

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.

1.1 To complete the following table first thing I would do is to add all the number in the frequency column and will give me total number for that column. Then to get the relative frequency I will divide each frequency number row with the total frequency to get the relative frequency for that row you just divided. To check that I did the work right my relative frequency column will total 1.

1.2 First thing I would do to start the problem would be by finishing the table. Dividing the number of people from each response by dividing it by the total number of people like we did for example 1.1. That will give me the relative frequency column. To answer part a. of the question display the study result in a relative frequency bar graph I would do it by hand. One side will be label with the number type of response and the other side will have the relative frequency. Then I will just plot the data using a bar chart. For section b. to get the percentage of consumers received a response to their letter of complaint. I would first subtract the total number of complaint minus the number of people who made that specific complaint, then that would give me a number I would divide that number by the total number of complain. Then multiply it by 100 and it will give the percentage for their letters of complaint.

1.3 To do part a. and b. to list the stem possibilities in order and form stem-and-leaf display. I would use the first digit of the number on one column. The second column I would place the second digit of each number that start with the same digit. I would label column one with stems and second column with leaves and you can example the asymmetry o the chart.

- 1.4 When using a sample of 20 to solve section a, b and c. We have to finish the chart by creating a table where there are six classes. First column will be label class and each row will have a number from one to six. Second step is to create the class interval column with the data they gave us that the lower boundary is 10.5 and a width of 5. The first row in the class interval column will be 10.5-15.5 because of the width of 5 and each row will overlap to make sure we get all the data in our intervals. Then we will fill all row until we get to class 6. The third step will be creating the class frequency column by looking at the sample measurement, by counting how frequent they see number that fall in each class interval. Then I would add the class frequency column get the class frequency total. to know you did the work right it matches the sample size they gave us. The last column would be the class relative frequency and to get each row you will divide the total class frequency by the number of each class frequency to get the relative frequency. Then to construct the relative frequency histogram you can use program like statcrunch or by hand.
- 1.5 Problem a. - e. summation I will substitute the x by the data set they gave me, and adding them. Problem a. I will add all the data set. Problem b. I will substitute x the data set so I will raise it to second power then add the result of each number in the data set. Problem c and d I will substitute x by each data set number, subtract it from 5 for problem c and 2 for problem d. Then I will rise it to the second power finally I will add each data set result. Problem e. I will add the data set and then rise the result to the second power to get the answer.
- 1.6 Find the mean and the median for the sample they gave me. They also gave me n that is equal to a number and a data set of numbers. 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 medium.
- 1.7 To get the range, variance and the stander deviation for the data set giving. To get the range I will subtract the larges from the small number in the data set. To get the variance I will use the formula $s^2 = \frac{\sum x^2 - (\sum x)^2/n}{n-1}$ and to get the stander deviation I will use the formula $\sqrt{\frac{\sum (x - \bar{x})^2}{n-1}}$.

- 1.8 To compute the Z score they gave me $x =$ a number, $\bar{x} =$ a number and $s =$ a number. Then I will use the formula $(x - \bar{x})/s$; that will give me the result. Then for the second part to examine the result I will make a table with each result to determine what x values lie the greatest distance above and below the mean.
- 1.9 To calculate \bar{x} , variance and standard deviation for 25 beta values first thing I would be calculating \bar{x} . I will add all the beta set number or x values then dividing by the amount of data or n $\bar{x} = \sum x/n$. To get the variance we have to use the formula $ss/(n-1)$ They gave us n but to get ss we have to use the following formula $\sum x^2 - (\sum x)^2/n$. Now that we have the variance we can solve the standard deviation by using the following formula $s = \sqrt{\text{variance}}$. To find out how many beta values lie within interval then we use $\bar{x} - 2(s)$. The empirical rule of 95% is symmetrical skewed. For part b. to calculate the median sort the data in descending order and find the middle number and the median will be the x value in the table. For part c to calculate the p th percentile we use the formula $p(n+1)/100$ then the number that I get would be the data set number and when I locate it in the table I will find the number in that specific percentage. Part d. to find the z score I will have to use the formula $(x - \bar{x})/s$ what this information tells me is that the differences between the results depending on the problem scenario.