2.

a)

kwidth = 0.1



kwidth = 1



kwidth = 10



From the result, we can derive this result:

For a larger kwidth, the curve we got will more like linear line. With small kwidth, the curve will be overfitting the data. We suppose the kwidth related to the flexibility of the curve, smaller kwidth leads to larger flexibility.

b)

llambda = 10-10



llambda = 1



llambda = 500



The llambda is the penalty term of the Kernel Ridge Regression. Larger value of llambda means less complexity of the result.

3.

kwidth and llambda were chosen from a set, within this way, the function can find the best value of kwidth and llambda.

4.

Shows the similarity between predict value and true value.

Kernel Ridge Regression can predict better than OLS. But it is not so stable as OLS.

5.

It takes too much time for executing the code.