

Self-Check for Tutorial 7
Graphing Linear Equations

1. Write an equation for the horizontal line passing through the point $(6, 2)$.
2. Write the equation $3x - 4y = 8$ in slope-intercept form.
3. Find the x and y intercepts for the equation $2x + 4y = 12$.
4. When graphing the line $y = 3x - 4$, what point would be convenient to plot first?
5. When plotting a point defined by an order pair, should you move vertically (up and down) or horizontally (left and right) first?
6. When moving from one point to a second point using the slope of the line, should you move vertically (up and down) or horizontally (left and right) first?

Solutions to Self-Check for Tutorial 7 Graphing Linear Equations

1. Write an equation for the horizontal line passing through the point (6, 2).

$$y = 2$$

3. Find the x and y intercepts for the equation $2x + 4y = 12$.

Let $y = 0$ to find the x-intercept

$$2x + 4(0) = 12$$

$$2x + 0 = 12$$

$$2x = 12$$

$$x = 6$$

(6, 0) is the x-intercept

Let $x = 0$ to find the y-intercept

$$2(0) + 4y = 12$$

$$0 + 4y = 12$$

$$4y = 12$$

$$y = 3$$

(0, 3) is the y-intercept

2. Write the equation $3x - 4y = 8$ in slope-intercept form.

$$3x - 4y = 8$$

$$\begin{array}{r} -3x \qquad -3x \\ \hline \end{array}$$

add -3x to each side of equation

$$\begin{array}{r} -4y \qquad = \quad -3x + 8 \\ \hline \end{array}$$

$$\begin{array}{r} -4 \qquad \qquad -4 \qquad -4 \\ \hline \end{array}$$

divide each side by -4

$$y = \frac{3}{4}x - 2$$

4. When graphing the line $y = 3x - 4$, what point would be convenient to plot first?

(0, -4) because the y-intercept can be read directly from the given equation.

5. When plotting a point defined by an order pair, should you move vertically (up and down) or horizontally (left and right) first?

Horizontally to move along the x-axis because, in an ordered pair (x, y) , the first number represents the distance on the x-axis.

6. When moving from one point to a second point using the slope of the line, should you move vertically (up and down) or horizontally (left and right) first?

Vertically because slope is defined as rise (vertical) over run (horizontal).