**Week 5 homework**

**Chi-Squares**

You are a general manager at a resort in Hilton Head, South Carolina. To analyze activity and sales, you are interested in studying the number of rounds of golf played by members per weekday. The following sample information is collected over 440 rounds:

Day of the Week Number of Rounds

Monday 98

Tuesday 75

Wednesday 77

Thursday 80

Friday 110

At alpha significance level of .01, is there a difference in the number of rounds of golf played by day of the week?

Please solve problem 25: Testing Effects of Outliers in Section 11–2 (Ch.11) of the text. Textbook Attached.

**Problem**

**25. Testing Effects of Outliers** In conducting a test for the goodness-of-fit as described in this section, does an outlier have much of an effect on the value of the test statistic? Test for the effect of an outlier in Example 1 after changing the first frequency in Table 11-2 from 7 to 70. Describe the general effect of an outlier.

**Example 1**

**Last Digits of Weights** Data Set 1 in Appendix B includes weights from 40 randomly selected adult males and 40 randomly selected adult females. Those weights were obtained as part of the National Health Examination Survey. When obtaining weights of subjects, it is extremely important to actually weigh individuals instead of asking them to report their weights. By analyzing the *last digits* of weights, researchers can verify that weights were obtained through actual measurements instead of being reported. When people report weights, they typically round to a whole number, so reported weights tend to have many last digits consisting of 0. In contrast, if people are actually weighed with a scale having precision to the nearest 0.1 pound, the weights tend to have last digits that are uniformly distributed, with 0, 1, 2, , 9 all occurring with roughly the same frequencies. Table 11-2 shows the frequency distribution of the last digits from the 80 weights listed in Data Set 1 in Appendix B. (For example, the weight of 201.5 lb has a last digit of 5, and this is one of the data values included in Table 11-2.) Test the claim that the sample is from a population of weights in which the last digits do *not* occur with the same frequency. Based on the results, what can we conclude about the procedure used to obtain the weights?

**Table 11-2** **Last Digits**

**of Weights\_\_\_\_\_\_\_\_\_\_**

**Last Digit Frequency**

0 7

1 14

2 6

3 10

4 8

5 4

6 5

7 6

8 12

9 8