Name: Hannah Schaefer

UmichID: hschaef

What dataset are you working with: steak\_survey, male\_flight\_attend

List 3 questions that you can ask with your dataset.

Q1: Are people who drink alcohol more likely to prefer a rare steak?

Q2: Are the number of male child care workers significantly higher than the number of male secretaries?

Q3:

List the associated null hypothesis for each question:

Q1: People who drink alcohol are not more likely to prefer a rare steak over a medium steak.

Q2: The number of male child care workers is not significantly higher than the number of male secretaries.  
Q3:

What statistical test(s) will you use to answer each of the questions:

Q1: Chi square

Q2: unpaired t test

Q3:

Make a visual plot showing the relationship that you will analyze statistically (e.g. boxplot for t-test or ANOVA; scatterplot for regression; table for chi-square).

Q1:

Drink alcohol Rare Medium rare Medium Medium Well Well

FALSE 3 38 23 17 12

TRUE 20 128 109 58 24

Q2:

Q3:

Do your data meet the assumptions required for the statistical test you want to run? Please state the assumptions you examined and whether or not your data meet those assumptions:

Q1: There are observations in each of the cells of the contingency table, the sample is randomly selected from the population, and the observations are independent of each other. The data should be meeting all of these assumptions.

Q2: Data are continuous = yes.

Sample is randomly selected = assuming yes

Observations are independent = yes

Q3:

Run the statistical test! Put your results here:

Q1:

Pearson's Chi-squared test

data: table\_steak

X-squared = 5.5062, df = 4, p-value = 0.2392

Q2:

Q3:

Interpret your results!

Q1:

The p value was larger than 0.05 which is the level of acceptance of error I wanted to assign, so I don’t think the data was significant.

Q2:

Q3: