

# Assignment #1

(Due: Thursday, February 7, 2008)

**Reading:** Oehlert, Chapters 1-5.

**Written Assignment:**

1. E2.3

2. E3.1

3. P3.2

Additionally: Display the data as side-by-side box plots. Examine pairwise differences between treatment means with HSD, provide an underline diagram, and interpret your findings.

4. E4.2

5. P4.1

Additionally: c) Are the first and second contrast in your set orthogonal? Why or why not?

Hint: In (b), the set of “meaningful” contrasts are the 3 comparisons suggested in the second sentence of the problem.

6. P5.1.

*Remark:* Instead of Tukey’s HSD, use the SNK method to produce 95% simultaneous confidence intervals. Use R to calculate the ANOVA table and treatment means, but calculate the confidence intervals by hand, and draw the underline diagram.

**Remarks:**

1. For problems that contain “raw data”, use R, unless specified otherwise. However, make sure that you know how to calculate test statistic values and P-values by hand — there is no computer access at the exams.
2. For multiple comparisons, **always** provide an underline diagram.