**Assignment 1 Template**

**LAST NAME:**

**FIRST NAME:**

**USERID:**

**UWaterloo ID**

**Problem 1: Fill in the information below based on your data set which was generated using your ID number as the seed for the random number generator.**

**The first five numbers in your Gaussian data set are:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |

**Sample mean =**

**Sample standard deviation =**

**The five number summary is:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |

**Sample median =**

**Range =**

**IQR =**

**Sample skewness =**

**Sample kurtosis =**

**Insert the plots of the relative frequency histogram with superimposed Gaussian probability density function and empirical cumulative distribution function with superimposed Gaussian cumulative distribution function on this page.**

**Problem 2: The first five numbers in your Exponential data set are:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |

**Sample mean =**

**Sample standard deviation =**

**The five number summary is:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |

**Sample median =**

**Range =**

**IQR =**

**Sample skewness =**

**Sample kurtosis =**

**Insert the plots of the relative frequency histogram with superimposed Exponential probability density function and empirical cumulative distribution function with superimposed Exponential cumulative distribution function on this page.**

**Insert the boxplot comparing the Gaussian and Exponential data here.**

**Problem 3: The first five numbers in your Gamma data set are:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |

**Sample mean =**

**Sample standard deviation =**

**The five number summary is:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |

**Sample median =**

**Range =**

**IQR =**

**Sample skewness =**

**Sample kurtosis =**

**Insert the plots of the relative frequency histogram for the Gamma data with superimposed Gaussian probability density function and empirical cumulative distribution function with superimposed Gaussian cumulative distribution function on this page.**

**Based on the numerical summaries and the graphical summaries for the Gamma data discuss how well the Gaussian model fits these data. Your answer should be written in complete sentences.**

**Problem 4:**

**Alpha = Beta =**

**The first five pairs of numbers in your bivariate data set are:**

|  |  |
| --- | --- |
| **x** | **y** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

**Sample Correlation =**

**Insert the scatterplot of the data here.**