Name:_____ Date:_____

Lab 4G: Growing Trees
Response Sheet

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

Our first tree

- Why can't we just use a *linear model* to predict whether a passenger on the Titanic `survived` or not based on their `gender`?

Viewing trees

- Write down the labels of the two *branches*.

- Write down the labels of the two *leaves*.

- Which `gender` does the model predict will survive?

- Where does the plot tell you the number of people that get sorted into each leaf? How do you know?

- Where does the plot tell you the number of people that have been sorted *incorrectly* in each leaf?

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Leafier trees

- Mrs. Cumings was a 38 year old female with a 1st class ticket from Cherbourg. Does the model predict that she survived?

- Which variable ended up not being used by `tree`?

Tree complexity

- How is `tree3` different from `tree2`?

On your own

- In your own words, explain what the *misclassification rate* is.

- Which model (`tree1`, `tree2` or `tree3`) had the lowest misclassification rate for the `titanic_test` data?

- Does creating a more complex *classification tree* always lead to better predictions? Why not?