

Elementary Statistics: Picturing the World

Section 1.2

1. Identify the population and the sample:

- a) A survey of 1353 American households found that 18% of the households own a computer.
- b) A recent survey of 2625 elementary school children found that 28% of the children could be classified obese.
- c) The average weight of every sixth person entering the mall within 3-hour period was 146 lb.

2. Determine whether the numerical value is a parameter or a statistics (and explain):

- a) A recent survey by the alumni of a major university indicated that the average salary of 10,000 of its 300,000 graduates was 125,000.
- b) The average salary of all assembly-line employees at a certain car manufacturer is \$33,000.
- c) The average late fee for 360 credit card holders was found to be \$56.75.

3. For the studies described, identify the population, sample, population parameters, and sample statistics:

- a) In a USA Today Internet poll, readers responded voluntarily to the question “Do you consume at least one caffeinated beverage every day?”
- b) Astronomers typically determine the distance to galaxy (a galaxy is a huge collection of billions of stars) by measuring the distances to just a few stars within it and taking the mean (average) of these distance measurements.

4. Identify whether the statement describes inferential statistics or descriptive statistics:

- a) The average age of the students in a statistics class is 21 years.
- b) The chances of winning the California Lottery are one chance in twenty-two million.
- c) There is a relationship between smoking cigarettes and getting emphysema.
- d) From past figures, it is predicted that 39% of the registered voters in California will vote in the June primary.

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5. Determine whether the data are qualitative or quantitative:

- a) the colors of automobiles on a used car lot
- b) the numbers on the shirts of a girls' soccer team
- c) the number of seats in a movie theater
- d) a list of house numbers on your street
- e) the ages of a sample of 350 employees of a large hospital

6. Identify the data set's level of measurement (nominal, ordinal, interval, ratio):

- a) hair color of women on a high school tennis team
- b) numbers on the shirts of a girls' soccer team
- c) ages of students in a statistics class
- d) temperatures of 22 selected refrigerators
- e) number of milligrams of tar in 28 cigarettes
- f) number of pages in your statistics book
- g) marriage status of the faculty at the local community college
- h) list of 1247 social security numbers
- i) the ratings of a movie ranging from "poor" to "good" to "excellent"
- j) the final grades (A, B, C, D, and F) for students in a chemistry class
- k) the annual salaries for all teachers in Utah
- l) list of zip codes for Chicago
- m) the nationalities listed in a recent survey
- n) the amount of fat (in grams) in 44 cookies
- o) the data listed on the horizontal axis in the graph

