ST 511             Fall 2016

Experimental Statistics for Biological Sciences I

Homework #7 – due Thursday, 27 October 2016

*** turn in only starred * exercises *** (two this time)

Text: 6.6, 6.23, 6.42, 6.44*

(checking editions, 6.6, 6.42, 6.44 (7th) are the same as (6th), except 6.6 data differs; 6.23 differs substantially between the two editions.)

*1) (from last homework) Below are the weight gains (g) of female rats under high protein and low protein diets.

High: 134, 146, 104, 119, 124, 161, 107, 83, 113, 129, 97, 123

Low: 70, 118, 101, 85, 107, 132, 94

a) Assuming that the variances in the two groups are different, test whether the mean weight gain was the same for the two diets against the alternative that the mean weight gain for the high protein diet was higher. Use level $\alpha=0.05$.

b) Using the Wilcoxon Rank Sum Test, (convert data to ranks – average if there are ties) test whether the mean weight gain was the same for the two diets against the alternative that the mean weight gain for the high protein diet was higher. Use level $\alpha=0.05$ and the large sample normal approximation.