MTH 3220 Lab 3 **Answer Sheet**

Due Thu., Sept. 26

1 Part A

1.1 Infant Head Circumferences Data Set

1. NA
2. Give the values of the four statistics:

Control standard deviation S_1 = _____ PH standard deviation S_2 = _____

Control variance S_1^2 = _____ PH variance S_2^2 = _____

3. For the ***F* test**, give the following values:

F test statistic value = _____

Numerator df = _____

Denominator df = _____

P-value = _____

State the conclusion (using $\alpha = 0.05$): _____

For which group (**Control** or **PH**), if any, is the variation in head circumferences greater? _____

2 Part B

2.1 Blood Coagulation Times Data Set

1. NA
2. NA

3. From the **ANOVA table**, give the values of the following statistics:

SSTr = _____ SSE = _____ SST = _____

MSTr = _____ MSE = _____ F Test Statistic = _____

Give the df for SSTr: _____

Give the df for SSE: _____

Give the df for SST: _____

Give the p-value for the ANOVA F test: _____

State the conclusion of the ANOVA F test using a level of significance $\alpha = 0.05$ (Reject or Fail to Reject H_0): _____

Based on the ANOVA F test, is there any difference in the effects of the diets on blood coagulation times (Yes/No)? _____

4. ***Don't*** print the boxplots. Just answer the following question.

Based on the boxplots, which diet leads to the longest blood coagulation times (A, B, C, or D)? _____

5. Give the values of the treatment group means:

Diet A sample mean $\bar{X}_{1\cdot}$ = _____

Diet B sample mean $\bar{X}_{2\cdot}$ = _____

Diet C sample mean $\bar{X}_{3\cdot}$ = _____

Diet D sample mean $\bar{X}_{4\cdot}$ = _____

6. Give the values of the treatment group standard deviations:

Diet A sample standard deviation S_1 = _____

Diet B sample standard deviation S_2 = _____

Diet C sample standard deviation S_3 = _____

Diet D sample standard deviation S_4 = _____