

Homework #1
Chapters 1, 2 and 3

Please answer the following questions from the textbook. Do not handwrite the answers (except for graphs); please use a wordprocessor (e.g. Word, Wordperfect, etc.).

Chapter 1

- 1) One theory about prejudice is that a person's level of prejudice is influenced by the degree of diversity in his/her surroundings, briefly give an example of this from your own experience and discuss how might you test this theory.
- 2) Let's say that a researcher selects 115 high school students from LAUSD high schools (schools known to be highly diverse) and measures the amount of prejudice (using a questionnaire) they each feel toward other ethnic groups. In this example what is the sample and what is the intended population?
- 3) For the prejudice study above, identify a parameter and a statistic in which we might be interested.
- 4) For the prejudice study above, suggest ways by which we might be able to produce a random (or nearly random) sample of students.
- 5) Give two examples of studies (real or made up) in which the primary interest is finding the relationship between variables.
- 6) Give two examples of studies (real or made up) in which the primary interest is finding differences between groups.

Chapter 2

- 7) Give one example each of a nominal, ordinal, interval and ratio measure.
- 8) Give an example of a scale that might be said to use a ratio scale for some purposes and an interval or ordinal scale for other purposes.
- 9) Write a sentence describing your approach to testing the prejudice theory in #1 above in terms of an independent and a dependent variable.
- 10) We hear all the time that smoking leads to higher levels of cancer. If you wanted to study this what would be the independent variable? What would be the dependent variable?
- 11) Steele and Aronson (1995) studied the performance of caucasian and african american students on the graduate record exam (GRE) where half of the students were told the test was a measure of intelligence and the other half was told that it was not indicative of their intelligence. What are the independent variables (there can be more than one)? What is the dependent variable?
- 12) In your own words define "continuous variable" and give 2 examples.
- 13) In your own words define "discrete variable" and give 2 examples.
- 14) $Y = \{7, 8, 5, 6, 6, 5, 4, 9, 7, 6\}$
Given the data above:
 - a. Calculate $(\sum Y)^2$ and $\sum Y^2$.
 - b. Given the answers to (a.) calculate
$$\frac{\sum Y^2 (\sum Y)^2}{N-1}$$
 - c. Calculate the square root of the answer to (b.).

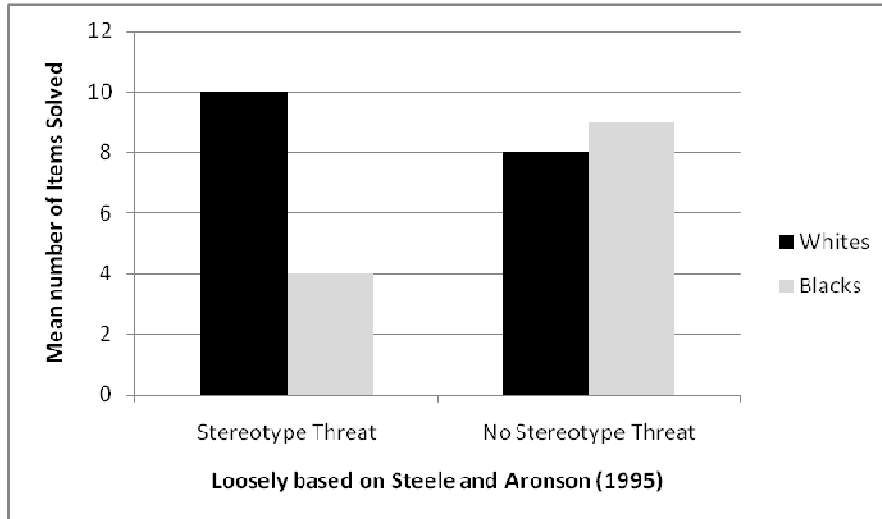
Chapter 3

15) Make a histogram for the following data using a reasonable number of intervals:

41 37 28 44 37 45 43 30 26 34 33 29 38 45 31
29 33 40 29 27 34 35 38 31 34 32 34 46 31 26

16) Create a stem-and-leaf plot for the data in number 15.

17) The following graph illustrates similar results found in Steele and Aronson (1995) (discussed above). Write 2 or 3 sentences about the results and what they seem to suggest.



18) A researcher is interested in whether a person’s liking of the TV show “The Family Guy” is influenced by other people. The research has each subject watch the TV show either alone, with people of the same gender and with people of the opposite gender. The researcher hypothesized that Men will like the TV show more overall but that liking would be increased in the presence of other men. The results are shown in the graph below, please write 2 or 3 sentences describing the results.

