# Homework 2: Due Wednesday, February 10

- From the book: 1.6.1, 1.8.1, 1.8.3, 1.10.8, 1.10.9, 1.10.10, 1.10.11
  - Note: 1.6.1 requires the dataset `table164.txt`, on the Data page in sakai
- The dataset `EXAM.txt` (Data page in sakai) contains the midterm and final exam scores on a student exam.
  - Calculate a 95% confidence interval for (a) the mean score on the midterm, (b) the mean score on the final.
  - Test the hypothesis that the mean scores on the midterm and final are the same, against the alternative that they are different. Use $\alpha = 0.1$. What is your conclusion?
  - Draw a scatterplot of the final exam scores against the midterm exam scores, and draw a straight line through the plot (feel free to adapt the in-class examples for the Amherst and Mount Airy datasets). Would you say a straight line regression is justified in this case?

# Instructions and Hints

- You may (and are expected to) use R for the computational part of any of this, but *show all working*: if you use R to get your answer, show the relevant R code so that we can see exactly how you got it, but also make sure that *you clearly and unambiguously state what your answer is*. You'd be amazed how many students neglect this very simple principle!

- Some of the Graybill-Iyer problems have solutions given in the "Answers" chapter of the book. I recommend that you work through these problems without first looking at the solutions, otherwise you won't learn much from trying to do them. However, I am not forbidding you to look at the solutions before handing them in: just make sure that the solution you hand in is *your* solution and contains a full explanation of what you did.