

* Is $(2, -3)$ a solution of

$$x = \frac{1}{3}y + 2 \quad \text{and} \quad -2x - y = 1 \quad ?$$

$$2 = \frac{1}{3}(-3) + 2$$

$$2 = -1 + 2$$

$$2 = 1$$

Not a solution

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

$$-4 - (-3) = 1$$

$$-4 + 3 = 1$$

$$-1 = 1$$

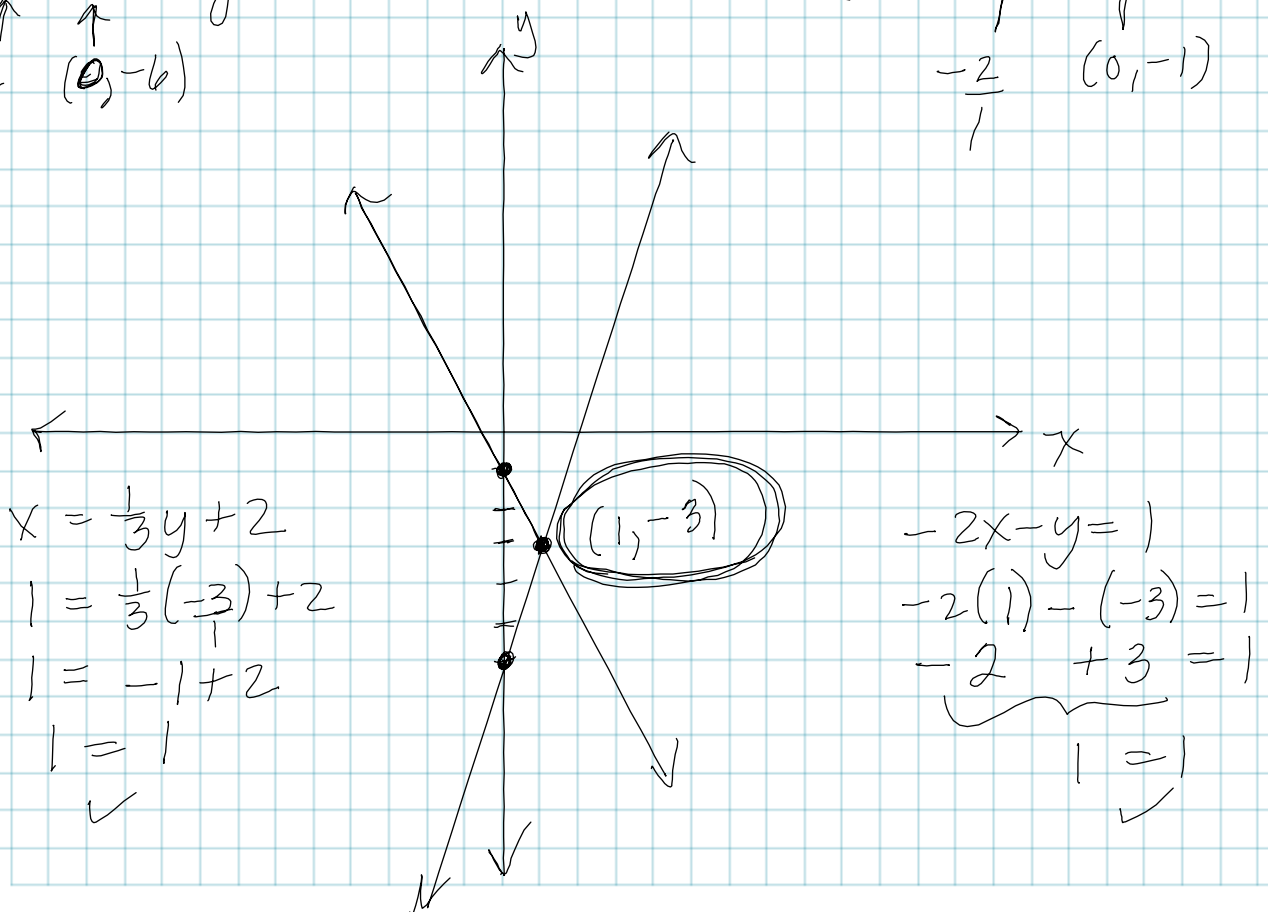
Not a solution

$$x = \frac{1}{3}y + 2$$

$$\begin{array}{r} -2 \qquad -2 \\ \hline 3(x-2) = \frac{1}{3}y \quad (3) \\ 3x - 6 = y \\ \uparrow \qquad \uparrow \\ \frac{3}{1} \quad (0, -6) \end{array}$$

$$-2x - y = 1$$

$$\begin{array}{r} +2x \qquad +2x \\ \hline (-1)(-y) = (2x+1)(-1) \\ y = -2x - 1 \\ \uparrow \qquad \uparrow \\ -\frac{2}{1} \quad (0, -1) \end{array}$$



$$x = \frac{1}{3}y + 2$$

$$1 = \frac{1}{3}(-3) + 2$$

$$1 = -1 + 2$$

$$1 = 1$$

✓

$$-2x - y = 1$$

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

$$-2 + 3 = 1$$

$$1 = 1$$

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