**MTH 1210 Lab 2 Answer Sheet**

## Part A

[**Copy and paste the dot plots here**]

[**Copy and paste the side-by-side boxplots here**]

**Question 1**. Based on the dotplots and the boxplots, who tends to study more, women or men?

**Question 2**. Give the numerical values of the sample means. Based on the sample means, which gender tends to study more, on average?

**Question 3**. Give the numerical values of the sample standard deviations. Based on the standard deviations, which gender exhibits more variation in their studying times?

## Part B

**Question 1**. Give the values of the mean and standard deviation .

Mean =  = ?

Std Dev =  = ?

**Question 2**.

What two values lie **one** standard deviation away from the mean?

Mean + 1 Std Dev =  = ?

Mean - 1 Std Dev =  = ?

What two values lie **two** standard deviations away from the mean?

Mean + 2 Std Devs =  = ?

Mean - 2 Std Devs =  = ?

**[Copy and paste the histogram here**]

**Question 3**.

According to the Empirical (68-95-99.7) Rule, ***approximately* 68%** of the observations should lie within **one** standard deviation of the mean. What’s the ***actual* (observed)** percentage that lie within **one** standard deviation of the mean? Give your answer as a percent to **one decimal place**.

According to the Empirical (68-95-99.7) Rule, ***approximately* 95%** of the observations should lie within **two** standard deviations of the mean. What’s the ***actual* (observed)** percentage that lie within **two** standard deviations of the mean? Give your answer as a percent to **one decimal place**.

## Part C

**Question 1**. Give the value of the ***z*-score** corresponding to an octane rating **88.5**. What does this *z*-score tell us about the octane rating? Be specific.

**Question 2**. The first octane rating in the data set is **88.5**. Verify that the ***z*-score** that Minitab produced is the same as the one you got in **Question 1**?