Using Minitab to run a Hypothesis Test with a Single Mean

1. Click on "Stat", choose "Basic Statistics" and then "1-Sample t ...".

2. In the drop down box, choose "Summarized data".

3. Enter the sample size, the sample mean, and the sample standard deviation in the boxes shown.

4. Click on the box next to "Perform hypothesis test".

5. Enter the mean from your hypotheses in the box next to "Hypothesized mean".

6. Click on the "Options" box.

7. Enter the percent confidence desired next to "Confidence level".

8. Choose the correct alternative hypothesis from the drop down box next to "alternative hypothesis".

9. Click on “OK” in that window and click on “OK” in the next window.

The result will appear in the "Session" window under the heading "One-sample T". The test statistic will be under "T" and the P-value will be under "P".

Example (Navidi & Monk, *Elementary Statistics*, 2nd edition, #15 p.444): The sample size is 55. The sample mean is $192,340. The sample standard deviation is $42,387. We want to test the claim that the population mean is more than $178,258. The significance is 0.05. 1 – 0.05 = 0.95, so the confidence is 95%.

Open Minitab. Click on “Stat”, choose “Basic Statistics” and “1-Sample t …”.

From the drop down box in the upper right corner of the window, choose “Summarized data”. Enter 55 next to “Sample size:”. Enter 192340 next to “Sample mean:”. Enter 42387 next to “Standard deviation:”. Click in the box next to “Perform hypothesis test”. Enter 178258 next to “Hypothesized mean:”.

Click on the “Options …” button. Enter 95 next to “Confidence level”. From the drop down box next to “Alternative hypothesis:”, choose “Mean > hypothesized mean”.

Click on “OK” in this window and click on “OK” in the window below. The results appear in the “Session” window under the heading “One-Sample T”. The test statistic appears below “T” as 2.46. The P-value is appears below “P” as 0.008.

Since the P-value of 0.008 is less than the significance of 0.05, the null hypothesis would be rejected. With 95% confidence, the evidence is strong enough to say the population mean is more than $178,258.