

Homework Set 9

Due Monday, May 9, before class starts.

1. Reading: Sections 14.5 and 8.5.

Do all the computing in Minitab:

2. For the data in Ex. 15.10 (p. 994), conduct an analysis of variance using $\alpha = 0.05$. Is there a difference in the mean mileage for the four gasoline blends after controlling for car and driver effects? Use Tukey's multiple testing procedure to determine which blends are/are not statistically significantly different from the other blends.
3. Company researchers conducted an experiment to compare the number of major defectives observed along each of five production lines in which changes were being instituted. They monitored production continuously during the period of changes, and recorded the number of major defectives per day for each line. The data are shown in class (Monday 5/2) and also posted online.
 - (a) Compute \bar{y} and s^2 for each sample. Does there appear to be a problem with nonconstant variances?
 - (b) What transformation might help eliminate the problem?
 - (c) Conduct an analysis of variance on the transformed data.