Problem Set 7 for Math 17

Date Due: April 1, 2011

January 21, 2011

Problems:
Chapter 24 - 14 (df=198), 24 (df=54)
Chapter 25 - 8, 14, 30

Additional Questions:
The data set bitingfly.txt contains information (measurements) from flies. Each fly was taken and had various measurements recorded. Suppose we are interested in determining if the length of antennae segment 12 (lseg12) is greater than the length of antennae segment 13 (lseg13) on average for each fly, and treat the data as a random sample of flies. A relevant analysis can be found in the related Word document, which you should use to address the following questions.
a. Choose the correct parameter and define it in context.
b. Is a hypothesis test or CI more appropriate? Why? If test, set up hypotheses and significance level. If CI, choose a confidence level.
c. Check conditions. Report on whether the conditions hold. You should specify which graphs you are looking at to check your assumptions. Any concerns about performing this analysis?
d. Complete your chosen procedure (even if conditions don't appear to work out). If test, report your test stat, p-value and conclusion. If CI, report your CI and provide an interpretation of the CI.