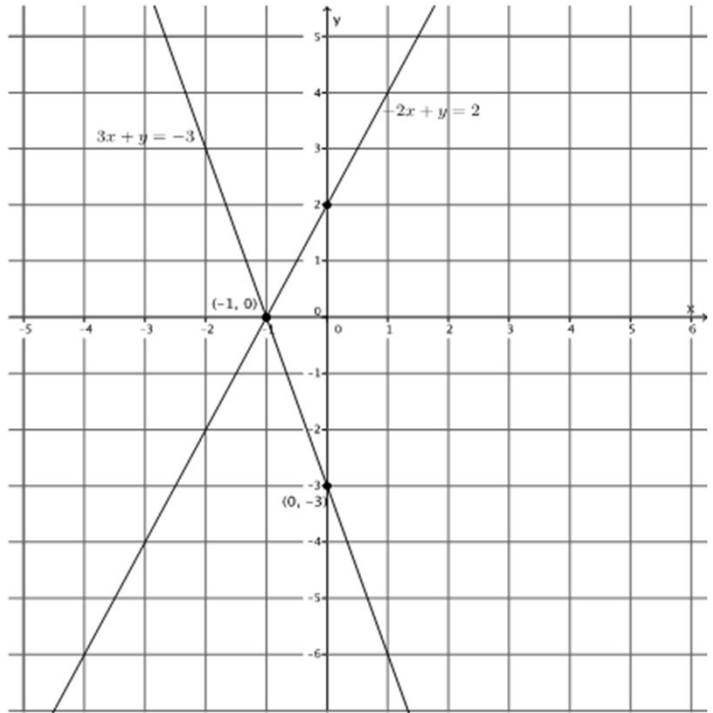# System of Equations (Graphical Method)

a) Sketch the graphs of the linear system on a coordinate plane: $\begin{cases} 3x + y = -3 \\ -2x + y = 2 \end{cases}$.

b) Name the ordered pair where the graphs of the two linear equations intersect.

c) Verify that the ordered pair named in part (a) is a solution to $3x + y = -3$.

d) Verify that the ordered pair named in part (a) is a solution to $-2x + y = 2$.

System of Equations (Graphical Method)

a) Sketch the graphs of the linear system on a coordinate plane: $\begin{cases} 3x + y = -3 \\ -2x + y = 2 \end{cases}$

For the equation $3x + y = -3$

$$3(0) + y = -3$$
$$y = -3$$

The y-intercept point is $(0, -3)$.

$$3x + 0 = -3$$
$$3x = -3$$
$$x = -1$$

The x-intercept point is $(-1, 0)$.

For the equation $-2x + y = 2$:

$$-2(0) + y = 2$$
$$y = 2$$

The y-intercept point is $(0, 2)$.

$$-2x + 0 = 2$$
$$-2x = 2$$
$$x = -1$$

The x-intercept point is $(-1, 0)$
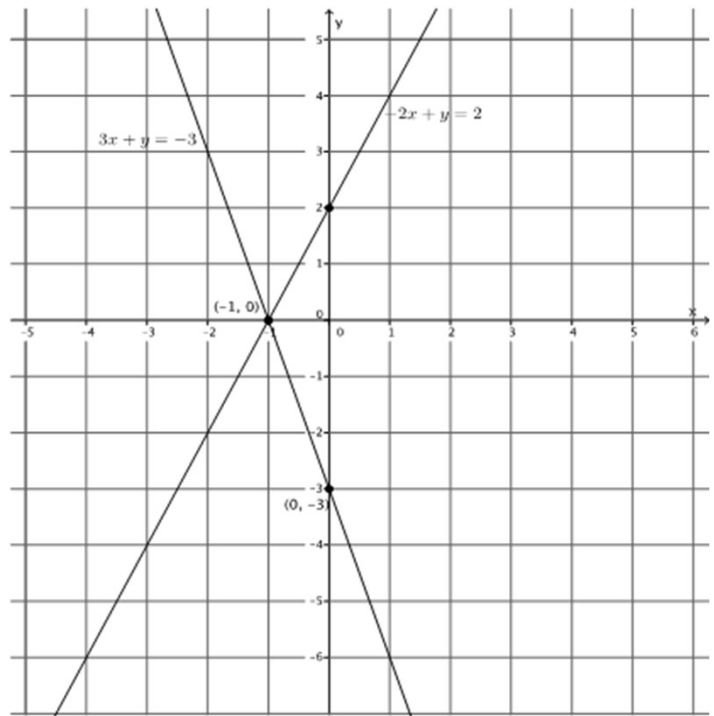
b) Name the ordered pair where the graphs of the two linear equations intersect.

$(-1, 0)$

c) Verify that the ordered pair named in part (a) is a solution to $3x + y = -3$.

$$3(-1) + 0 = -3$$
$$-3 = -3$$

The left and right sides of the equation are equal.

d) Verify that the ordered pair named in part (a) is a solution to $-2x + y = 2$.

$$-2(-1) + 0 = 2$$
$$2 = 2$$

The left and right sides of the equation are equal.