

Name: _____

Identify the population and sample in each situation.

1. A committee on community relations in a college town plans to survey local businesses about the importance of students as customers. From the telephone book listings, the committee chooses 150 business at random. Of these, 73 return the questionnaire mailed by the committee.

Population: All local businesses in this college town.

Sample: The 150 businesses that were sent the questionnaire *or* the 73 businesses who returned the questionnaire.

2. The 2000 Census tried to gather basic information from every household in the U.S. A “long form” requesting additional information was sent to a sample of approximately 17% of households.

Population: All U.S. households.

Sample: The 17% of the U.S. households that were chosen for the survey.

3. A machinery manufacturer purchases voltage regulators from a supplier. There are reports that variation in the output voltage of the regulators is affecting the performance of the finished product. To assess the quality of the supplier’s production, the manufacturer sends a sample of 5 regulators from the last shipment to a laboratory for study.

Population: All regulators produced by this supplier.

Sample: The 5 regulators that were sent to the laboratory for study.

Determine whether the underlined value is a parameter or a statistic.

4. A study of 6,076 adults in public restrooms (in Atlanta, Chicago, NYC, and San Francisco) found that 23% did not wash their hands before exiting. *Source: American Society of Microbiology and the Soap and Detergent Association*

Statistic

5. Ty Cobb is one of major league baseball’s greatest hitters of all time, with a career batting average of 0.366.

Parameter

6. In a national survey about drug abuse, 10% of the respondents aged 12 to 17 reported using illicit drugs within the past month. *Source: 2009 National Survey on Drug Use and Health*

Statistic

Determine whether each situation involves descriptive or inferential statistics.

7. Researchers at a university recently conducted a study to determine whether the capital crunch is affecting small businesses' abilities to expand. The project surveyed 559 privately held businesses and 1430 lenders and investors nationwide. The study found that 78 percent of businesses had solid growth strategies but only 40% had the resources to grow.

Inferential

8. A young actuary has been asked to summarize the number of automobile accidents which his company has settled in the last year and counties the number of accidents in each region: North, South, East, and West. He summarizes the counts by region in a chart and gives the chart to his supervisor.

Descriptive

The August 23, 1999 issue of the *Tampa Tribune* reported on a study involving data volunteered by 17,251 users of the abcnews.com web site. Users of the site were asked to respond to questions including whether they used the Internet to escape problems, tried unsuccessfully to cut back their internet use, and found themselves preoccupied with the Internet even when not using it. Almost 6% of those responding confessed to some sort of addiction to the Internet.

The number 6% applies to the sample so it is a statistic. Define the corresponding parameter of interest in this study.

The parameter of interest is the true proportion of users of the website abcnews.com who have some sort of addiction to the internet.