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 statistic (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, parameter, and statistic:

   a) In a USA Today Internet poll, readers responded voluntarily to the question "Do you consume at least one caffeinated beverage every day?" 88% of respondents said "yes."

   b) Astronomers typically determine the distance to a galaxy (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. 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 girl's 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

5. Decide which method of data collection you would use to collect data for the study:

a) A study of the salaries of college professors in a particular state

b) A study where a political pollster wishes to determine if his candidate is leading in the polls

c) A study where you would like to determine the chance getting three girls in a family of three children

d) A study of the effects of a fertilizer on a soybean crop

e) A study of the effect of koalas on Florida's ecosystem

6. Identify the sampling technique used:

a) Every fifth person boarding a plane is searched thoroughly.

b) At a local community College, five math classes are randomly selected out of 20 and all of the students from each class are interviewed.

c) A researcher randomly selects and interviews fifty male and fifty female teachers.

d) A researcher for an airline interviews all of the passengers on five randomly selected flights.

e) Based on 12,500 responses from 42,000 surveys sent to its alumni, a major university estimated that the annual salary of its alumni was $92,500.

f) A community college student interviews everyone in her biology class to determine the percentage of students that own a car.

g) A market researcher randomly selects 200 drivers under 35 years of age and 100 drivers over 35 years of age.

h) All of the teachers from 85 randomly selected nation's middle schools were interviewed.

i) To avoid working late, the quality control manager inspects the last 10 items produced that day.

j) The names of 70 contestants are written on 70 cards, The cards are placed in a bag, and three names are picked from the bag.

7. Name the type of bias involved and explain why it is biased.

a) A local newspaper ran a survey by asking, "Do you support the development of a weapon that could kill millions of innocent people?"

b) A student interviews teachers about the amount of hours they work. She walks around DHS at 4 pm to gather her data.

c) When a student asks her teachers about their political views, some teachers refuse to participate in the survey.

d) Mr. Curlette asks students about whether or not they have ever cheated on a test.

8. A sample of 4 people must be selected randomly from the following group. Use the following table of random digits to select your sample:

    07830 43846 12938 19827 08643 17532 89032

Andrew	Femi	Michael
Belinda	Jalisa	Nathan
Chelsea	Kenny	Omeed