

**Statistical Studies – CW Day 2**

Name: \_\_\_\_\_

Decide which method of data collection you would use to collect data for the study. Specify either observational study, experiment, simulation, or survey.

1. A study where a drug needs to be tested to determine its effectiveness on a particular illness.
2. A study to determine how many boys a couple would have out of 15 children, a coin is flipped 15 times with heads being a girl and tails being a boy, and the number of tails is counted.
3. A study where a political pollster wishes to determine if his candidate is leading in the polls.
4. A study to determine the dietary habits of rabbits.

Identify the sampling technique used (voluntary response, convenience, simple random sample, stratified random sample, cluster sample, systematic random sample).

5. A community college student interviews everyone in a statistics class to determine the percentage of students that own a car.
6. Billy takes an alphabetical list of HRHS students and randomly picks Susie. He then picks every 3<sup>rd</sup> person until he forms a 20 student committee.
7. It is thought that your grade level influences your opinion on administration. A high school is divided by grade level and then a random sample of 20 students from each grade level is chosen.
8. A sample of North Carolina citizens is needed. A random sample of 5 zip codes is taken and every person from each zip code is surveyed.
9. A TV show asks viewers to call in their opinion on a proposed tax increase.
10. Math III students' names are put in a hat and 30 are chosen to receive a survey about Math III topics.
11. Which method of collecting data would most likely result in an unbiased random sample?
  - a) Placing a survey in a local newspaper to determine how people voted in the 2004 presidential election.
  - b) Surveying honor students taking Math II to determine the average amount of time students in a school spend doing homework each night.
  - c) Selecting every third teenager leaving a movie theater to answer a survey about entertainment.
  - d) Selecting students by the last digit of their school ID number to participate in a survey about cafeteria food.
12. Which of the following would be the most accurate way of finding out how many people in a given state feel about gun control laws?
  - a) Conduct a survey of all gun owners in the state.
  - b) Set up a study in which researchers observe how people react to news of gun violence.
  - c) Analyze the results of a survey given to a random sample of the state's population.
  - d) Conduct an experiment in which state employees are provided with the ability to be "legislator for a day" and see how they vote.
13. Which of the following would not result in skewed survey data?
  - a) conducting a survey of spending habits at a store the night of a midnight sale
  - b) asking students to complete course evaluations of professors after students have seen their end-of-course grades
  - c) distributing a survey about music preferences during the winter season
  - d) asking season ticket holders for a sports team to provide feedback about increasing prices at the stadium