

1. An online store contacts 1000 customers from its list of customers who have purchased something from them in the last year. In all, 696 of the 1000 say that they are very satisfied with the store's Web site. The population in this setting is

- A. all customers who have purchased something in the last year.
- B. the 1000 customers contacted.
- C. the 696 customers who were very satisfied with the store's Web site.

2. A state representative wants to know how voters in his district feel about enacting a statewide smoking ban in all enclosed public places, including bars and restaurants, as well as several other current statewide issues. He mails a questionnaire addressing these issues to an SRS of 800 voters in his district. Of the 800 questionnaires mailed, 152 were returned. The sample is

- A. the 800 voters receiving the questionnaire.
- B. the 152 voters returning the questionnaire.
- C. all voters in his district.

3. The Pew Research Center survey asked a random sample of 1500 adults, "Do you think the use of marijuana should be made legal, or not?" In the entire sample, 41% said, "Yes, legal." But only 24% of the Republicans in the sample said, "Yes, legal." Which of these two sample percents will be more accurate as an estimate of the truth about the population?

- A. The result for Republicans is more accurate because it is easier to estimate a proportion for a smaller group.
- B. The result for the entire sample is more accurate because it comes from a larger sample.
- C. Both are equally accurate because both come from the same sample.

4. Your college wants to gather student opinion about parking for students on campus. It isn't practical to contact all students.

Give an example of a way to choose a sample of students that is poor practice because it depends on voluntary response.

- A. Placing a poster in the student center advertising the survey and collecting responses from those who respond.
- B. Sending a questionnaire to the entire student body.
- C. Asking random students who pass by the student center.

5. A television station is interested in predicting whether voters in its viewing area are in favor of federal funding for abortions. It asks its viewers to phone in and indicate whether they support/are in favor of or are opposed to this policy. Of the 2241 viewers who phoned in, 1574 (70.24%) were opposed to federal funding for abortions. The viewers who phoned in are

- A. a voluntary response sample
- B. a convenience sample
- C. a population
- D. a simple random sample

6. To determine the food preferences of students, a staff member surveys students as they exit a local bar. This type of sample is a

- A. a voluntary response sample
- B. a convenience sample
- C. an unbiased sample
- D. a simple random sample

7. After the guests have departed, a hotel sends an email to each guest with a link to an online survey in order to gather information about the guest satisfaction.

- A. a voluntary response sample
- B. a convenience sample
- C. an unbiased sample
- D. a simple random sample

8. In order to gather information for a science project, a student polls other students that sit nearby in each class.

- A. a voluntary response sample
- B. a convenience sample
- C. an unbiased sample
- D. a simple random sample

9. A school wants to encourage more parent participation, so they send home a survey with each student asking the parents to complete the survey and return it to their child's teacher.

- A. a voluntary response sample
- B. a convenience sample
- C. an unbiased sample
- D. a simple random sample

10. A researcher randomly selects 25 files from each precinct of an urban police department in order to estimate the average age of criminals.

- A. a voluntary response sample
- B. a convenience sample
- C. an unbiased sample
- D. a simple random sample

11. Each night, the local TV station has a flash poll question, asking viewers to call or text in their vote.

- A. a voluntary response sample
- B. a convenience sample
- C. an unbiased sample
- D. a simple random sample

12. A chemistry professor who teaches a large lecture class gives a survey during class about how he can make the class more interesting. He is hoping he can get more students to attend his class. This survey method suffers from which of the following?

- A.** nonresponse bias
- B.** response bias
- C.** undercoverage bias
- D.** question wording bias

13. Suppose several of the units selected into a random sample cannot be found or contacted during the conducting of a survey. What can we say about this situation?

- A.** This sample contains a lurking variable.
- B.** This will likely produce nonresponse bias in the sample results.
- C.** The sample results will suffer from response bias.
- D.** This situation came about because of interviewer inefficiency

14. A researcher is interested in the cholesterol levels of adults in the city in which she lives. A cholesterol screening program is set up in the downtown area during the lunch hour. Individuals can walk in and have their cholesterol determined for free. One hundred seventy-three people use the service, and their average cholesterol is 217.8. The sample obtained is an example of

- A.** nonresponse bias
- B.** response bias
- C.** undercoverage bias
- D.** question wording bias

15. A newspaper reporter decided to sample residents of all major metropolitan areas in the entire country. This sampling asked if the residents liked living in their city, or are they considering moving, and if so, where? Unfortunately, this survey went over budget and was stopped, and only the east coast of the country was adequately interviewed. With regards to having this survey labeled as representing the entire country, what, if any, will be the most noticeable bias for this survey as it is now?

- A.** nonresponse bias
- B.** response bias
- C.** undercoverage bias
- D.** question wording bias

16. If people tend to respond differently to a question depending on whether the interviewer is well-dressed or dingy, which type of bias is present?

- A.** nonresponse bias
- B.** response bias
- C.** undercoverage bias
- D.** question wording bias

17. If a woman surveys a man on his attitudes to domestic violence, which type of bias is present?

- A. nonresponse bias
- B. response bias
- C. undercoverage bias
- D. question wording bias

18. A Gallup poll sponsored by the disposable diaper industry asked "It is estimated that disposable diapers account for less than 2% of the trash in today's landfills. In contrast, beverage containers, third-class mail, and yard waste are estimated to account for about 21% of the trash in landfills. Given this, in your opinion, would it be fair to ban disposable diapers?"

Which type of bias does this poll suffer from?

- A. nonresponse bias
- B. response bias
- C. undercoverage bias
- D. question wording bias

19. You are using the table of random digits to choose a simple random sample of 6 students from a class of 30 students. You label the students 01 to 30 in alphabetical order. You are going to select the sample using Table B. Which of the following is a possible sample that could be obtained?

- A. 45, 74, 04, 18, 07, 65
- B. 04, 18, 07, 13, 02, 07
- C. 04, 18, 07, 13, 02, 05

20. A firm wants to understand the attitudes of its minority managers toward its system for assessing management performance. Below is a list of all the firm's managers who are members of minority groups. Label them as ordered in the table: top down and then from left to right.

Use Table B at line 134

27816 78416 18329 21337 35213 37741 04312 68508

to choose three to be interviewed in detail about the performance appraisal system.

Adelaja	Draguljic	Huo	Modur
Ahmadiani	Fernandez	Ippolito	Rettiganti
Barnes	Fox	Jiang	Rodriguez
Bonds	Gao	Jung	Sanchez

What three are chosen?

- A. Sanchez, Bonds, Gao.
- B. Sanchez, Modur, Gao.
- C. Ippolito, Modur, Gupta.
- D. Sanchez, Bonds, Modur.

