

## Assignment Inferential Statistics

1. If we want to be very certain we capture the population parameter, what type of interval should be used, a wider interval or a smaller interval?
2. With a simple random sample of 25 a particular species of reptiles and measure their tails. The mean tail length of the sample is 5 cm. Assume 0.2 cm is the standard deviation of the tail lengths of the reptiles in sample of the population, then what is a 95% confidence interval for the mean tail length of all reptiles in the population?
3. From a popular brand of cosmetics with a known standard deviation of 2.76, a sample of size 52 is drawn and from that sample a sample mean = -22.8 is taken. Find the 95.0% confidence interval for that statistics
4. A microchip manufacturing company produces microprocessors used for electronic applications. If a manufacturer takes a random sample of 200 devices and notices 19 of them are defective. Construct 95% confident interval around the true population defective.
5. 28 successes in 70 independent Bernoulli trials were observed. Compute a 90% confidence interval for the population proportion  $p$ ?