

In Class Notes

A _____ is a set of two or more linear equations in the same variables.

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

$$\begin{cases} y = x + 1 \\ y = 2x - 7 \end{cases}$$

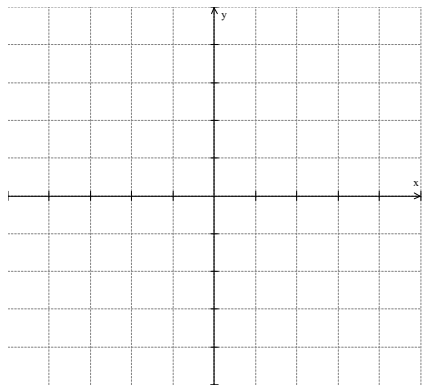
Although ours doesn't, some textbooks use a single brace to indicate a system of equations.

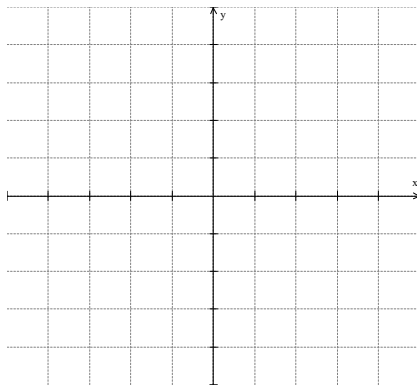
A _____ of a system of linear equations in two variables is an ordered pair that is a solution of each equation in the system. The solution of a system of linear equations is the point of intersection of the graphs of the equations.

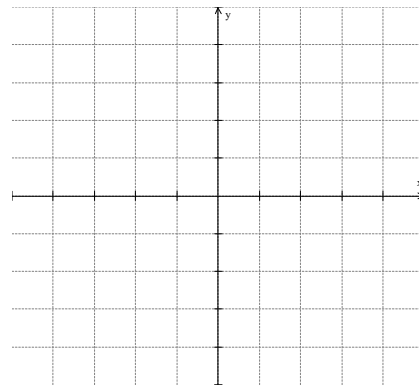
Although there are many different ways to solve systems of linear equations, the first method we're going to learn about is solving by graphing.

Types & Names of Systems of Linear Equations

In what different ways can 2 lines interact with one another on a graph?







Determining if an Ordered Pair is a Solution to a System

Ex:) Determine if the given point is a solution to the system of linear equations.

Notes:

(5, 2)

$$y = -\frac{2}{5}x + 4$$

$$10x + y = 52$$

OYO:) Determine if the given point is a solution to the system of linear equations.

Notes:

(1, 1)

$$2x + y = 3$$

$$-x + y = -3$$

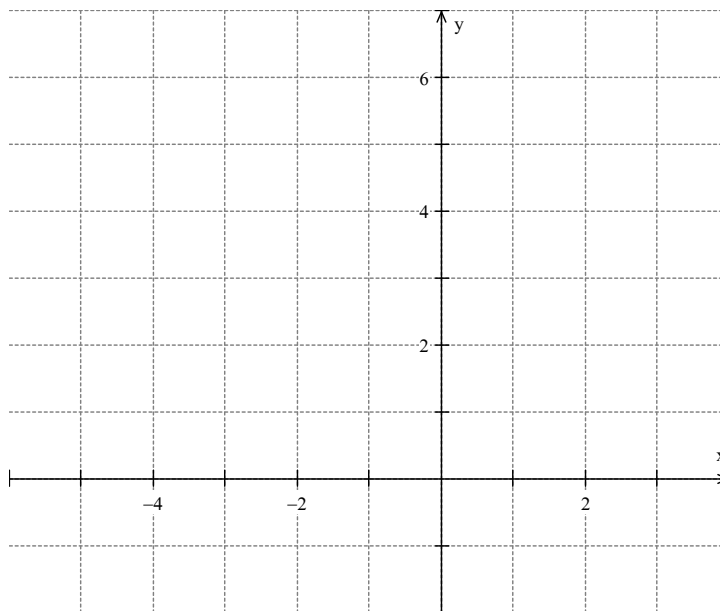
Solving a System of Linear Equations by Graphing

Ex:) Solve the system by graphing.

Notes:

$$y = 2x + 5$$

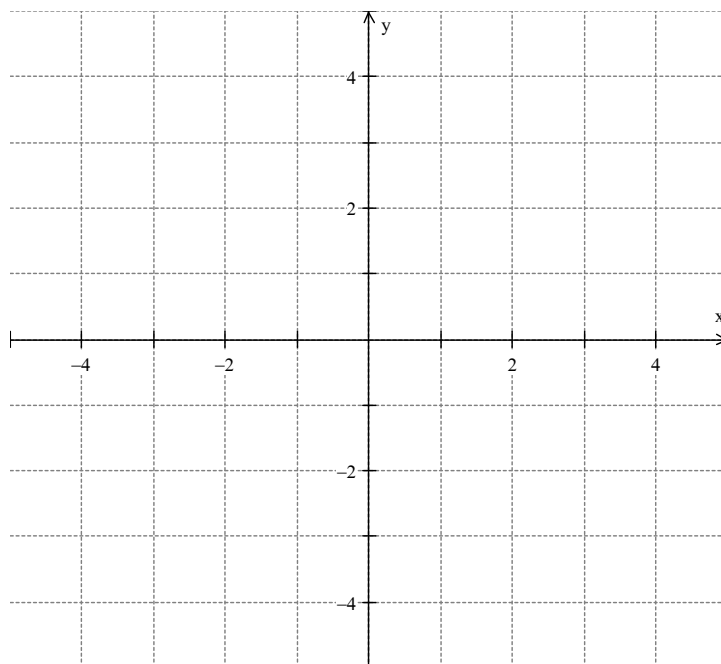
$$y = -4x - 1$$



OYO:) Solve the system by graphing.

Notes:

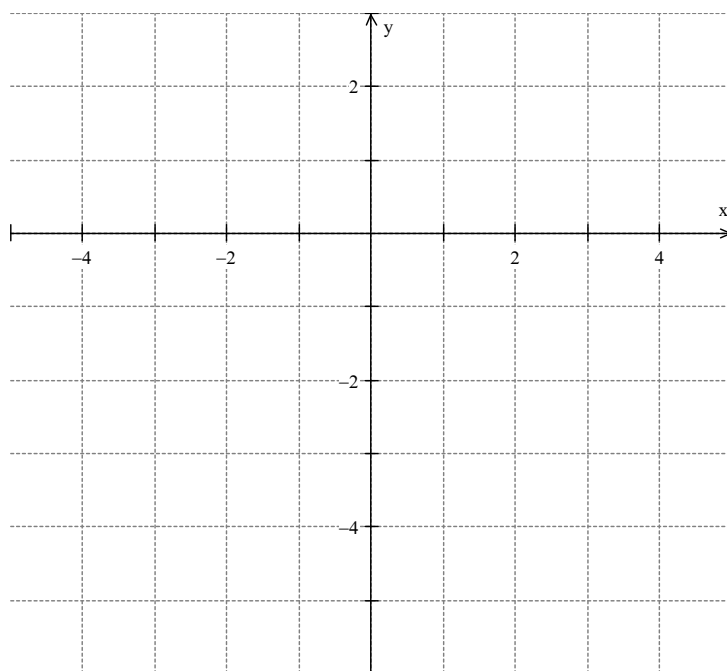
$$y = x - 1$$
$$y = -x + 3$$



Ex:) Solve the system by graphing.

Notes:

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

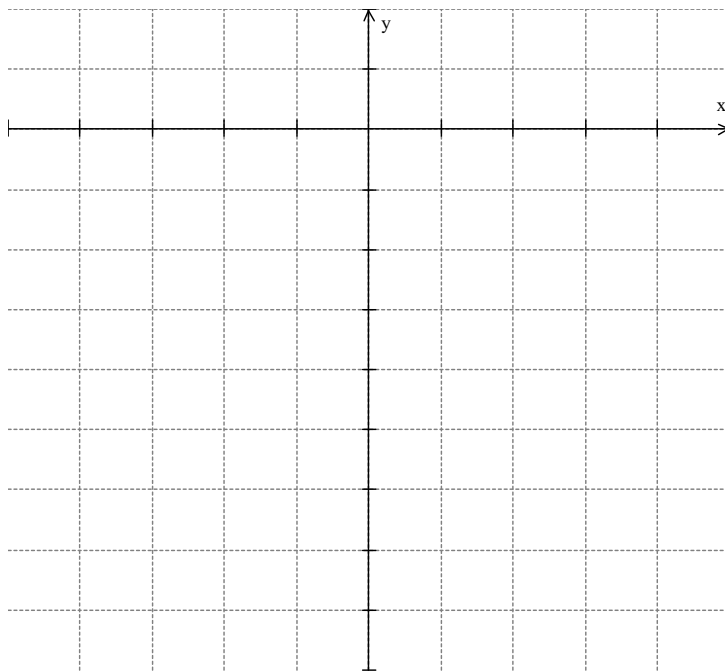


OYO:) Solve the system by graphing.

Notes:

$$x - y = 5$$

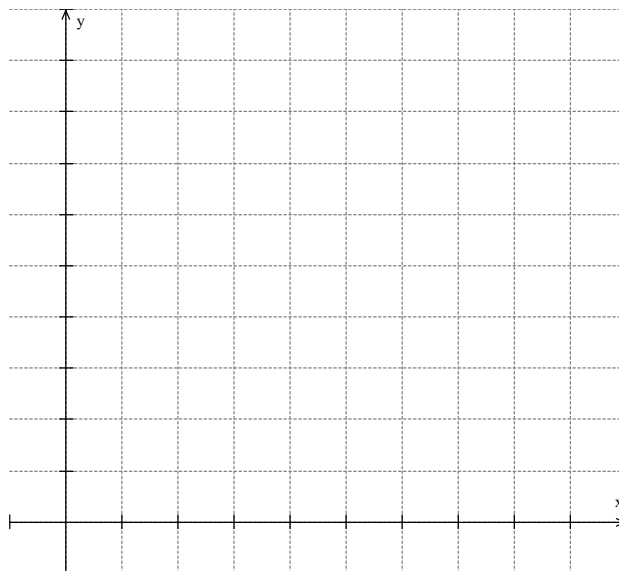
$$-3x + y = -1$$



Modeling Real Life

Ex:) Your family attends a comic convention. Each autograph costs \$20 and each photograph costs \$50. Your family buys a total of 5 autographs and photographs for \$160. How many photographs does your family buy?

Notes:



OYO:) Sondra is making 10 quarts of punch from fruit juice and club soda. The number of quarts of fruit juice is 4 times the number of quarts of club soda. How many quarts of fruit juice and how many quarts of club soda does Sondra need?

Notes:

