**Problem 1e**

**According to the solutions shown in problem 1d, we can see the importance of tuning. For k=0.1, when the input has a small change, the outputs of xstar and ystar have a big change. For k=10, when the input has a small change, the outputs of xstar and ystar does not change very much comparing to the results of k=0.1. Therefore, it is very important to define the parameters that can fit model well. For this problem, if we want to get sensitive results, we can use k=0.1; if we want the output that has less variation as input varies, we can use k=10.**