## MATH 2240 – Problem Set #8

- 1. Read Problem 10.139 on p. 580.
  - (a) Find the ANOVA table (use the ROACH dataset) for this factorial experiment. What conclusion(s) should we make?
  - (b) Use Tukey's procedure to rank the roach group means. Interpret this ranking to a general audience.
  - (c) Find, and interpret, a 95% confidence interval for the difference between the control mean and the fecal extract mean.
  - (d) Generate a full interactions plot. Explain this picture to a general audience. In particular, how does this picture support the p-value for interaction in the ANOVA table?
- 2. Read Problem 10.103 on p. 569.
  - (a) Find the ANOVA table (use the MOW dataset) for this factorial experiment. What conclusion(s) should we make?
  - (b) Generate a full interactions plot. Explain this picture to a general audience. In particular, how does this picture support the p-value for interaction in the ANOVA table?
  - (c) Use Tukey's procedure to rank all nine treatment means.
  - (d) What recommendation for mowing would you make based on this study? In other words, how often and at what height should the right-of-way be mowed in order to minimize average vegetation height?