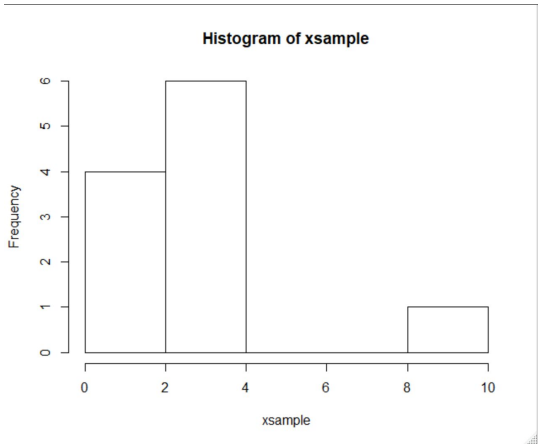
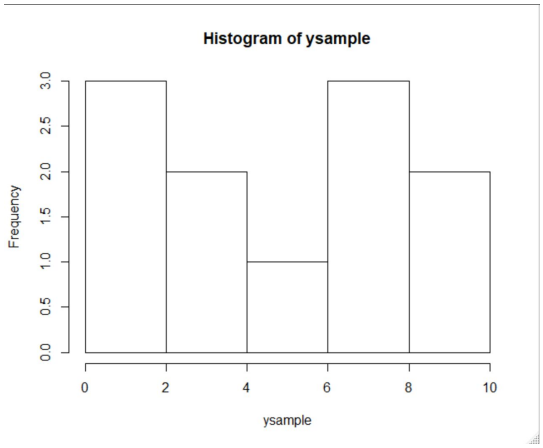
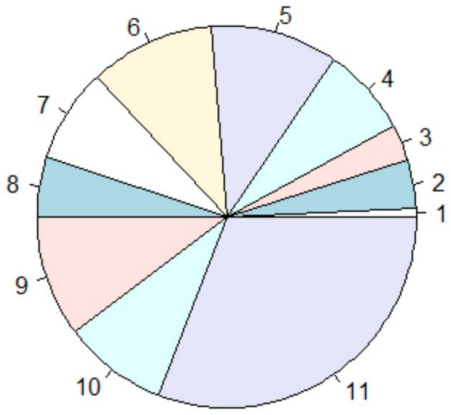
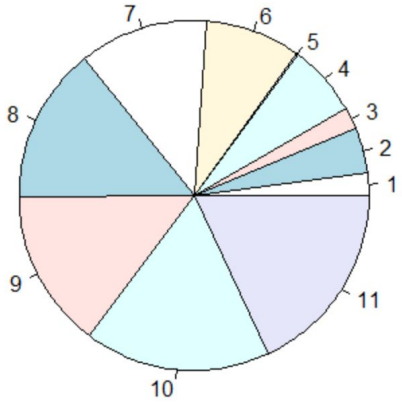
Max Shi
MA 331 Homework 1
I pledge my honor that I have abided by the Stevens Honor System

1.

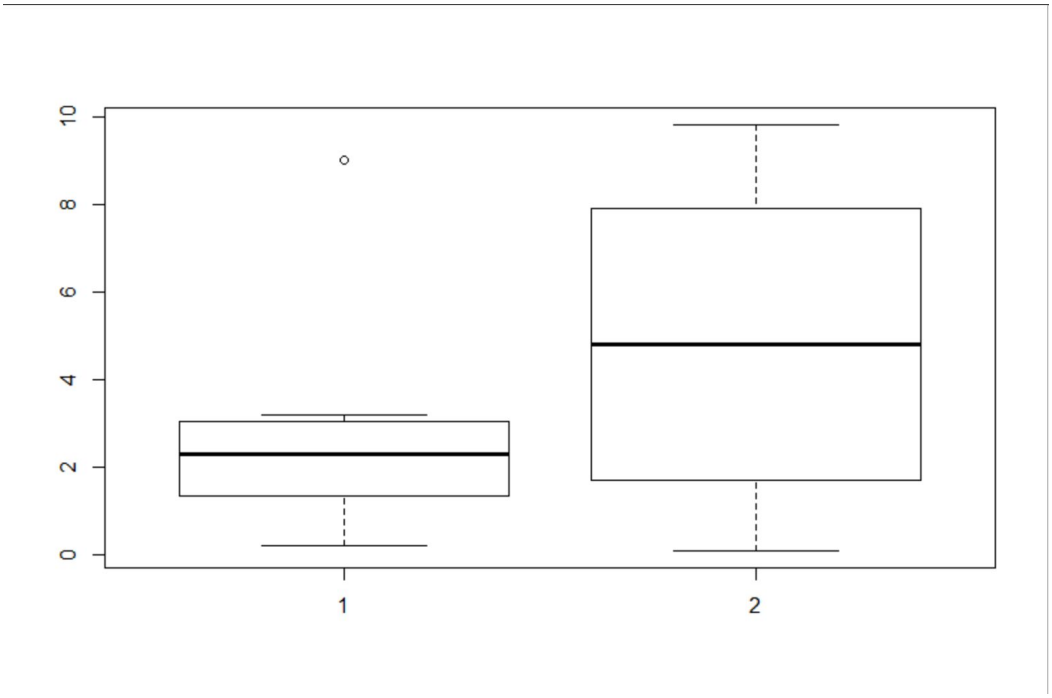






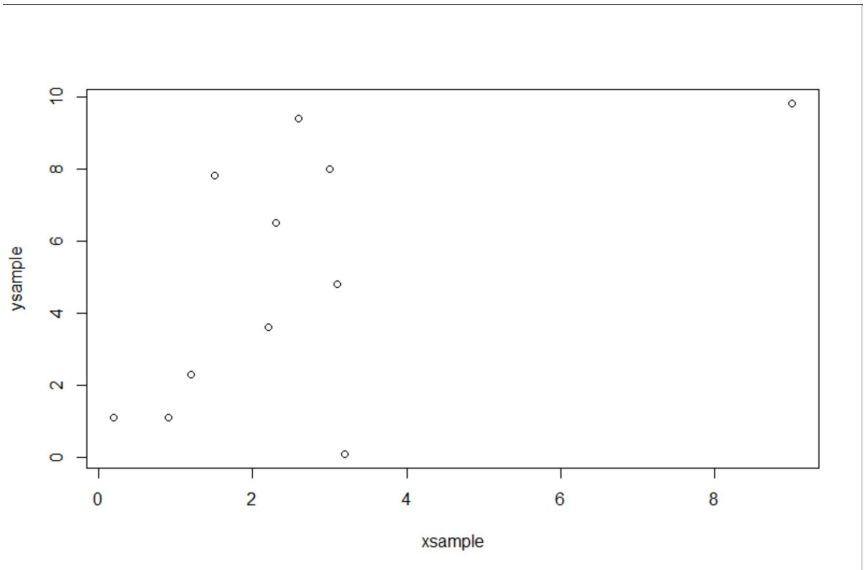


(The plots for X are on the left, and the plots for Y are on the right)
The distribution of the X points are shifted toward the left, toward the smaller values. Meanwhile, the distribution of the Y points are more spread out, however there are less values near the middle of the range of values. The pie charts depict the values as areas in the order they were input into the program, and therefore do not depict a very helpful representation of the data, however we can see that there are fewer large values in X and many more large values in Y.



2.

X -- min - 0.200, 1stq - 1.350, median - 2.300, 3rdq - 3.050, max - 9.000, variance - 5.3767
Y -- min - 0.100, 1stq - 1.700, median - 4.800, 3rdq - 7.900, max - 9.800, variance - 12.5187
There are no outliers in Y, but there is an outlier in X at 9.0.



3.

Correlation - 0.5571
There seems to be a positive correlation between x and y, with a line with a positive slope fitting through the points.

4. There are outliers in (X,Y) at point (9.0, 9.8). With those values removed, the correlation is 0.3874

5. There is a smaller correlation value and the positive linear correlation seems to be weaker with the outlier removed.
6. X seems more likely to be normal distributed if the outlier is ignored. The normal QQ plot and the normal QQ line goes through many of the points of X, which is on the left, while the plot of Y and the corresponding line does not signify much normality.