled{2} \begin{aligned} *y &= -4x + 6 \\ 2y + 8x &= -4 \end{aligned}$$

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

$$\frac{2y}{2} = \frac{-4 - 8x}{2} \quad \frac{-8x}{2}$$

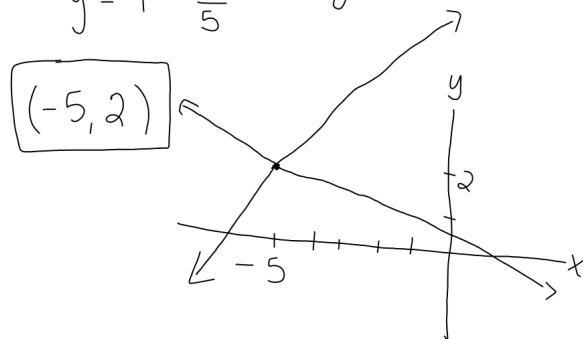
$$*y = -2 - 4x$$

No Solution \emptyset
Parr. Lines



$$\textcircled{3} \quad \begin{aligned} X + 5y &= 5 \\ X - y &= -7 \end{aligned}$$

$$\begin{array}{r} X + 5y = 5 \\ -X = -5 \\ \hline 5y = 5 - X \\ \frac{5y}{5} = \frac{5 - X}{5} \\ y = 1 - \frac{X}{5} \end{array} \quad \begin{array}{r} X - y = -7 \\ -X = -7 \\ \hline -y = -7 - X \\ \frac{-y}{-1} = \frac{-7 - X}{-1} \\ y = 7 + X \end{array}$$



$$\textcircled{4} \quad \begin{aligned} 4x + 6y &= 12 \\ * y &= -\frac{2}{3}x + 2 \end{aligned} \quad \begin{aligned} 4x + 6y &= 12 \\ -4x & \\ \hline 6y &= 12 - 4x \\ \frac{6y}{6} &= \frac{12 - 4x}{6} \end{aligned}$$

Infinite number
of solutions
Same Line

