**Part III: Chapter 3: Descriptive Statistics**

**Task 1: Fill in the following chart concerning the measures of center for the variables:**

|  |  |  |
| --- | --- | --- |
| **Variable** | **Best Measure of Center** | **Explain Why** |
| **Country** |  |  |
| **Infant Mortality (per 1000 live births)** |  |  |
| **Health Expenditure per capita** |  |  |
| **Obesity Rate** |  |  |
| **Income per capita** |  |  |
| **Suicides per 100,000** |  |  |
| **Life Expectancy** |  |  |
| **Universal Health Care** |  |  |
| **Diabetes Rate** |  |  |
| **Leading Cause of Death** |  |  |
| **Hospital Beds per 100,000** |  |  |

**Task 2: Use Statdisk to get the descriptive statistics for income per capita and obesity. Insert these results in the space below.**

|  |  |
| --- | --- |
| **Income per Capita** | **Obesity %** |
|  |  |

**Task 3: Sort the data according to position and create a modified boxplot of the obesity data. Copy and insert the boxplot below being sure to properly label the plot. Outliers are shown with an asterisk.**

**Are there any outliers in this data? Make the calculations below to determine the lowest and highest usual values.**

* **To determine the highest and lowest boundary data values, you must first calculate the Interquartile Range (IQR):** 
* **Lowest boundary value =** 
* **Highest boundary value =** 

**Use Statdisk to sort the data and determine the outliers.**

* **Low side outliers:**
* **High side outliers**

**Task 4:**

* **Determine the z score for the percent obesity in Japan. The obesity data value is \_\_\_\_\_\_\_\_\_\_\_\_.**
* **The z score is found using the equation,**  **, where**  **is the obesity mean and s is the standard deviation for the obesity data.**

**z = \_\_\_\_\_\_\_\_\_\_\_\_\_**

* **Complete the following statement: The z-score of \_\_\_\_ means that the individual data value \_\_\_\_\_\_ is \_\_\_\_\_ standard deviation units above/below (circle one) the mean value of \_\_\_\_\_\_\_.**
* **Is this an unusual z score? Why or why not?**
* **In terms of obesity rates, is this z-score good or bad? Explain why.**