1. The president of a large university wants to know the average age of students attending her university. A sample of fifty random students yielded a sample mean of 21.3 years of age, and a standard deviation of 2 years. Construct a 99% confidence interval for the true mean age of all students that attend this university.

2. Consider a 2011 study which looked at the age of the prison population, and whether it had changed in the 30 years from 1974 until 2004. In 1974, the mean age of the prison population was 31.9 years. In Part 1 we rejected this value. (recall we had 75 inmates from 2004 with a mean age of 35.2 and a standard deviation of 10.91) Use this data to construct a 99% confidence interval for the true mean age for all prisoners in 2004.