STAT 313/513 Assignment 1
Due Monday, 4/5

Melons, p. 20
Read the problem description, but answer the following questions rather than those listed in the text.

1. What are the null and alternative hypotheses relevant to this problem?
2. Using R, create a plot similar to the one in Figure 1.15 using the stripchart command. The data is downloadable from the data page on our website. Display your code and plot (suitable for publication) as the solution to this problem.
3. Using R, compute the mean, standard deviation, standard error of the mean, and sample size of the yields for each of the four melon varieties. Display the code used to produce the summaries and a formatted table (in word) that presents your results (suitable for publication).
4. Use R to conduct an ANOVA that addresses your hypotheses in part 1. Display your code, the ANOVA output, and your conclusions regarding these hypotheses being sure to cite relevant quantities in the ANOVA output to defend your answer.

Dioecious trees, p. 21
Read the problem description, but answer the following questions rather than those listed in the text.

1. Using R, create a meaningful plot that is useful to compare the number of flowers produced by male and female trees. Display your code and plot (suitable for publication) as the solution to this problem.
2. Is there significant evidence that male and female trees produce different numbers of flowers on average? Use R, to conduct both a two-sample t-test and a Wilcoxon-Mann-Whitney test. Do these two analyses agree? Which do you think is more appropriate and why?