(Correction: In the video at the 1:25 mark, the Confidence Interval upper and lower bounds are shown with values of .05%, but they should both be .5%, since .5 + .5 = 1.0%, and 1.0 + 99.0 = 100%.)

We can use bootstrapping and sampling distributions to build confidence intervals for our parameters of interest.

By finding the statistic that best estimates our parameter(s) of interest (say the sample mean to estimate the population mean or the difference in sample means to estimate the difference in population means), we can easily build confidence intervals for the parameter of interest.

**Solutions**

It is in your best interest to work through the solution notebooks on your own before looking at the solutions available for this course. However, if you get stuck or would like to double check your solutions, notice all of the solutions and data are available in the resources tab of this course.

NEXT

You can interpret your confidence interval as **We are 95% confident, the population mean falls between the bounds that you find**. Notice that the percent and the parameter can both change depending on what you are building your confidence interval for, and what percentage you cutoff in each tail.

NEXT

# **ScreenCast: Difference In Means**

**Note at the end diffs should be diff when building the interval**.

In this video, you built a confidence interval for the difference of the average heights for coffee drinkers and non-coffee drinkers. The interval was built at a 95% confidence level, and since the difference did not contain zero, this suggested there was truly a difference in the average heights in the population of coffee drinkers as compared to non-coffee drinkers.

Specifically, we can be 95% confident that the difference in the average heights for coffee drinkers as compared to non-coffee drinkers was in the provided interval of 0.59 to 2.37 inches.

Notice the similarity of the wording to the last confidence interval you built. The highlighted portions signify the two parts that can change in your conclusions:

1. The confidence level.
2. The parameter you are capturing with your interval