

AP Statistics

M9Y

Classwork 3/20/2026

A bottling company wants to estimate the mean amount of soda dispensed by one of its filling machines. The machine is supposed to fill bottles with a consistent amount, and past quality-control data show that the standard deviation of the machine is known to be $\sigma=1.8$ ounces.

A random sample of 49 bottles is selected, and the sample mean amount of soda is found to be $\bar{x} = 20.6$.

Construct a 93% confidence interval for the true mean amount of soda dispensed by this machine. Interpret the confidence interval and the confidence level.