

4.1 systems of equations

2 or more equation with 2 or more variables.

Solution: ① point that satisfies both equations (both equations are true)

② Intersection of the lines.

Determine if $(3, 3)$ is a solution to:

$$\begin{cases} x + y = 6 \\ 2x - 5y = -2 \end{cases}$$

$$x + y = 6$$

$$3 + 3 = 6$$

$$6 = 6 \checkmark$$

$$2x - 5y = -2$$

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

$$6 - 15 = -2$$

$$~~-9 = -2~~$$

No

$(1, 4)$

$$\begin{cases} x + 4y = 9 \\ -2x + 3y = 10 \end{cases}$$

$$1 + 4(4) = 9$$

$$1 + 16 = 9$$

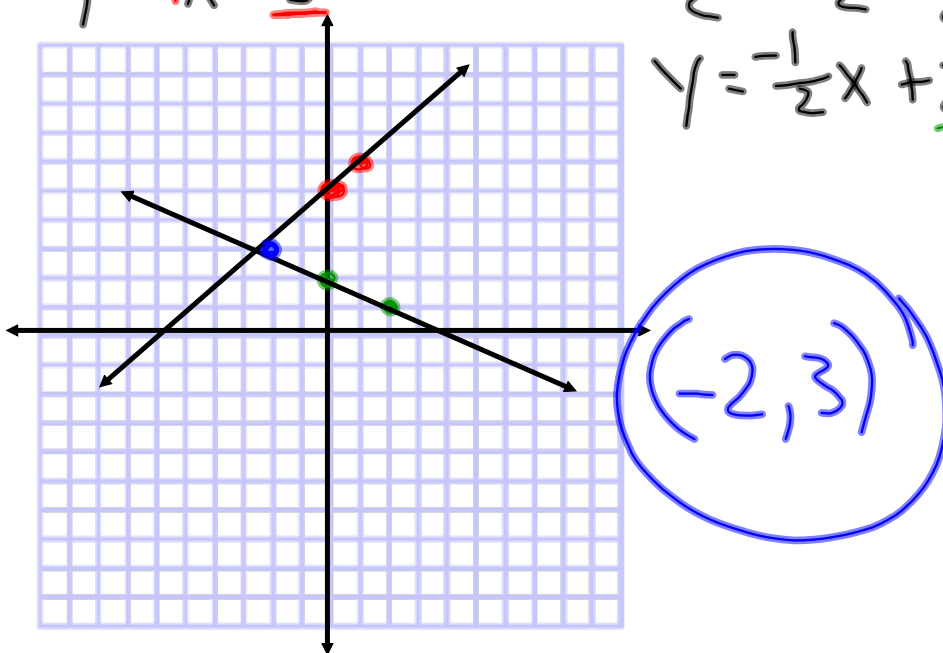
$$17 = 9 \quad \text{No}$$

Solve by graphing

$$\text{Solve: } \begin{cases} -x + y = 5 \\ x + 2y = 4 \end{cases}$$

$$\begin{array}{r} -x + y = 5 \\ +x \quad +x \\ \hline y = x + 5 \end{array}$$

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



HW:

P. 244

2-40 even,

odds E.C.