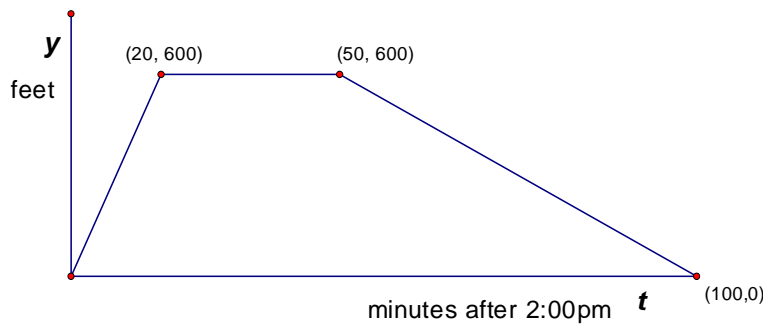


1. Let $f(x) = \frac{3}{4}x - 5$.
 - a. Evaluate $f(-12)$.
 - b. Evaluate $f(1 + 3)$ and $f(1) + f(3)$. Does $f(1 + 3) = f(1) + f(3)$?
 - c. Solve the equation $f(x) = -12$.
2. Let $f(x) = x^2 - 3$.
 - a. Evaluate $f(0)$.
 - b. Solve the equation $f(x) = 15$.
 - c. For what value(s) of x does $f(x) = f(5)$?
3. The number of sodas that the PUB will sell each day is given by the function $D(p) = 620 - 4p$, where p is the price of a soda in cents.
 - a. Sketch a graph of this function. Find the coordinates of the intercepts and give the appropriate domain and range.
 - b. How many sodas will the PUB sell each day if they charge \$1.25 per soda?
 - c. At what price would they sell 104 sodas each day?
4. Let g be the function whose graph is a line passing through the points $(-2, -3)$ and $(1, -1)$.
 - a. Find the coordinates of the intercepts of the graph of the function $y = g(x)$.
 - b. Evaluate $g(-2)$.
 - c. Solve the equation $g(x) = -1$.
 - d. Evaluate $g(105)$.
 - e. For what value(s) of x does $g(x) = 105$?
4. The function $y = H(t)$ gives the height (in feet) of a balloon t minutes after 2:00pm. The graph of the function $y = H(t)$ is shown below.



- a. Find the height of the balloon at 2:08 pm.
- b. When is the balloon 450 feet above the ground?
- c. If the temperature (in $^{\circ}\text{F}$) at an altitude of A feet is given by the function $f(A) = 60 - 0.004A$, determine the temperature of the balloon's environment at 3:00pm. Also determine when the temperature of the balloon's environment is 59°F .