Confidence Intervals

A) Point Estimation means that one number is estimated to be the parameter of the population. (In real world, we typically don't know μ). How much "confidence" should you have in this estimate?

B) A confidence interval is a range of values bounded by a lower and upper limit. The interval is considered with a certain degree of confidence to contain the parameter.

If you have an N>30 and given Sigma then

$$\bar{x} \pm Z(\sigma_{\bar{x}})$$

Magic Z's (95% confidence use 1.96 and 99% use 2.58 always)

If you have N<30 and not given Sigma then

$$\bar{x} \pm t(s_{\bar{x}})$$

Let's look at the t distributions,

Df = N-1 Look up on Table

"_____ percent confident that the interval between ____ and ____ contains the mean of the population (μ)."