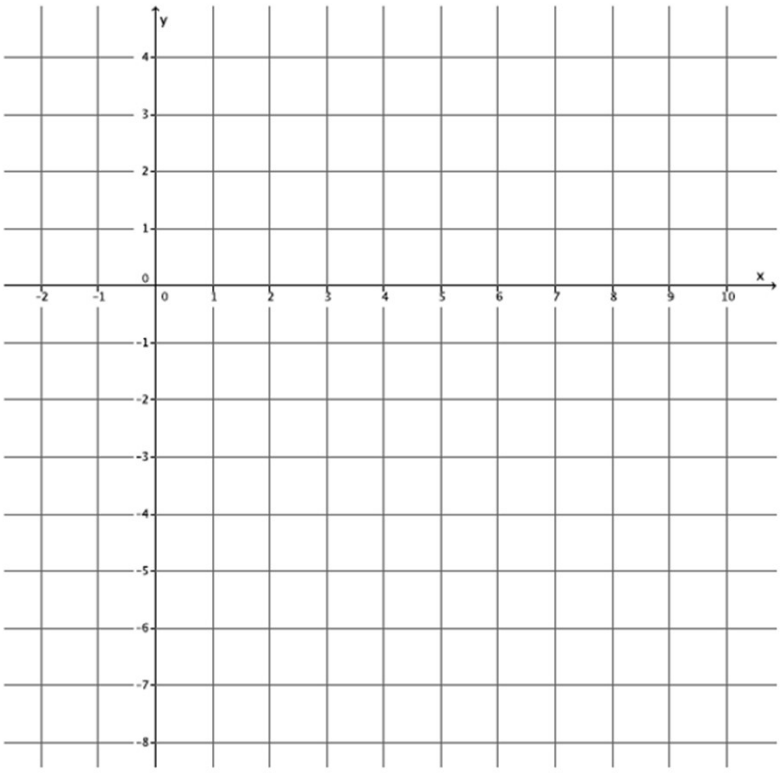
System of Equations (Graphical Method)

a) Sketch the graphs of the linear system on a coordinate plane: $\begin{cases} 2x - 3y = 18 \\ 2x + y = 2 \end{cases}$



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 $2x - 3y = 18$.

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: $\begin{cases} 2x - 3y = 18 \\ 2x + y = 2 \end{cases}$

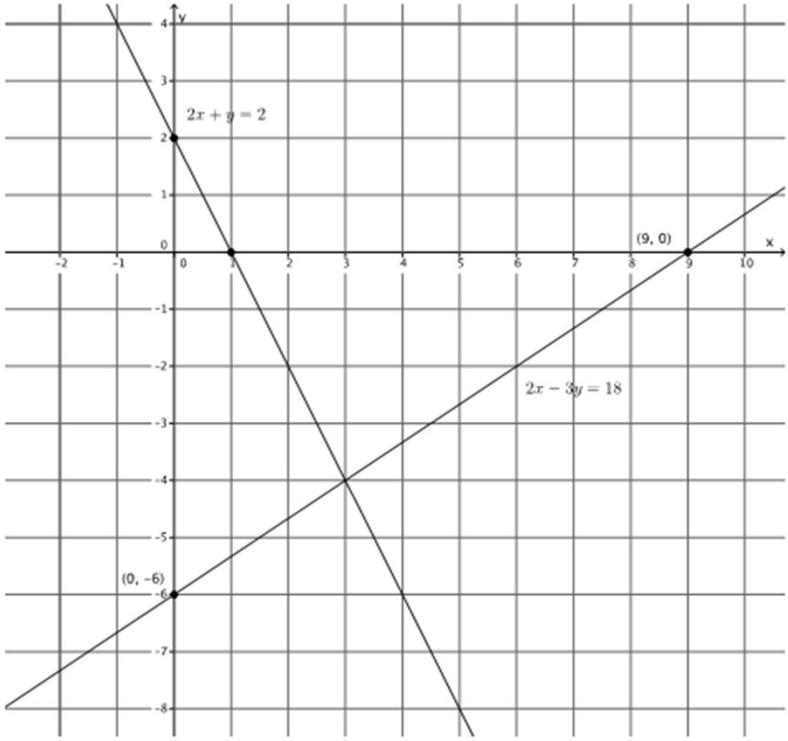
For the equation $2x - 3y = 18$*:*

$$2(0) - 3y = 18$$
$$-3y = 18$$
$$y = -6$$

The y*-intercept point is* $(0, -6)$.

$$2x - 3(0) = 18$$
$$2x = 18$$

$x = 9$*The* x*-intercept point is* $(9, 0)$.



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.

$(3, -4)$

c) Verify that the ordered pair named in part (a) is a solution to $2x - 3y = 18$.

$$2(3) - 3(-4) = 18$$
$$6 + 12 = 18$$
$$18 = 18$$

The left and right sides of the equation are equal.

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

$$2(3) + (-4) = 2$$
$$6 - 4 = 2$$
$$2 = 2$$

The left and right sides of the equation are equal.