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Analytics 512 Statistical Learning
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Final Exam take home portion

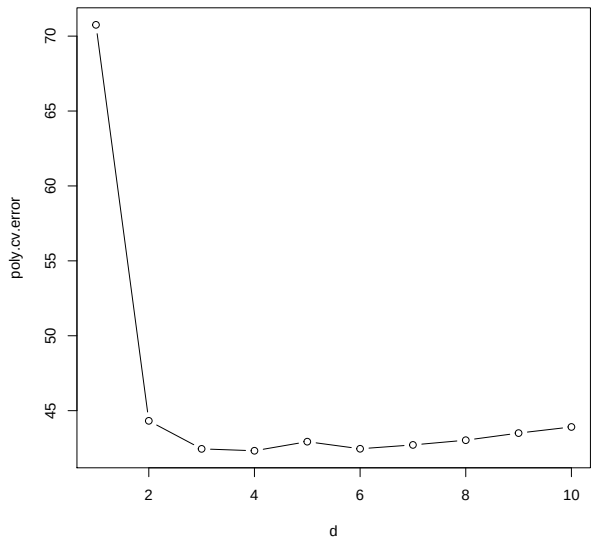
```
library("mlbench")
data(Ozone)
```

Exercise 1

```
names(Ozone) <- c("mo","day","wday","maxoz","pressh","wind","hum","temp1","temp2","inverh","pressg","in
Ozone$time = 1:366
Ozone = na.omit(Ozone)
train = sample(nrow(Ozone), nrow(Ozone)*.70)
Ozone_train = Ozone[train,]
```

Exercise 2

```
library(boot)
poly.cv.error = c()
d = 1:10
for(i in d){
  ozone_pm = glm(maxoz~poly(time,i), data = Ozone_train)
  poly.cv.error[i] = cv.glm(Ozone_train, ozone_pm, K = 10)$delta[2]
}
plot(d,poly.cv.error,type="b")
```



```
ozone_pm = glm(maxoz~poly(time,d[poly.cv.error == min(poly.cv.error)]), data = Ozone_train)
```