Parameters vs. Statistics Homework

1. Describe the difference between a statistic and a parameter.

2. The United States House of Representatives has 435 members when all positions are filled. Currently there are three vacancies. Among the 432 positions that are currently filled 56% are Republicans.

   a. Identify the individuals of the study and the variable?

   b. Do the data comprise a sample or a population?

   c. Does the study represent a statistic or a parameter?

   d. For a set population, does a parameter ever change?

3. Television station DKA wants to know the proportion of TV owners in Arkansas who watch the station's new program at least once a week. The station asked a group of 1000 TV owners in Arkansas if they watch the program at least once a week.

   a. Identify the individuals of the study and the variable.

   b. Do the data comprise a sample?

   c. If so, what is the underlying population?

   d. Is the proportion of viewers in the sample who watch the new program at least once a week a statistic or a parameter?

4. Identify the population and the sample.

   a. A survey of 1353 American households found 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 as obese.

   c. The average weight of every sixth person entering the mall within a 3 hour period was 146 lb.

Use the scenario to identify populations and samplings

1. A beverage company wanted to see if people in the United States liked their new logo. Which choice best represents a population?

   a. A selection of logo artists.
   b. Every person in United States.
   c. A selection of shoppers from different states.
   d. 3,800 children age 5 - 15

2. A musician wanted to see what people who bought his last album thought about his songs. Which choice best represents a sample?

   a. Every person who bought the album.
   b. A selection of people who didn't want to buy the album.
   c. 250 girls who bought the album.
   d. A selection of 3,294 people who bought the album.

3. A gaming website wanted to find out which console its visitors owned. Which choice best represents a population?

   a. Visitors to the 3DS section.
   b. All of the website visitors.
   c. Visitors to the PS4 section.
   d. Visitors who are on the website for more than 5 minutes.

4. Before a nation-wide election, a polling place was trying to see who would win. Which choice best represents a sample?

   a. A selection of voters over age 50.
   b. A selection of male voters.
   c. A selection of voters of different ages.
   d. All voters.

5. A toy store owner tracking how much kids spend each month on toys. Which choice best represents a population?

   a. All of kids who buy toys.
   b. 227 rich kids.
   c. 228 boys 7 – 15
   d. 235 kids from age 10 to 15.