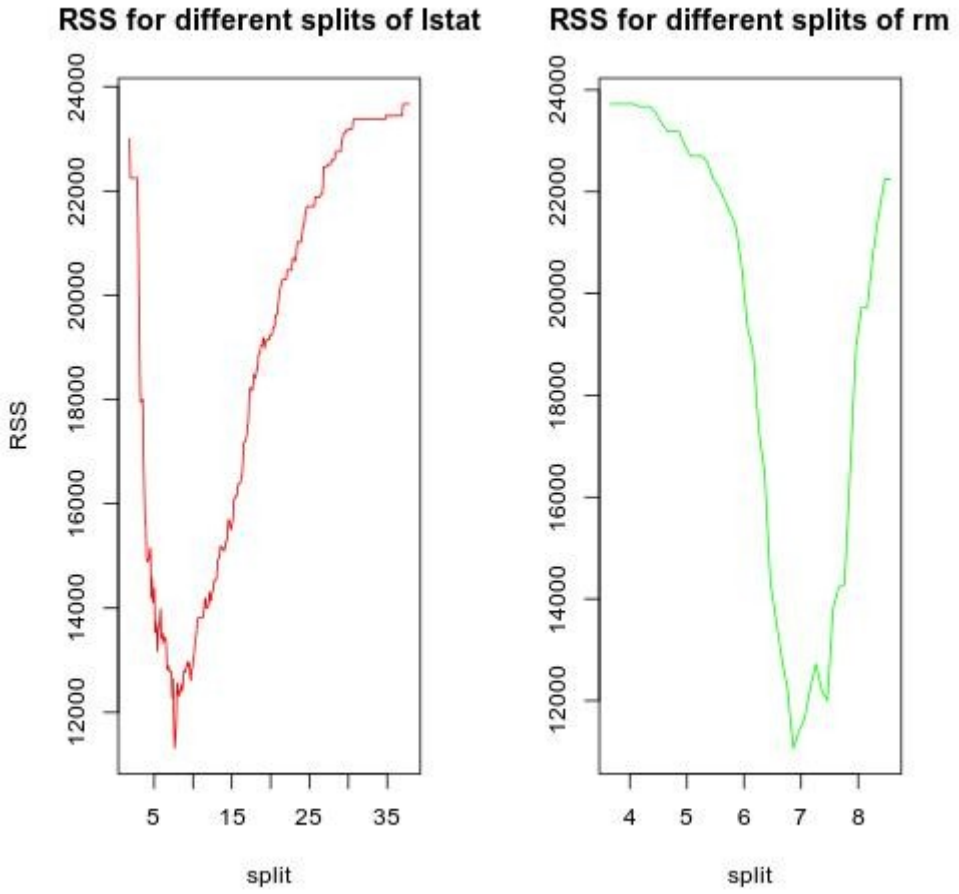
Report for Assignemnt 2

Part 1

I found that the best split was when rm=6.861.
This occurred when the training MSE = 43.742.
Using this split I found the Test MSE = 50.712.
The two plots below show the Test RSS against the splitting point for both lstat and rm.



Part 2

Using nu = 0.01 and B = 1000 I obtained a Test MSE = 24.562.

Part 3

I used a nu = 0.1 and B = 5000 to try to see if there would be overfitting. The two graphs below show the number of trees used to calculate the prediction rule against the Test MSE. The graph on the right is the same as the one on the left except it doesn't plot the first 19 Test MSE's. This is because the Test MSE started quite high so by missing out some of the initial values in the plot it is much clearer to see that a large B does actually lead to overfitting.