Proportional model:  Last digit problem.

Question 1. In these steps, you’ve gone from raw data to a frequency table. The frequency table has two columns. How many variables are represented in the frequency table?

Question 2. Write down what the expected numbers should be for each category, if the null hypothesis was true.

Question 3. Show that you understand the process by calculating this term for the “0” last digit category.

Question 4. List the title of each graph and briefly summarize what information it tells you.
**Question 5.** Summarize your results for this problem in the same style we have used in lecture. Make sure to include the sample size, test statistic, P value, and df. It would be cumbersome to list the descriptive statistics, so no need to do this – in a paper you would probably include a graph. However, do make sure that your results provide a sense of the data (i.e. if they deviate from the $H_0$, what is the pattern of the deviation?)

------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Specific hypothesis or model problem: Trisomy problem

*Question 6. State the null and alternative hypotheses for a goodness of fit test.*

*Question 7. Determine the expected numbers for each category using the information in the problem.*

*Question 8. State your conclusions.*
Discrete probability distribution: Seminar sex ratio problem

Question 9. There are four criteria that are central to the binomial distribution. For the three listed below, briefly state whether they are consistent with this problem. Also, state the numerical value for n and p. Let “female” = “success”.

1) 2 outcomes
2) fixed n
3) fixed p

Question 10. As a check on your understanding, use the binomial formula and calculate the number of classes that one would expect to be like Joe’s (six men and one woman), given the null hypothesis. Define the presence of a woman in the class as a “success”. Show your work.

Question 11. State your conclusion (recall that we need a test statistic, df, P-value, and sample size). (No need for descriptive statistics for this conclusion; you would more likely provide a graph for illustration.)

Question 12. Without doing any calculations, do you expect to “reject” or “not reject” the null hypothesis with this much larger data set