Finding Confidence Intervals for the Population Proportion using Minitab

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

2. In the drop down box in the upper right corner, choose "Summarized data".

3. Enter the number of successes next to “Number of events”.

4. Enter the number of trials next to “Number of trials”.

5. Click on the "Options" box.

6. Enter the percent confidence desired next to “Confidence Level”.

7. Next to "alternative hypothesis", make sure "proportion ≠ hypothesized proportion" is selected.

8. Choose “Normal approximation” from the drop down box next to “Method”.

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" and your chosen percentage followed by "CI".

Example (Navidi & Monk, *Elementary Statistics*, 2nd edition, #19(b) p.387): The sample size is 238. The number of successes is 102. The desired confidence is 95%.

Open Minitab and click on “Stat”, choose “Basic Statistics” and “1 Proportion…”.

From the drop down box in the upper right corner, choose “Summarized data”. Enter 102 next to “Number of events:” and enter 238 next to “Number of trials”.

Click on the “Options …” button. Enter 95 next to “Confidence level”. Make sure “Proportion ≠ hypothesized proportion” is selected from the drop down box next to “Alternative hypothesis:”, and also make sure that “Normal approximation” is selected from the drop down box next to “Method”.

Click on “OK” in that window, and on “OK” in the window below. The result will appear in the “Session” window under the heading “Test and CI for One Proportion” under “95% CI”.

For this problem, Minitab gives the 95% confidence interval as (0.365700, 0.491443). In this class, we use at most four significant digits, so we would write the 95% confidence interval as (0.3657, 0.4914).