

Finding Confidence Intervals for the Population Mean using Minitab

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.
4. Click on the "Options" box.
5. Enter the percent confidence being used.
6. Next to "alternative hypothesis", make sure "mean \neq hypothesized mean" is selected.
7. 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, #21(a) p.375): The sample size is 263. The sample mean is 5.53. The standard deviation is 0.92. The desired confidence is 95%.

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

From the drop down box in the upper right corner of the window, choose "Summarized Data". Enter 263 next to "Sample size:". Enter 5.53 next to "Sample mean:". Enter 0.92 next to "Standard deviation:".

Click on the "Options..." button, enter 95 next to "Confidence level:", and make sure "Mean \neq hypothesized mean" is selected next to "Alternative hypothesis:".

Click on "OK" in that window and click on "OK" in the window below. The result will appear in the "Session" window under the heading "One Sample T" under "95% CI".

For this problem, Minitab gives the 95% confidence interval as (5.4183, 5.6417). Since the sample mean is given to two decimal places, we would use three decimal places in our answer and write the 95% confidence interval as (5.418, 5.642).