Lab 2E: The Horror Movie Shuffle

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

Playing with permutations

Initial thoughts...

- **How many variables and observations are contained in the data and what are the possible values of the variables?**

- **Which gender had more survivors? Write down a few sentences as to how you came to your conclusion. Be sure to look at both the *counts* and *percentages* of survivors before deciding.**

- **Calculate the difference between the percentage of females who survived and the percentage of males who survived. Is the difference large enough to conclude that women tend survive more often than men?**

Tally whoa ... !

- **The last question on the previous slide can be answered using the line of code below. Why?**

Examining differences

Do the shuffle!

Let's compare ...
- **How many people, in total, survived the slasher film before shuffling? How many people survived after shuffling?**

- **How has shuffling our data changed the percentage of women who survived compared to men who survived?**

  - **Is the difference in percentages from your shuffled data larger or smaller than the difference from the original data? Interpret what this means.**

- **Explain why shuffling our data one time is not enough to decide if the difference seen in our *actual* data occurs by chance or not.**

Detecting differences
- **In how many simulations did a higher percentage of males survive than females?**

- **What is the largest difference in percentages of survival between males and females?**

- **What patterns are emerging from these simulations?**

Now what?

Time to decide

- **What was the typical difference in percentages between men and women survivors?**

- **Does the actual difference occur very often by chance alone?**

- **Does gender play a role in whether or not a character will survive in a horror film? Explain your reasoning.**

- **If you wanted to survive in a horror film, would you want to play a female character or a male character?**

Summary

On your own

- **Does shuffling the gender variable instead of the survival variable change your answer to the question** *Does gender play a role in whether or not a character will survive in a horror film?***?**
  - **Why or why not?**