

Getting Ready for the Midterm – Chapter 1

Topics

You are responsible for the following:

- Determine whether a statement is an example of descriptive statistics or inferential statistics.
- Determine the appropriate level of measurement for a set of data.
(Nominal, Ordinal, Interval, Ratio)
- Identify the sampling technique used in a given scenario – random, stratified, systematic, cluster, convenience

Practice Problems

Here are the number of homicide arrests of juveniles age 18 and under in the United States for the years from 1993 through 1997. (Justice Department)

Year	1993	1994	1995	1996	1997
Arrests	3284	3102	2560	2172	1731

Determine whether the following statements are descriptive, and which are inferential. Explain the reasoning behind your choice, in your own words.

- 1) The number of homicide arrests of juveniles declined each year.
- 2) A government program is responsible for the decline in arrests.

Here are the test scores for two students in a statistics class.

Student	Test 1	Test 2	Test 3	Test 4	Test 5
Alycia	85	88	83	86	85
Kevin	73	78	81	84	84

Determine whether the following statements are descriptive, and which are inferential. Explain the reasoning behind your choice, in your own words.

- 3) Alycia's score on the final exam will be higher than Kevin's.
- 4) Kevin's average for these five tests is 80 points.

Determine whether the following data is nominal-level, ordinal-level, interval-level or ratio-level data.

- 5) The colors of the marshmallows in a box of cereal
- 6) A college student's degree (Associate's, Bachelor's, Master's, etc.)
- 7) Temperatures of beers from a tap (°C)
- 8) Weight of a college student
- 9) Letter grades on an exam (A, B, C, D, F)
- 10) Percentage grade on an exam
- 11) Elevations of U.S. National Parks, in feet above/below sea level
- 12) Major in college (Mathematics, Biology, Psychology, etc.)

For the following scenarios, determine which sampling technique was used.

- 13) Percentage of 18- to 25-year-olds who used drugs during the past 30 days: At a shopping mall, people who appear to be in the proper age group are stopped and asked for their age and whether they've used drugs in the past 30 days.
- 14) Percentage of Master's degrees in Mathematics earned by females: Several universities are selected at random and asked for the number of Master's degrees awarded in Mathematics, and how many were awarded to females.
- 15) Average SAT score for females compared to males: Fifty students are randomly selected from a University's list of students. Their gender and SAT scores are recorded.