QPM PSet 2

1. In this problem, the sample is the bills passed by congress, and the population is the bills passed by congress. Because both the sample and the population are the same, it does not make sense to construct a confidence interval.
2.
    a. The distribution of the population of this tribal society is skewed to the right, with a mean of 5.2 and a standard deviation of 3.0.
    b. The sample data distribution is skewed to the right, with a mean of 4.6 and standard deviation of 3.2.
    c. The sampling distribution of Y is normal with a mean of 5.2 and a standard deviation of .5
    d. The probability that the mean sample falls within .5 of the population mean is 0.6826
    e.   The probability would be .7438 which is higher than part D
    f. Yes because if Y= 4.0 the likelihood of there being a normal distribution would be low, therefore it would unlikely be a random sample
3.
    a.   Pr(1.0<u<6.95)=.95
    b. We are 95% confident that the population mean falls between 1.0 and 6.95.
    c.
        i. The confidence interval would be wider if we constructed a 90% confidence interval.
        ii. The confidence interval would be narrower due to the sample size being reduced
4. In R
    a. 0.1056498
    b. 0.5298926
    c. 0.0384053
5. In PDF uploaded to github
6. In PDF on GITHUB
7.
    a.


Histogram of drugCoverage$Year
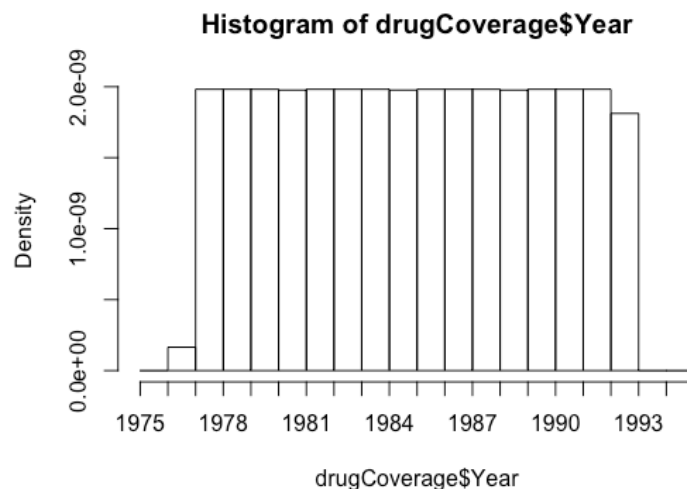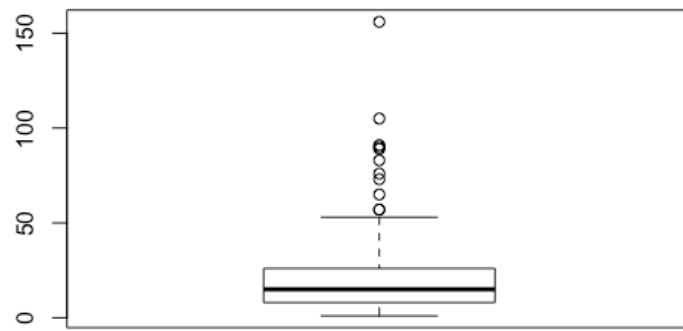
b. Plot on Drug Coverage
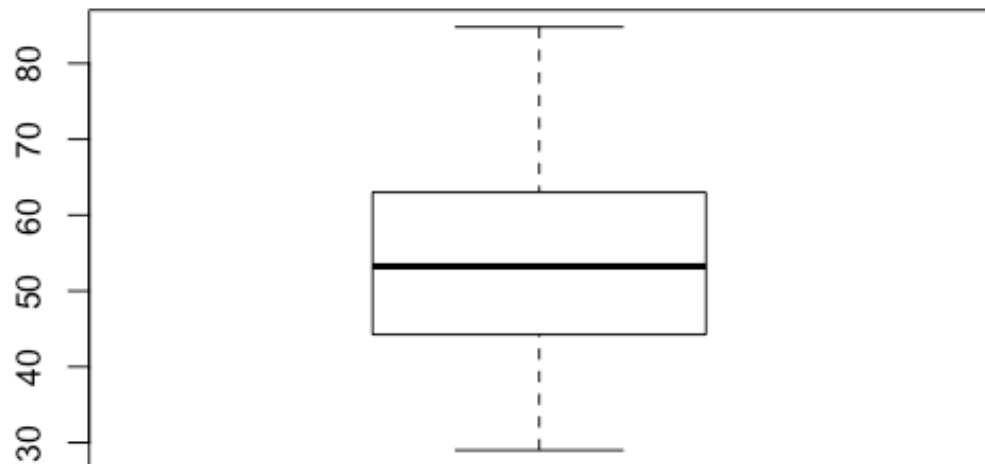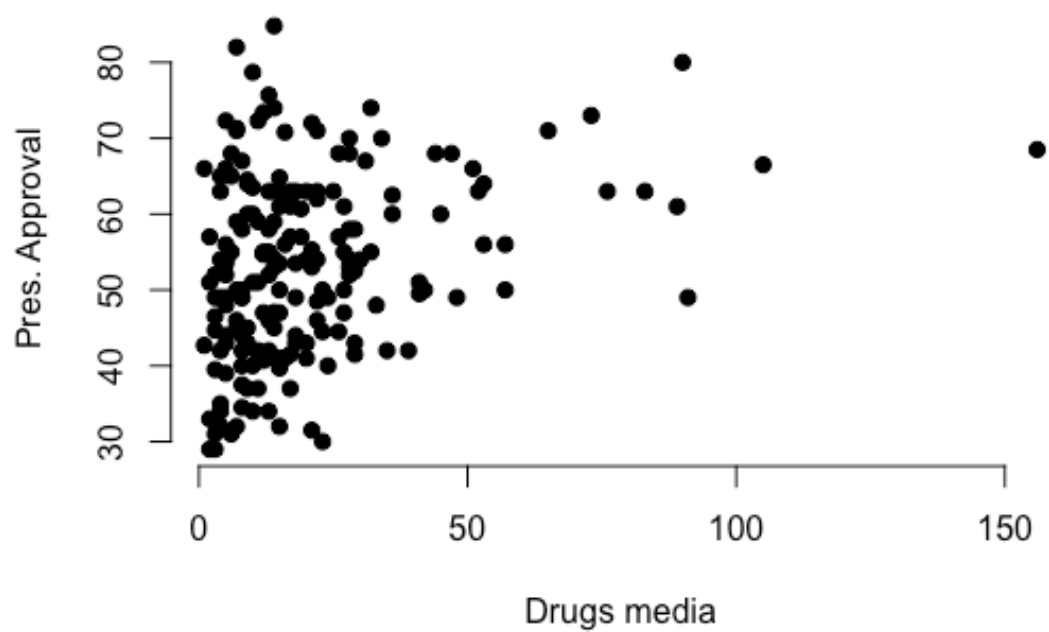
Plot on Presidential approval

These plots differ in the fact that the upper, lower, and middle quariltes are drastically different. The contrast tells me that both data sets were set on different scales. Approval rating being out of 100 percent, while the drug coverage articles being a statistic.
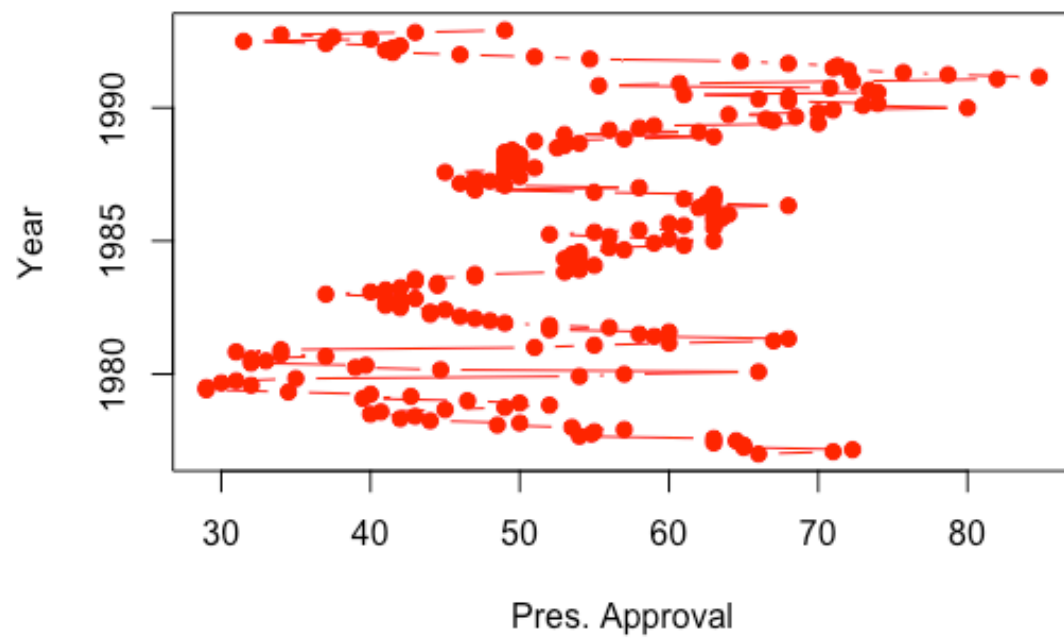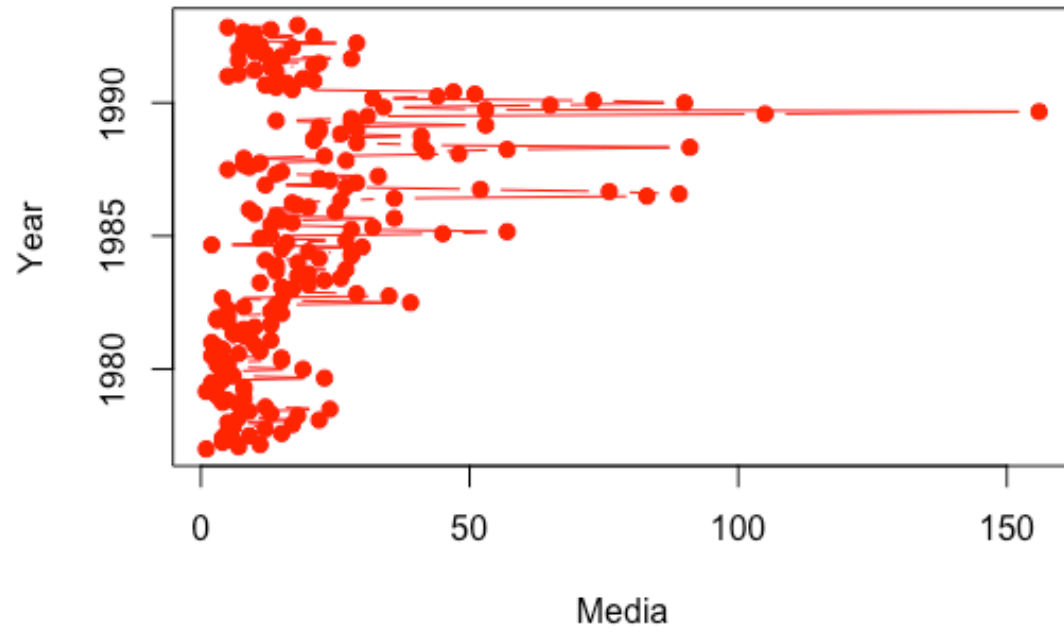
c.

Drug media Vs. Unemployment
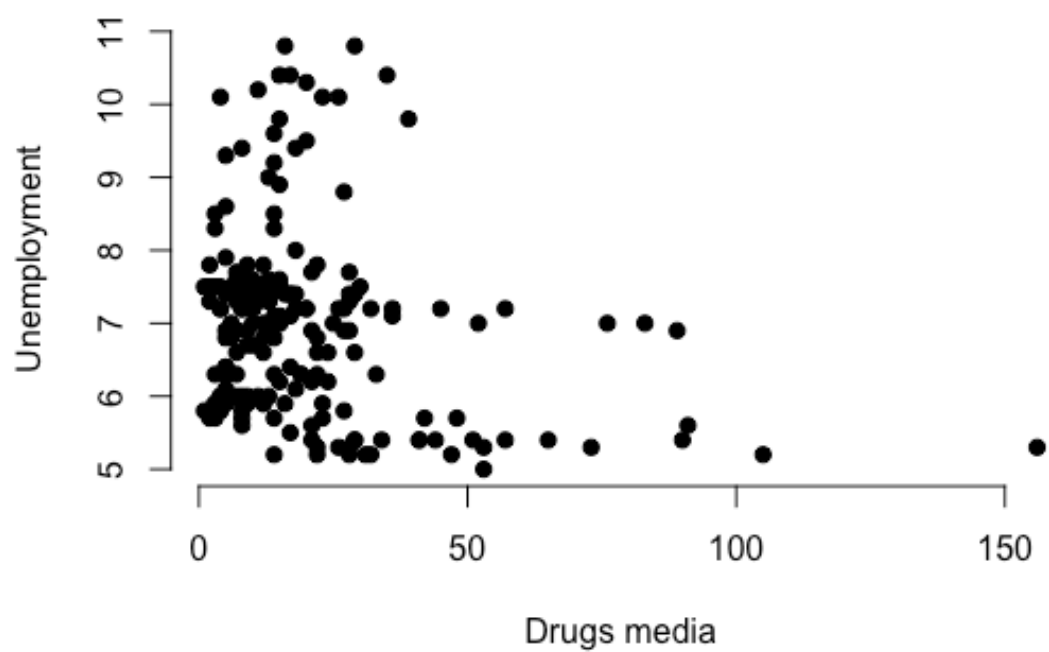
Drug media Vs. Pres. Approval

The graphs above do not particularly differ to drastically, aside from the scales. It would be possible to conclude that lower amount of drug media provide a lower approval rate, which is similar to the correlation between drug media and unemployment.

d.

You can learn from these graphs the different trends in both approval rating and media coverage over these particular years.

8.
a. on R
b. Congress 88: 141.1364
Congress 107: 107

This means that between these two congress sessions, congress swung more democratic.

h. Between these two sessions of congress, congress became more polarized, swaying from closer to the predicted mean (150, if democrats and republicans have split congress) to closer towards the democratic side. The ideological cohesiveness likely decreased over this time.

Was not able to get to all the parts in time. I tried really hard to figure out the plots regarding the parties, but I ran out of time. Im so sorry.