MTH 316 NONPARAMETRIC STATISTICS
Homework #8 (Due Thursday, November 07)

The following exercises are from Chapter 7, pages 222–225.

1. Problem 7.1
2. Problem 7.4. Compare your results to Friedman's test.
3. Problem 7.10
4. Problem 7.13. Is a parametric ANOVA procedure appropriate? Please explain.

5. Refer to the Kruskal-Wallis test.
a. Explain why the average of all the ranks $1, ..., n$ is $(n + 1)/2$.
b. Show that the test statistic T presented in class can be expressed as follows.

$$T \; = \; \frac{12}{n(n + 1)} \sum_{i=1}^{k} n_i \left(\frac{R_i}{n_i} - \frac{n + 1}{2} \right)^2$$

c. Please explain the meaning (or interpret) the expression R_i/n_i.