PS9

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Question 5

The dimension of housing.train is [1:404].

Question 6

optimal value of lambda: 0.012,
in-sample RMSE: 0.1546636,
out-of-sample RMSE: 0.1819137

Question 7

optimal value of lambda: 0.0813,
in-sample RMSE: 0.1646798,
out-of-sample RMSE: 0.1544612,

Question 8

optimal value of lambda:0.064,
in-sample RMSE: 0.1734023,
out-of-sample RMSE: 0.154442,
Given the value of alpha, we need to use the LASSO model.

Question 8

Taking into account the data demensions, we cannot use OLS since it can overfitt the data. Also, there is no way to regularize the data.

Given the values of RMSE, the variance of data is low while the bias is high.