Practice Problem 1

(a) Solve the equation below for q in terms of p (that is, with q isolated on the left and all other terms on the right):

$$p = 80 - 0.2q$$

(b) Sketch the equation from part (a) and show the intercepts and slope: Put p on the vertical axis and q on the horizontal axis.

Practice Problem 2

(a) Solve the equation below for p in terms of t:

$$48{,}000 - 800(p + t) = 800p$$

(b) Solve the equation below for q in terms of p:

$$q = 10\left(500 - \frac{1}{2}p\right) + 5(2000 - 4p)$$

Practice Problem 3

(a) Solve the equation below for y in terms of x:

$$\frac{x}{y} = \frac{3}{5}$$

(b) Sketch the equation from part (a). Show the intercepts and the slope. Because of the nature of the intercepts for this problem, it may help to calculate an extra point other than the intercepts when drawing the graph.

Practice Problem 4

(a) Solve the equation below for L in terms of Q and K:

$$Q = \frac{1}{18} K^{0.5} L^{0.5}$$

(b) Solve the equation below for m in terms of u, p_x, and p_y:

$$u = \left(\frac{0.5m}{p_x} \right)^{0.5} \left(\frac{0.5m}{p_y} \right)^{0.5}$$

Practice Problem 5

(a) Sketch a graph of the following equation showing the values of the intercepts and the slope:

$$12x + 8y = 3040$$

(b) Sketch a graph of the following equation, with w on the vertical axis and q_L on the horizontal axis. Show the intercepts and the slope:

$$w = 20 + 0.2q_L$$