

Sampling Techniques Worksheet

For each description of sampling, decide if the sampling technique is

- A. Simple Random
- B. Stratified
- C. Cluster
- D. Systematic
- E. Convenience

1. In order to estimate the percentage of defects in a recent manufacturing batch, a quality control manager at Intel selected every 8th chip that comes off the assembly line starting with the 3rd, until she obtains a sample of 140 chips.
2. In order to determine the average IQ of ninth-grade students, a school psychologist obtains a list of all high schools in the local public school system. She randomly selects five of these schools and administers an IQ test to all ninth-grade students at the selected schools.
3. In an effort to determine customer satisfaction, United Airlines randomly selects 50 flights during a certain week and surveys all passengers on the flights.
4. A member of Congress wishes to determine her constituency's opinion regarding estate taxes. She divides her constituency into three income classes: low-income households, middle-income households, and upper-income households. She then takes a random sample of households from each income class.
5. In an effort to identify whether an advertising campaign has been effective, a marketing firm conducts a nationwide poll by randomly selecting individuals from a list of known users of the product.
6. A radio station asks its listeners to call in their opinion regarding the use of American forces in peacekeeping missions.
7. A farmer divides his orchards into 50 subsections, randomly selects 4 and samples all of the trees within the 4 subsections in order to approximate the yield of his orchard.
8. A school official divides the student population into five classes: freshman, sophomore, junior, senior and graduate student. The official takes random sample from each class and asks the members' opinions regarding student services.
9. A survey regarding download time on a certain Web site is administered on the Internet by a market research firm to anyone who would like to take it.
10. A lobby has a list of 100 senators of the United States. In order to determine the Senate's position regarding farm subsidies, they decide to talk to every seventh senator on the list starting with the third.

➤ **Types of Sampling**

1. Which sampling method was utilized? Why?
 - (a) Student organization looking to get signatures for a petition camp out in front of Class of 1950 Lecture Hall.
 - (b) Select three students from a class to receive ice cream by putting all the students' names in a hat and picking out three names randomly.
 - (c) Select three female students and three male students to receive ice cream by putting all the men's names in one hat and all the women's names in a different hat and picking out three names from each hat.
 - (d) In Fall 1995, the BBC in Britain requested viewers to call the network and indicate their favorite poem.
 - (e) Divide the class into four groups (freshman, sophomore, junior and senior) and take a random sample of two students from each group.
 - (f) Priceline.com randomly e-mails a Customer Satisfaction Survey for certain transactions done on its site in which customers choose to either respond or not.