

## Confidence Interval for a Mean using StatCrunch

If you are given summary data and asked to find a confidence interval, it is relatively easy using StatCrunch. Here is a typical problem:

Construct the indicated confidence interval for the population mean  $\mu$  using a t-distribution.

$$c = 0.90, \bar{x} = 115, s = 10, n = 21$$

In this problem, you are told to use the t-distribution, but that may not always be the case. If you are given the sample standard deviation,  $s$ , instead of the population standard deviation,  $\sigma$ , use the t-distribution to find the confidence interval. In StatCrunch, this is in the T Stats menu. If you are given  $\sigma$  or are told to use the z-distribution, it is essentially the same steps except you select Z Stats in step 2.

1: Click on the Stat menu

2: if given sample std. dev.  $s$ , use T distribution

3: you have one sample

4: you have summary data, not the raw data

5: Enter the sample mean  $\bar{x}$

6: Enter the sample std. dev.  $s$

7: Enter sample size  $n$

8: Select Confidence Interval & enter the confidence level  $C$  as a decimal

9: Click

10: Answer box

**Options**

One sample T summary confidence interval:  
 $\mu$  : Mean of population

90% confidence interval results:

Mean	Sample Mean	Std. Err.	DF	L. Limit	U. Limit
$\mu$	115	2.1821789	20	111.23636	118.76364