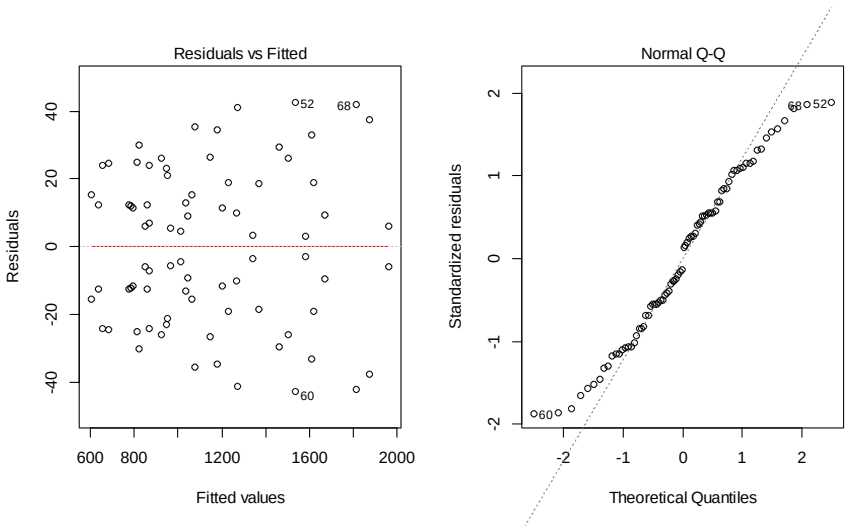
Problem 1c

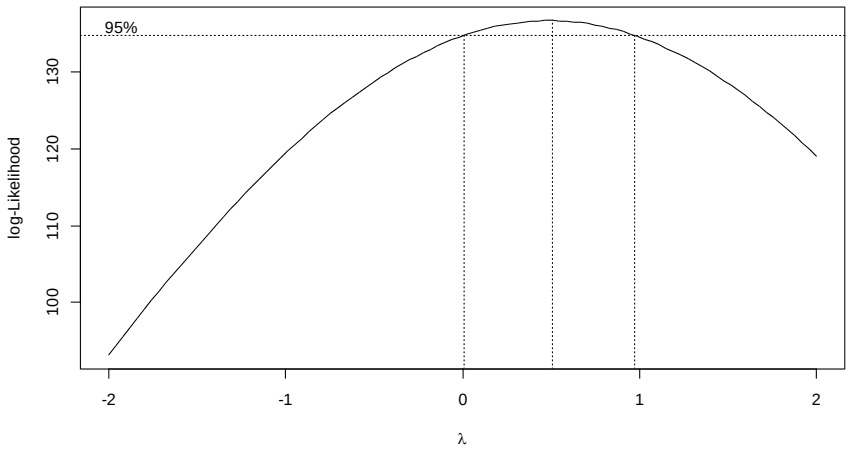
```
par(mfrow=c(1,2))
plot(Prob1.lm1, which =c(1,2))
par(mfrow=c(1,1))
```



The normal qq plot is fairly good with just a bit of deviation at the tails. The residual by predicted plot is not too bad, but shows a hint of a megaphone pattern. Together they suggest possible slight violations of the equal variance and normal assumptions.

Problem 1d

```
library(MASS)
boxcox(Rent ~ State +Bedrooms +State:Bedrooms, data=Prob1,lambda = seq(-2.00, 2.00, length
= 50))
```



The confidence interval for lambda barely excludes 1, so we could reject the null hypothesis at alpha = .05. However, it nearly includes 1, and a good transformation appears to be the square root transformation.