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 9.13, 9.15, 9.22, 9.31, 9.53, and 10.9, 10.24, 10.39

9.13 This problem is a scenario where they want us to build a hypothesis test to answer parts a-c. They gave us the sample size and the mean. For part a. they want to know what is the null and the alternative hypothesis, Ho: = (average they gave us) and Ha: ≠(the average they gave us). For part b. they want to know what is a type I error for my test is when I say that the mean Ho is not true when it is. Fort part c they want to know what is type II error for my test would be the when I say that my Ho is true when is not true.

9.15 This is real world problem to determine if the number is true about a product .they gave us the sample size, std dev., and the mean. For part a. they want to know if there any evidence that the mean amount is different from what they gave us, knowing the std dev. we can use the function Xbar minus one divided by std dev. divided by the sqroot of the sample size. Computing the numbers we will get the zstat we get the critical number from a significant value and the zstat value don’t fall in between our significant interval level, we conclude that there is not enough evidence to show that our mean is different. For part b. they want us to compute p-value and interpret its meaning, so we convert the Z value the probability by lucking at the cumulative probability table when we find it the number we multiply it by two to get p-value that is the probability of getting a mean value that would not land in the population mean test. For part c. they want us to construct a confidence interval they gave us a percentage to estimate the population mean. We do this by using the function xbar+ and- the z critical value times the std dev. divided by the sqroot of the sample size, this will give us an upper and a lower number to make our interval. For part they want us to compare the results of part a and part c. and what conclusion can we reach, we could say both confirm or don’t confirm the test for the population mean.

9.22 This world problem scenario they gave us the sample size, mean, and std dev. for part a. they want to know if there is evidence that the sample mean is different from the population mean according to the level of significance ant the new mean they gave us. We use the function sample mean – population mean divided by std dev. divided by sqroot of the sample size we get a zstat and we can concluded that there is not enough evidence because it fell in the non-rejection region. For part b. they want to know if we have to be concerned of the sample size when doing t test, so depending if is greater than or equal to 30 then the distribution is normal.

9.31 This problem is a scenario where they want us to validate the data they gave us, so they gave us a sample size and a table with data. We have to solve part a.-d. For part a. they want us to find evidence if there any about if there is any difference in the mean they gave us using the p-value approach and level of significant they gave us. First thing we do is because the sample size they gave is less than 30 then we will use the level of significant +- and they will give us a greater sample size so we us the tstat function Xbar-population mean divided by std dev. divided by sqroot of the sample size gives us tstat don’t fall in the rejection area so we don’t have evidence that it show us that there is a different. For part b. they want us to construct a confidence interval of a percentage they gave us to estimate the interval of the population mean, we first the difference of xbar and population mean +- the tstat will give us the upper and the lower that’s how we get the confidence interval. For part c. they want us to compare the conclusion in part a and b. and we can say is the same and we will not reject the hypothesis For part d. they want to know if we are concerned with the sample size and we are not because is a sample larger than 30 so we are confidence of the distribution.

9.53 They gave us a scenario with a sample size and they want us to solve part a. and b. For part a. they want us to use the five step p-value approach to hypothesis testing and they gave us a level of significance we have to determine if there is any difference between the two mean. First thing identify Ho and Ha then we need to get our Zstat by using the function, we need p=x/n, pie=the hypothesis mean we are trying to test, sample size. Now that we have all the parts we find Zstat= p-pie divided by the sqroot pie times one minus pie divided by sample size and we get the zstat we look at the critical value table to find the probability and to get the p-value we subtract the probability by one and multiply it by two. For par b. they want us to repeated part a with a different mean so we get the difference mean and divided by the sqroot pie times one minus pie divided by sample size, look at the critical value table to find the probability and to get the p-value we subtract the probability by one and multiply it by two they are different because one less so we reject the null.

10.9 This is a world problem scenario where we have a sample size and two data tables we are comparing. They want us to solve part a-d. For part a. they want us to assume that the population from both offices are equal, is there evidence of a differences in the mean between the two data also they gave us level of significance. So we use the function S^2p= (nfirst-1) S^2First + (nsecond-1) S^2second / (nfirst-1) + (nsecond-1) and we get an S^2p, second we look for the tstat= (xbarfirst-xbarsecond)-(mewfirst-mewsecond) / sqroot S^2p (1/nfirst+ 1/nsecond). Know we can determine that the tstat does not fall between the level of significance intervals so we do not reject the null. For part b they want the p value first we would get the probability from the table using the tstat we got then we will subtract one from that probability and multiply it by two to get the p-value and we can conclude depending what we got the p-value is greater than the significance level so we do not reject the null. For part c. they ask us what other assumption are necessary, we have to assume the distribution is normal to be able to do the test. For part d. they want us to estimate the difference by the confidence level they gave us, first thing we do is use the function (xbarfirst – xbarsecond) +- critical value times the sqroot S^2p times (1/nfirst +1/nsecond) we will get a upper and a lower number and that is how we would build our interval, and we would conclude whatever we see in our interval.

10.24 This problem they gave us a scenario with two data sest they want us to solve part a-d. Part a. they gave us the level of significance they want to know if there difference in the two data is greater than the other set. We need Dbar to get the is the sum of Dvalues / n we also need Sd= sum (Dvalues-Dbar) ^2/n-1 now that we have that we can find the tstat=Dbar-mewD/Sd/sqroot n. we can conclude that the tstat does not fall in the interval so we cannot reject the null. For part b. we have to find the p-value (1-probability value) 2. For part c. they want us to construct an interval with the confidence level they gave us we would us the function Dbar+-critical value times Sd / sqrootn and we would get an upper and lower values to create our interval, and we can just interpret what information we see in our interval regarding the scenario. For par d. what assumption in necessary about the population distribution in order to perform the test we have to assume is normal distribution.

10.39 For this problem they want to know what is the value of the Fstat and they gave us the two population to solve we would only have to use the function Fstat=S^2first / S^2second.