PRACTICE QUESTIONS FOR INTRODUCTION TO STATISTICS

EXERCISE 1.1

1. In each of these statements, tell whether descriptive or inferential statistics have been used.
a. By 2040 at least 3.5 billion people will run short of water. Inferential
b. Nine out of ten on-the-job fatalities are men. Descriptive
c. Expenditures for the cable industry were $5.66 billion in 1996. Descriptive
d. The median household income for people aged25–34 is $35,888. Descriptive
e. Allergy therapy makes bees go away. Inferential
f. Drinking decaffeinated coffee can raise cholesterol levels by 7%
g. The national average annual medicine expenditure per person is $1052. Descriptive
h. Experts say that mortgage rates may soon hit bottom. Inferential

2. Classify each variable as qualitative or quantitative.
a. Marital status of nurses in a hospital. Qualitative
b. Time it takes to run a marathon. Quantitative
c. Weights of lobsters in a tank in a restaurant. Quantitative
d. Colors of automobiles in a shopping center parking lot. Qualitative
e. Ounces of ice cream in a large milkshake. Quantitative
f. Capacity of the NFL football stadiums. Quantitative
g. Ages of people living in a personal care home. (1–2) Quantitative

3. Classify each variable as discrete or continuous.
a. Number of pizzas sold by Pizza Express each day. Discrete
b. Relative humidity levels in operating rooms at local hospitals. Continuous
c. Number of bananas in a bunch at several local supermarkets. Discrete
d. Lifetimes (in hours) of 15 iPod batteries. Continuous
e. Weights of the backpacks of first graders on a school bus. Continuous
f. Number of students each day who make appointments with a math tutor at a local college Discrete
g. Blood pressures of runners in a marathon. (1–2) Continuous

4. Classify each as nominal-level, ordinal-level, interval level, or ratio-level measurement.
a. Pages in the 25 best-selling mystery novels. Ratio
b. Rankings of golfers in a tournament. Ordinal
c. Temperatures inside 10 pizza ovens. Interval
d. Weights of selected cell phones. Ratio
e. Salaries of the coaches in the NFL. Ratio
f. Times required to complete a chess game. Ratio
g. Ratings of textbooks (poor, fair, good, excellent). Ordinal
h. Number of amps delivered by battery chargers. Ratio
i. Ages of children in a day care center. Ratio
j. Categories of magazines in a physician's office (sports, health, news). (1–2) Normal

5. Classify each sample as random, systematic, stratified, or cluster.
a. In a large school district, all teachers from two buildings are interviewed to determine whether they believe the students have less homework to do now than in previous years. Cluster
b. Every seventh customer entering a shopping mall is asked to select her or his favorite store. Systematic
c. Nursing supervisors are selected using random numbers to determine annual salaries. Random
d. Every 100th hamburger manufactured is checked to determine its fat content. Systematic
e. Mail carriers of a large city are divided into four groups according to gender (male or female) and according to whether they walk or ride on their routes. Then 10 are selected from each group and interviewed to determine whether they have been bitten by a dog in the last year. (1–3) Stratified.