

# PS9<sub>stinnett</sub>

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## 1 Questions

Question 1: What is the optimal value of lambda ? 0.0504 What is the in-sample RMSE? 0.2051383 What is the out-of-sample RMSE (i.e. the RMSE in the test data)? 0.2502986

Question 2: What is the optimal value of lambda ? 0.141 What is the in-sample RMSE? 0.1605712 What is the out-of-sample RMSE (i.e. the RMSE in the test data)? 0.1711735

Question 3: What is the optimal value of lambda and alpha ? lambda=0.0173,alpha=0.0306 What is the in-sample RMSE? 0.1638702 What is the out-of-sample RMSE (i.e. the RMSE in the test data)? 0.1841104

We could not use a simple linear regression as the parameters of the data are not linear. Given the values we can guess that the prediction is somewhere near the center of the bias variance trade off.