**First Collection:**

The following work is expressing my take on the following examples for each specific section regarding the topic covered. This is my understanding of what I have understood from reading the chapter and previous knowledge by writing a paragraph showing how to perform and resolve each example. Problems 2.19, 2.36, 2.51, 2.52, and 3.3, 3.27, 3.37

2.19) For this problem they want as to compute the percentage. First step we have to add the total of the frequency and then we would have to divide each frequency variable with the total frequency to get a decimal then I would multiply that decimal by 100 to get the percentage. For part b, they are asking what conclusion I perceive from the results we are talking about percentages so we can tell which one is more than the others.

2.36) In this problem they gave us a sets of data, and they want us to build a frequency distribution and a percentage distribution for each manufacturer. They also gave us the width for both set of data. They also want us to examine witch set of data have longer life for that specific item problem. First thing we need to do is the frequency distribution table, note the process is the same for both data set. First column is going to be the classes using the width they gave we will create enough classes so all data fits in our table. Second column we will add the frequency table by filling in how frequent the data shows for each class. To get the percentage column we will divided the frequency for a class by the total frequency to get the percentage. To get the cumulative we will add the class percentage by itself first then that answer we will add it by the next class percentage, and so on until we meet at the bottom. To make sure we did it right the total is 100%.

2.51) For this problem they gave us a data set of variables. They want us to get the data into ordered array. Then they want us to construct a stem-and-leaf display for part c. they want us to discuss want information both form give and finally for part d. they want us to solve a question. First thing I did was to order the data from small to biggest amount. Then I created a stem-and-leaf chart by making one side the first digit of the data from smallest 5 to the biggest 15 and then the second column placing the last digit that has a similar first digit to make the chart. Fort part c. I can say that the chart stem-and-leaf give us more visual because we can see the distribution of data where is skewed. Finally for the question they ask us the data is not symmetrical so we cannot conclude in any value.

2.52) For this problem they gave us a data set of 50, and they want us to construct a histogram and percentage polygon. For part b. a cumulative percentage polygon and part c. they ask us a question about the results. For this problem the fast way is using a software like statcrunch or excel. First thing we have to do is create frequency distribution table with percentage and cumulative columns view previous exercise to complete it. After that is done next step is just to add charts highlighting the columns to input the data from the table. Then using the chart we can answer the following question they ask us.

3.3) For this problem they gave us n= a number and a data set we have to compute mean, median, and mode. Also the range, variance, standard deviation, and coefficient of variation. Compute the Z score and answer questions. To get the mean I will add all the numbers in the data set, and divide it by n that is equal to a number. To get the median I will add the two middle number if they are not in descending order you have to arrange it. Then I will divide it by two to get the median, the mode is just the numbers the repeats itself. To get the range is just biggest minus smallest variable. The coefficient of variation is just standard deviation divide by the mean times 100. To get the variance we have to use the formula ss/(n-1) to get ss we have to use the following formula sumx^2-(sumx)^2/n. Now that we have the variance we can solve the stander deviation by using the following formula s=sqrroot variance.to compute z-score use formula x-xbar/s. finally answer the question they are no outlier according to the results and is skewed to the left.

3.27) For problem 27 they gave us a sample data they want us to compute Q1 the third quartile Q3 and the interquartile range, and list the five number summary and finally construct a boxplot and describe it. We have to do is get the minimum by smallest variable minus the median then we do the largest minus the median. Then Q1 minus the smallest and Q3 minus the medium that will give us our boundaries to draw the box plot and we can determine from the graph the skewedness.

3.37) Problem 37 they gave us n = a number a sample size they want us to compute the population mean and the population standard deviation. First thing to get the population mea is the sum of the data set divided by N. for the second part is population standard deviation = sqrt root variance. That’s how I solved the problem.

**Second Collection:**

**2.19:**

The information is presented in a table that shows categories of A, B and C and then their respected frequency of how many times each category was observed. A) is to determine the percentage of values in the each category and this is done by dividing each category frequency by the total number of observations for example A=13/50=26% , B=28/50=56%, C=9/50=18% Total=100 B) is to determine what conclusion can be reached for each category, B occurred the most of 28 times or 56% of the time. C occurred the least of 9 time sor 18% of the time and A is in the middle of 13 times or 26% of the time. This is closer to the B percentage.

**2.36:**

The scenario is given in paragraph form and then the data gathered is given in a table that shows 40 100-watt light bulbs that were obtained for the test for Manufacturer A and B. A) is to present this data into another table that shows the frequency for each hour the light bulb lasted for each manufacturer with a width of 99. B) Another table is constructed to show the percentage distribution for each manufacturer for each hour width. This is done by dividing each frequency by the total number of observations of 40 for each manufacturer. C) It was then determined that Manufacturer B had longer light bulb lives because 65% of its bulbs lasted less than 1,050 hours, while Manufacturer A’s bulbs had 70% of its bulbs last less than 950 hours.

**2.51:**

The in information is given as a table of observations. A) The observations are placed into an ordered array that is placing the observations into ascending order with commas. B) Then a stem and leaf display is constructed by placing the first digit on the right side of the decimal on the left side of the display and then the second or last digit of the number is placed on the right side of the display. When there is a digit in front of the decimal, that digit and the digit after the decimal are placed on the left side of the display. C) It is then determined that the stem and leaf display convey more information that the ordered array because in order to keep the information consistent, more digits had to be placed in the display. D) It is then determined that there appears to be no concentration around any value.

**2.52:**

The scenario is presented in paragraph form and then presented as raw data in a table. A) A histogram and a percentage polygon was constructed from the data to show the relationship of the data. B) Then a cumulative percentage polygon was presented from the information that was gathered from the other two charts. C) It was then determined that the majority of unity changes are clustered between $120 and $180.

**3.3:**

The information is given as set of data and the data size is 7. A) It was then determine that adding all of the observations up and dividing by the total data size compute the mean. 42/7=6 The Median is computed by taking the middle number of the data, which in this case it is 7. The mode is the computed by determining which number occurs the most, in this case it is 7. B) Then the Range, variance and standard deviation are computed. C) Then the Z score is determined for each data number. D) It was then determined that since the mean is less than the median, the distribution is left skewed.

**3.27:**

The information is presented as a data set. A) It was determined that the first quartile is 23.5, the third quartile is 44.5 and the inter-quartile range is 21. B) The information gathered is then placed into a five number summary shown as a table. C) This information was then placed into a box plot and the it was determined that the data is skewed left due to the mean being less than the median.

**3.37:**

The information is given as a data sample. A) the mean was determined to be 6 by adding up the data and then dividing by the total number of observations. B) the standard deviation was then determined to be 3.23.