Homework 1

A.

```
autoData <- read.csv("C://Users//Tetra//Documents//Auto.csv",na.strings = "?")
```

B.

```
> typeof(autoData)
[1] "list"

> class(autoData)
[1] "data.frame"
```

C.

```
> dim(autoData)
[1] 397   9
```

D.

```
> autoData = na.omit(autoData)
> dim(autoData)
[1] 392   9
```

E.

```
> ls(autoData)
[1] "acceleration" "cylinders"    "displacement" "horsepower"   "mpg"
"name"         "origin"
[8] "weight"       "year"
```

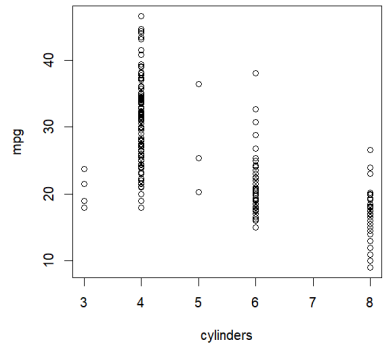
F.

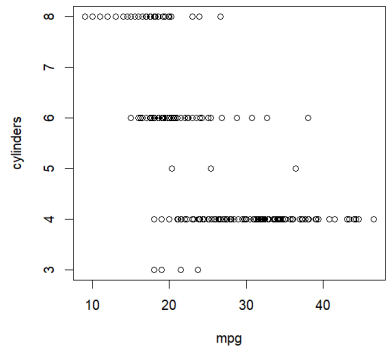
```
> attach(autoData)
The following objects are masked from autoData (pos = 3):

    acceleration, cylinders, displacement, horsepower, mpg, name, origin,
weight, year

> plot(cylinders,mpg)
> plot(mpg,cylinders)
```

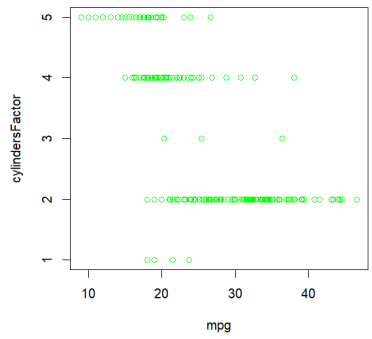
Wasn't sure if cylinders was x or y so i did both





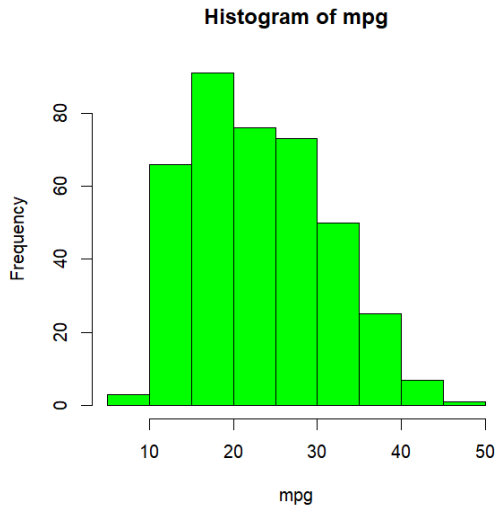
G.

```
cylindersFactor = factor(cylinders)
plot(mpg,cylindersFactor,col="green")
```



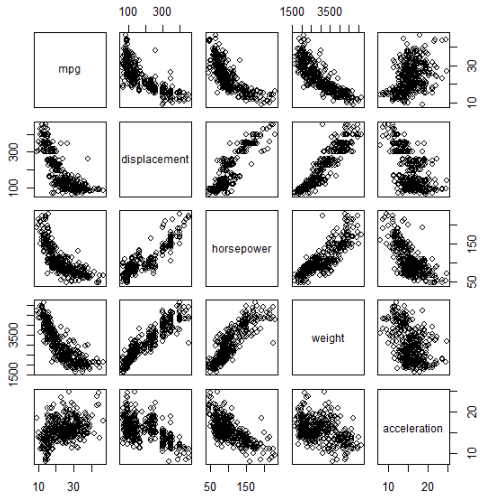
H.

```
hist(mpg,col="green",breaks=10)
```



I.

```
pairs(select(autoData,'mpg','displacement','horsepower','weight','acceleration'
))
```



J.

```
newAuto = filter(autoData,grepl("chevrolet|ford|toyota|bmw|volkswagen",name))
```

```
> df = data.frame("Mean" = c(mean(newAuto$mpg),
+                            mean(newAuto$weight),
+                            mean(newAuto$horsepower),
+                            mean(newAuto$acceleration)),
+                 "Variance" = c(var(newAuto$mpg),
+                                var(newAuto$weight),
+                                var(newAuto$horsepower),
+                                var(newAuto$acceleration)))
```

```
> rownames(df) = c("Mpg","Weight","Horsepower","Acceleration")

> df
                    Mean     Variance
Mpg             22.62030 4.984148e+01
Weight        2965.22556 7.413998e+05
Horsepower     101.77444 1.269509e+03
Acceleration    15.60376 7.649304e+00
```