

Definition: A Linear System is a set of two linear equations.

Example: $y = -2x$ and $y = x + 3$

1) Does the point $(0, 4)$ make either equation true? Substitute it in and find out.

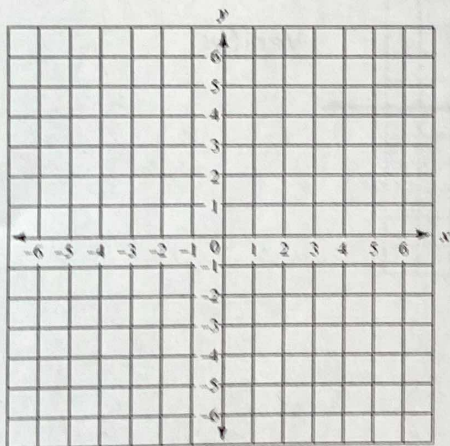
2) Does the point $(2, 5)$ make either equation true? Explain.

3) Does the point $(-1, 2)$ make either equation true? Explain.

If a point works in both equations of a linear system, then that point must be the SOLUTION to the linear system. When you solve a linear system you find that one point makes both equations true.

4) What point is the solution to the system above? _____

Plot both equations in the same coordinate plane below. $y = -2x$ and $y = x + 3$



5) At what point do the two lines intersect? _____ Compare this with your answer for #4...

An ordered pair that makes a linear equation TRUE is called a _____.

The point that the two lines _____ is the solution to the system!

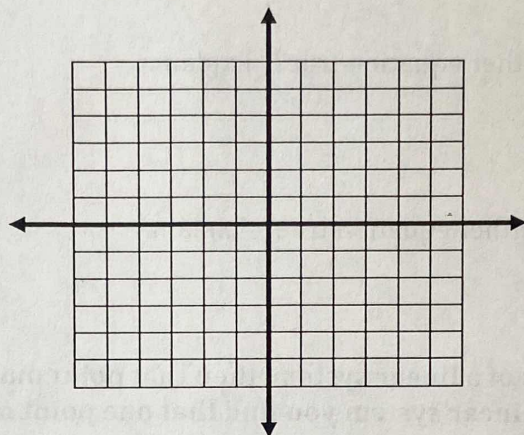
To solve a system of linear equations, the ordered pair must work for _____ equations!

Steps for Solving a Linear System Using Graphing:

1. Put the equations in slope-intercept or standard form.
2. Graph each equation on the same coordinate system.
3. Locate the point of intersection and write it down.
4. Verify that the point makes both equations true!!

Example: $y = 2x$

$$y = -x + 3$$

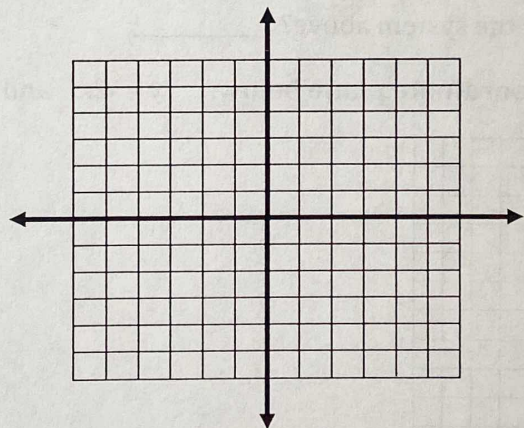


Point _____

Verify:

Example: $y - 2x = -4$

$$y = x - 2$$



Point _____

Verify:

Try these:

1. $y = -x + 5$
 $y = x + 1$

2. $2x - y = 2$
 $x = 3$

3. $2x + y = 2$
 $x - y = 4$

