

Warm-up:

Determine whether you should use a normal distribution or t-distribution then construct the confidence interval for the population mean in the problem.

Interpret the results.

1. For a study on body temperatures, 16 temperatures were taken. The mean and standard deviation of these 16 scores were 98.4°F and 0.30°F , respectively. Construct a 95% confidence interval for the population mean of all body temperatures. Assume body temperatures are normally distributed.
2. You work for a consumer advocate agency and want to find the mean repair cost of a washing machine. As part of your study, you randomly select 40 repair costs and find the mean to be \$100. From past studies, you assume the population standard deviation is \$17.50. Construct a 90% CI.
3. How large must a sample be in order to be 95% confident within 2 points given a population standard deviation of 13.67?