5. We want to estimate the average burning time for our particular statistics book. We go out and burn 15 and find the sample mean to be 17.4 minutes with a sample standard deviation of 2.3 minutes. What is a 80% confidence interval for the actual mean burning time?

6. Through much effort, we manage to catch 4 terrapins and measure their shell diameters to be (in inches):

   10.2 14.7 11.6 13.1

   Give a 90% confidence interval for the actual mean shell diameter.

7. Bill, an evil quality control engineer wants to insure that all of the crayons he makes have approximately the same amount of lead. To do this he wants to estimate the standard deviation. He selects 17 crayons at random off the production line, and calculates the sample standard deviation of amount of lead contained in the crayons to be .42 mg. What is a 95% confidence interval for the actual standard deviation?