

Statistics

Sampling Review

Name _____

1. The shift manager at a manufacturing plant calls each of the employees into his office and asks them a series of questions about job satisfaction. This method of polling is likely to result in what type of bias?
 - A) response bias
 - B) voluntary response bias
 - C) undercoverage
 - D) none of these
2. The local chapter of the National Honor Society offers after school tutoring, but the sessions are not well attended. Hoping to increase attendance, the tutors design a survey to gauge student interest in times, locations, and days of the week that students could attend tutoring sessions. They choose 3 English classes at random, and have all of the students in each class take the survey. What type of sample is this?
 - A) simple random sample
 - B) stratified random sample
 - C) cluster random sample
 - D) systematic random sample
3. The local chapter of the National Honor Society offers after school tutoring, but the sessions are not well attended. Hoping to increase attendance, the tutors design a survey to gauge student interest in times, locations, and days of the week that students could attend tutoring sessions. They randomly choose 10 students from each grade to take the survey. What type of sample is this?
 - A) simple random sample
 - B) stratified random sample
 - C) cluster random sample
 - D) systematic random sample
4. The local chapter of the National Honor Society offers after school tutoring, but the sessions are not well attended. Hoping to increase attendance, the tutors design a survey to gauge student interest in times, locations, and days of the week that students could attend tutoring sessions. They stand outside the entrance to the school and give the survey to every 10th student entering the building. What type of sample is this?
 - A) simple random sample
 - B) stratified random sample
 - C) cluster random sample
 - D) systematic random sample

8. A college group is investigating student opinions about funding of the military. They phone a random sample of students at the college, asking each person one of these questions (randomly chosen):

A: *“Do you think that funding of the military should be increased so that the United States can better protect its citizens?”*

B: *“Do you think that funding of the military should be increased?”*

Which question do you expect will elicit greater support for increased military funding?
 What kind of bias is this?

9. Management at a retail store is concerned about the possibility of drug abuse by people who work there. They decide to check on the extent of the problem by having a random sample of the employees undergo a drug test. Several plans for choosing the sample are proposed. Name the sampling strategy in each.

- a) Randomly select an employee classification and test all the people who work in that classification - supervisors, full-time clerks, part-time clerks, and maintenance staff. _____
- b) Choose the fourth person that arrives to work for each shift. _____
- c) There are four employee classifications: supervisors, full-time clerks, part-time clerks, and maintenance staff. Randomly select ten people from each category. _____
- d) Each employee has a three-digit identification number. Randomly choose 40 numbers. _____

10. Listed at the right are the names of the 20 pharmacists on the hospital staff. Use the random numbers listed below to select three of them to be in the sample. Clearly explain your method.

04905 83852 29350 91397

19994 65142 05087 11232

Pastore	Back
Spiridinov	Ahl
Hedge	MacDowell
Schissel	Novelli
Lavine	Kaplan
Highland	Roundy
Grubb	Markowitz
Glass	Davies
Golkowski	Reeves
Janis	Yen

11. Name the kind of bias that might be present if the administration decides that instead of subjecting people to random testing they'll just...

a) interview employees about possible drug abuse.

b) ask people to volunteer to be tested.

12. A member of the City Council has proposed a resolution opposing construction of a new state prison there. The council members decide they want to assess public opinion before they vote on this resolution. Below are some of the methods that are proposed to sample local residents to determine the level of public support for the resolution. Match each with one of the listed sampling techniques. One term will not be used.

a) Place an announcement in the newspaper asking people to call their council representatives to register their opinions. Council members will tally the calls they receive.

b) Call every 500th person in the phone book.

c) Have the Board of Elections assign each voter a number, then select 400 of them using a random number table.

d) Go to a downtown street corner, a grocery store, and a shopping mall; interview 100 typical shoppers at each location.

e) Randomly pick 50 voters from each election district.

f) Have each council member survey 50 friends, neighbors, or co-workers.

g) Randomly pick several city blocks, then randomly pick 10 residents from each block.

h) Randomly select several city blocks; interview all the adults living on each block.

1	cluster
2	convenience
3	judgment
4	census
5	simple (SRS)
6	stratified
7	systematic
8	voluntary response
9	multistage