STAT 672
Homework 4
due Wed. Feb. 22

3 Problems. Show all work. Please follow the Lab report directions off the homework web page for R Problems.
Please work in Groups 2 (or 3)

1. p. 58, 3.19
In addition, sort through the Walsh averages to find an approximate 95% CI for θ. What is the achieved confidence level?

The data is available off the class web page at:

    http://www.rohan.sdsu.edu/~babailey/stat672/t3-3.txt

2. p. 133, 4.1
Use the R function `wilcox.exact` to calculate the value of W. (Note: you will have to convert the W returned to the Wilcoxon Rank Sum W). Calculate a $W^\star$ and compare the p-value from the normal approximation to the exact p-value from `wilcox.exact`.

The data is available off the class web page at:

    http://www.rohan.sdsu.edu/~babailey/stat672/t4-3.txt

3. p. 141, 4.18
Use the sample code from Professor Geyer's computer example for The Wilcoxon Rank Sum Test to construct the Hodges-Lehman estimator (median of the pairwise differences). In addition, using the computer example, compute a 95% CI using the confidence interval associated with the rank sum test. What is the achieved significance level of your CI? How does the above estimate and interval compare to the estimate and interval obtained using the R function `wilcox.exact`?

Professor Geyer's code for Example 4.3 and 4.4 (in text) is available here:

    http://www.stat.umn.edu/geyer/5601/examp/ranksum.html