Lab 3D: Are You Sure About That?
Response Sheet

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

In this lab

* 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.

Take a look

* Write a paragraph that explains to someone who is 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.

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Visualizing our bootstraps

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

Bootstrapped confidence intervals

• Using your histogram, fill in the statement below:

The lowest 5% of our estimates are below _____ years and the highest 5% of our estimates are

above _____ years.

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

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On your own

- 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*.