STAT:2010/4200, Statistical Methods and Computing
Instructor: Cowles Spring 2019, Homework 11

Due: Wed. May 1 at 10:30 by electronic submission

Read Chapter 28 from the web page for the textbook (find it through the "Web Resources" link on the public course web page. You do not need to learn how to compute the test statistics for the nonparametric tests. You do need to know when to use them and what hypotheses they test.

1. Textbook problem 28.19. Enter the data into SAS yourself.
   (a) Answer part (a).
   (b) Use SAS to perform the Sign test. What is your conclusion regarding whether the counts of immune cells are higher after infusion?
   (c) Then use SAS to perform the Wilcoxon signed rank test. What is your conclusion regarding whether the counts of immune cells are higher after infusion?
2. Textbook problem 28.42. This actually refers back to problem 19.49 and table 19.3 in the paper textbook. You did that problem in homework 8. The data is on the course web page as `subliminalmath.dat`. Use SAS to plot the data from each sample (stemplot, histogram, or boxplot is ok). Use SAS to perform an appropriate nonparametric test to answer the question. What is your conclusion?
3. Texbook problem 28.48. The data are on the course web page as `nematodes.txt`. Use SAS to perform an appropriate nonparametric test to determine whether there is a systematic difference in plant growth rates among the different nematode conditions. What is your conclusion?