MATH 123 Functions

For each of the following functions,

- (a) determine the input information;
- (b) determine the output information;
- (c) determine the input;
- (d) determine the output;
- (e) determine the input units;
- (f) determine the output units;
- (g) explain why negative input values are or are not meaningful for the function; and
- (h) explain why negative output values are or are not meaningful for the function.
- **1.** W(t) is the number of hours that the Governor of Massachusetts works at the State House, t days after taking office.
- 2. C(x) is the average cost, in dollars, to produce *The Boston Globe*, x years after 1980.
- **3.** B(x) is the average cost, in thousands of dollars, to excavate an x-foot deep trench at the site of "The Big Dig".
- **4.** R(x) is the revenue, in thousands of dollars, from the sale of printer cartridges at *Staples*, x years after 1990.
- **5.** D(t) is the United States deficit, in billions of dollars, t years after 1990.
- **6.** P(x) is the profit at the *Framingham State University Bookstore*, x days after the start of the semester.
- **7.** W(x) is your weight, in pounds, when your height is x inches.
- **8.** M(x) is the amount of money in your wallet, x hours after 8 AM on a particular day.
- **9.** G(x) is the average cost to fill a 20-gallon gas tank, x years after 1980.
- **10.** S(x) is the salary of the President of the United States of America, x years after 1900.
- **11.** C(x) is the cost, in dollars to produce x watts of electricity.
- **12.** M(x) is the cost, in dollars, for x hours of labor to repair a MacBook Pro laptop computer.