

Warm-up:

Use the standard normal distribution or the t-distribution to construct the indicated CI for the population mean of each data set. Justify your decision. If neither distribution can be used, explain why. Interpret the results.

1. In a random sample of 40 patients, the mean waiting time at a dentist's office was 20 minutes and the standard deviation was 7.5 minutes. Construct a 95% CI for the population mean.
2. In a random sample of 15 cereal boxes, the mean weight was 11.89 ounces. Assume the weights of the cereal boxes are normally distributed and the population standard deviation is 0.05 ounces. Construct a 90% CI for the population mean.