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#### Week 7 Reading Questions

- 1) The population mean doesn't influence the width of the CI's. The mean is used to calculate other factors of the CI and when you have smaller or larger populations or sample sizes the mean doesn't change drastically. Most of the effects on widths or CI's come from the factors below.
- 2) The population standard deviation affects the width of the CI's the greater the standard deviation the wider the CI is.
- 3) Population size has an influence on the CI widths, the larger the size the smaller the width because it decreases the standard error.
- 4) The sample size of the population does have an influence on the CI widths. A smaller sample size creates greater widths in the CI because it increases the standard error.
- 5) If I was describing a Frequentist CI, I would describe it by flipping a coin and wanting to get heads. In a Frequentist CI this would be saying that 95% of the infinite number of flips would give me the true value (heads) or it would not give me heads. There is no randomness in a frequentist CI. A common assumption of this paradigm would be the 95% of flips would fall within the true value of the probability of the coin being heads (50%) this is a Bayesian CI.