INTERPRETING SLOPE AND VERTICAL INTERCEPT

For # 1 – 7, interpret the slope and y-intercept of the function in each of the following scenarios.

1. Richard’s Yoga Center has done some research and found that the Center’s revenue, \( R \), can be written as a function of the number, \( n \), of floor mats sold. Let \( R(n) = 11n \).

2. Richard’s Restaurant has determined that their profit, \( P \), can be written as a function of the number of meals sold, \( n \). Let \( P(n) = 3n - 21 \).

3. Tom’s Fish Store has determined that their total cost, \( C \), of producing fish hooks is a function of the number, \( n \), of fish hooks made. Let \( C(n) = 2n + 24 \).

4. The revenue, \( R \), in hundreds of dollars of Tom’s Pool Company is a function of the number, \( n \), of in-ground pools sold. Let \( R(n) = 12n \).

5. Laurie’s Yoga Center has done some research and found that the Center’s profit, \( P \), can be written as a function of the number, \( n \), of floor mats sold. Let \( P(n) = n + 29 \).

6. Mary’s Tire Company has determined that their total cost of operation, \( C \), is a function of the number, \( n \), of tires made. Let \( C(n) = 2n + 9 \).

7. Tom’s Awning Retailer has determined that the store’s profit, \( P \), can be written as a function of the number, \( n \), of awnings sold. Let \( P(n) = 100n - 8 \).

8. A small appliance manufacturer finds that if he produces \( x \) toaster ovens in a month, his production cost is given by the equation \( y = 6x + 3000 \), where \( y \) is measured in dollars.

9. The manager of a weekend flea market knows from past experience that if she charges \( x \) dollars for a rental space at the flea market, then the number, \( y \), of spaces she can rent is given by the equation \( y = 200 - 4x \).

10. Many scientists believe that the average surface temperature of the world has been rising steadily. The average surface temperature is given by \( T = 0.02t + 8.50 \) where \( T \) is temperature in °C and \( t \) is time in years since 1900.