

Name: _____

Date: _____

Lab 2I: R's Normal Distribution Alphabet *Response Sheet*

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

Is it normal?

- Is the distribution close to normal? Explain how you determined this. Describe the center and spread of the distribution.

- Compute the mean difference in the age of the *actual* survivors and the actual non-survivors.

Extreme probabilities

- Draw a sketch of a normal curve. Label the mean age difference, based on your shuffles, and the actual age difference of survivors minus non-survivors from the actual data on. Then, shade in the areas, under the normal curve, that are smaller than the actual difference.

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On your own

- Were women on the Titanic typically younger than men?
 - Use a histogram, 500 random shuffles, and a normal model to justify your answer.
- Using 500 random shuffles and a normal model, how much taller would the typical male have to be than the typical female in order for the difference to be in the upper 1% by chance alone?
- How can we use this value to justify the claim that the average Male in our data is taller than the average Female?