Lab 3D - Are you sure about that?

**Directions: Record your responses to the lab questions in the spaces provided.**

The United States has an estimated population of 327,350,075. How many people were surveyed for this particular data set?

Why is it important that the ATUS is a random sample?

Use our atus data to calculate an estimate for the average age of people older than 15 living in the U.S.

Write a paragraph that explains to someone that's not familiar with R how you created bs\_rows and bs\_atus. Be sure to include an explanation of what the *values* of bs\_rows mean and how those values are used to create bs\_atus. Also, be sure to explain what each argument of each function does.

Create a histogram for your bootstrapped samples and describe the *center*, *shape* and *spread* of its distribution.

Using your histogram, fill in the statement below:

Based on your bootstrapped estimates, between which two ages are we 90% confident the actual mean age of people living in the U.S. is contained?

Why is the 95% confidence interval wider than the 90% interval?

Write down how you would explain what a 95% confidence interval means to someone not taking *Introduction to Data Science*.