

Homework Problems (HW1)

1. True or false? Statistical inference consists of methods for estimating and drawing conclusions about sample characteristics based on the information in the population.
2. True or false? Selection bias occurs when the population from which the actual sample is drawn is not representative of the target population.
3. True or false? A parameter is a characteristic of a sample.

FILL IN THE BLANK

4. Statistics is the art and science of _____, analyzing, presenting, and interpreting data.
5. An _____ is the set of values of all variables for a given element.
6. A random sample is a sample for which every element has _____ (two words) of being included in the sample.
7. A statistic is a characteristic of a _____.

SHORT ANSWER

8. Is a sample survey examining the effects of secondhand smoke an example of an experimental study or an observational study?
9. Which type of sampling is represented by the following: You would like to estimate the average number of hours per week Americans watch television. You interview all the members of your family and your best friends' families.
10. State which type of statistical study is involved in the following: A large pharmaceutical company is interested in whether a new drug will reduce Alzheimer's disease symptoms in elderly patients.
11. For the study in the previous question, identify the predictor variable and the response variable.