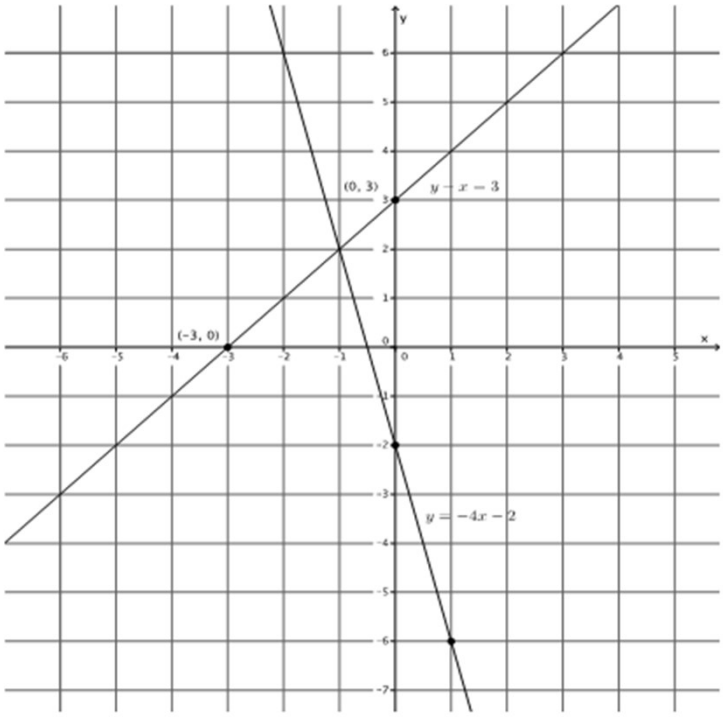
System of Equations (Graphical Method)

a) Sketch the graphs of the linear system on a coordinate plane: $\begin{cases} y - x = 3 \\ y = -4x - 2 \end{cases}$.



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 $y - x = 3$.

d) Verify that the ordered pair named in part (a) is a solution to $y = -4x - 2$.

System of Equations (Graphical Method)

a) Sketch the graphs of the linear system on a coordinate plane: $\begin{cases} y - x = 3 \\ y = -4x - 2 \end{cases}$.

For the equation $y - x = 3$

$$y - 0 = 3$$
$$y = 3$$

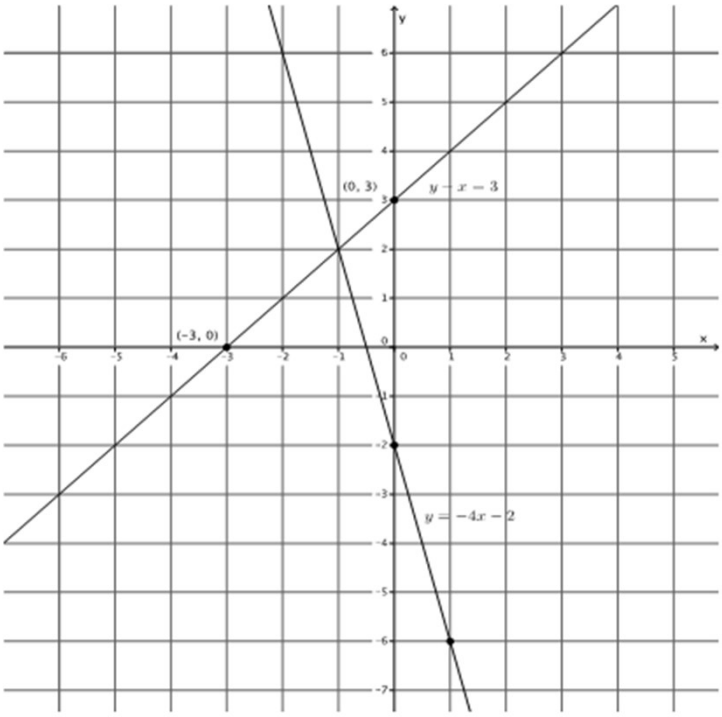
The y-intercept point is $(0, 3)$.

$$0 - x = 3$$
$$-x = 3$$
$$x = -3$$

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

For the equation $y = -4x - 2$:

The slope is $-\frac{4}{1}$, and the y-intercept point is $(0, -2)$.



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

$(-1, 2)$

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

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

The left and right sides of the equation are equal.

d) Verify that the ordered pair named in part (a) is a solution to $y = -4x - 2$.

$$2 = -4(-1) - 2$$
$$2 = 4 - 2$$
$$2 = 2$$

The left and right sides of the equation are equal.