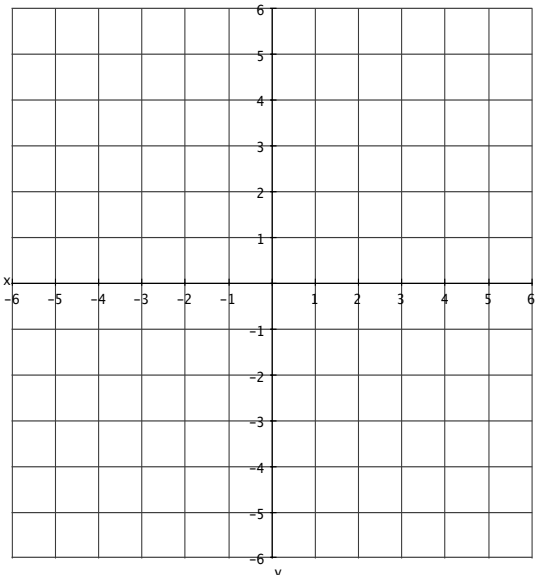
Solution or Not? – Part I

1) a) Plot the points (0, 1), (-1, 0), (-5, -4), (1, 2) and (3, 4). Connect the points using a ruler.



b) Name two other ordered pairs that are on the line (,) and (,).

c) I know the two points are ***solutions*** because _____.

All of the points that you plotted, and the two you wrote down in question *b* are called ***solutions.***

d) A coordinate that is ***not*** a **solution** is: (,). It is ***not*** a **solution** because _____.

e) The equation for the line you graphed above is: $y = x + 1$. Substitute in the point (1, 2) into the equation simplify.

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

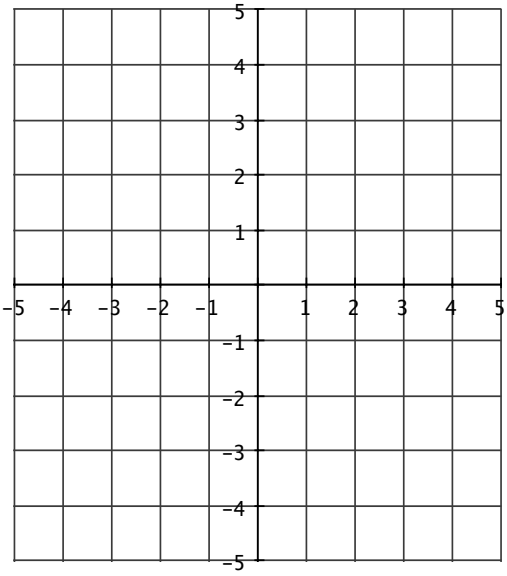
Because both sides of the equation are *equivalent*, we know the point (1, 2) (circle) *is* or *is not* a **solution**. We can also say the equation is ***true***.

f) Substitute in the coordinate you wrote in *d*, which is ***not*** a **solution**.

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

I know that (,) (coordinate from d) is ***not* a solution (false)** because when I substituted the values in, the right and left side were (circle) *equivalent* or *not equivalent* making the equation ***false***.

Directions: For the following 2 problems, state if the ordered pair (coordinate) is a ***solution*** or ***not a solution*** of the given equation. Verify by **graphing** and explain why it is or is not a solution. Use the same coordinate plane for both problems.



2) $y = 2x - 1$; (3, 1)

The coordinate (3, 1) _____ a
is/is not
solution because it _____ on the line.
is/is not

3) $y = -x + 2$; (2, 0)

The coordinate (2, 0) _____ a
is/is not
solution because it _____ on the line.
is/is not

Directions: For the following 2 problems, state if the ordered pair (coordinate) is a ***solution*** or ***not a solution*** of the given equation. Verify by using **substitution** and explain why it is or is not a solution.

4) $y = -3x + 10$; (3, 1) The coordinate (3, 1) _____ (*is/is not*) a **solution** because it makes the equation _____ (*true/false*).

5) $y = x + 2$; (2, 0) The coordinate (2, 0) _____ (*is/is not*) a **solution** because it makes the equation _____ (*true/false*).