## **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 inputs are or are not meaningful for the function; and
- (h) explain why negative output are or are not meaningful for the function.
- 1. Suppose W(t) is the number of hours that the Governor of Massachusetts works at the State House t days after (s)he takes office.
- 2. Suppose C(x) is the average cost, in dollars, to produce The Boston Globe x years after 1980.
- Suppose B(x) is the average cost, in thousands of dollars, to dig an x foot deep trench at the Big Dig site.
- **4.** Suppose R(x) is Staples' revenue, in thousands of dollars, from the sale of software x years after 1990.
- 5. Suppose D(t) is the United States deficit, in billions of dollars, t years after 1990.
- 6. Suppose P(x) is the profit at the Framingham State College bookstore x days after September 1.
- 7. Suppose H(x) is your height, in inches, when you weigh x pounds.
- 8. Suppose W(x) is the amount of money in your wallet x hours after 8 am.
- **9.** Suppose G(x) is the average cost to fill a 20 gallon gas tank x years after 1980.
- **10.** Suppose S(x) is the salary of the President of the United States of America x years after 1900.
- **11.** Suppose E(x) is the cost, in dollars to produce x watts of electricity.
- **12.** Suppose G(x) is the cost, in dollars, for x hours of labor to repair a Gateway laptop computer.