Reading: November 4 – November 13 Chapter 8
November 18 – November 20 Section 9.3

Assignment:

1. Complete the following problems from the text: 8.6, 8.24, 8.34, 8.56, 8.72, 8.114 and 8.116.

2. Problem 2 of homework 2 this semester referred to data on the hemoglobin A1C blood test given to 40 different diabetic patients (Problem 2.44 in the text on page 70). A1C values are percentages and are directly proportional to the concentration of glucose in the blood over the full life span of the red blood cells and are not subject to the fluctuations that are seen in daily blood glucose monitoring. An A1C value of 7% is considered the target value for diabetes that is in control. The population standard deviation for A1C values is $\sigma = 1.3\%$.

The data for this problem is in a JMP data table that is available on the section web site [www.public.iastate.edu/~wrstephe/stat104.html](http://www.public.iastate.edu/~wrstephe/stat104.html). Use Analyze – Distribution to produce output that helps you answer the following questions. Be sure to turn in the JMP output with your completed homework assignment.

a) Describe the shape of the histogram of A1C values.
b) Report the value of the sample mean. Be sure to include appropriate units.
c) Test the hypothesis that diabetics have a population mean A1C equal to 7% versus the alternative that the population mean A1C is less than 7%. JMP can do the calculations for you but you must fill in the details of the step-by-step process of testing a hypothesis.
d) Construct a 95% confidence interval for the population mean A1C value. Give an interpretation for this interval.