Name_____ Date_____

LAB 3D: Are you sure about that?
Response Sheet

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

Confidence and intervals

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.**

One bootstrap

Our first bootstrap

Take a look

- **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.**

Name_____ Date_____

LAB 3D: Are you sure about that?
Response Sheet

One strap, two strap

Many bootstraps

Bootstrap function

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 age of people living in the U.S. is contained?**

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*.**