Table 2.1 HousePrices-NoID - Graphics

MP

2015-05-13

```
> setwd("D:/Dropbox/R/2015-NUS/Basics/Graphics")
```

```
> Dataset <-
+   read.table("D:/Dropbox/R/2015-NUS/Basics/Graphics/Table 2.1 HousePrices-NoID.csv",
+    header=TRUE, sep=",", na.strings="NA", dec=".", strip.white=TRUE)
```

```
> summary(Dataset)
```

```
     Price             SqFt         Bedrooms       Bathrooms
 Min.   : 69100   Min.   :1450   Min.   :2.000   Min.   :2.000
 1st Qu.:111325   1st Qu.:1880   1st Qu.:3.000   1st Qu.:2.000
 Median :125950   Median :2000   Median :3.000   Median :2.000
 Mean   :130427   Mean   :2001   Mean   :3.023   Mean   :2.445
 3rd Qu.:148250   3rd Qu.:2140   3rd Qu.:3.000   3rd Qu.:3.000
 Max.   :211200   Max.   :2590   Max.   :5.000   Max.   :4.000
     Offers      Brick    Neighborhood
 Min.   :1.000   No :86   East :45
 1st Qu.:2.000   Yes:42   North:44
 Median :3.000            West :39
 Mean   :2.578
 3rd Qu.:3.000
 Max.   :6.000
```

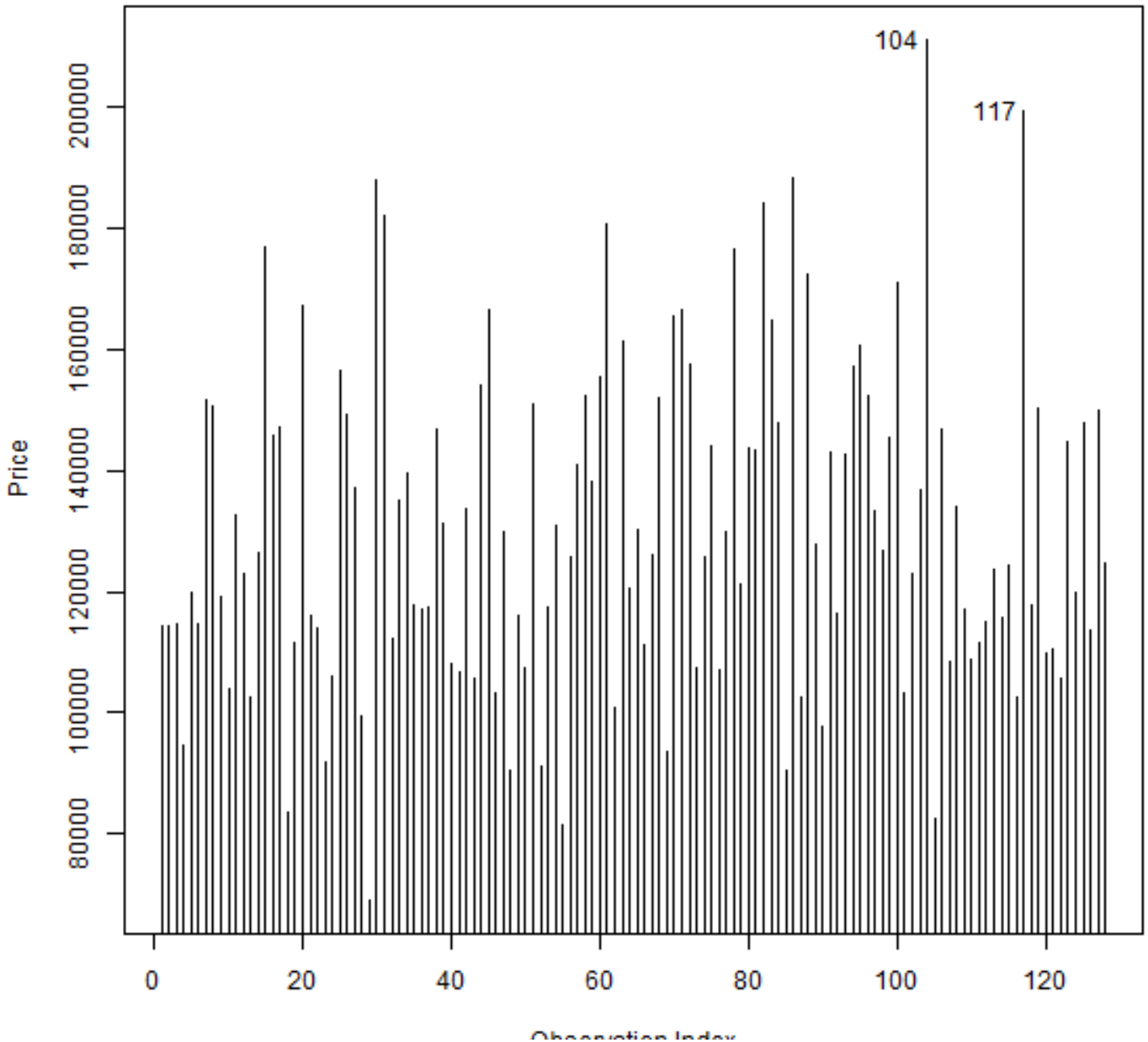
```
> library(abind, pos=15)
```

```
> library(e1071, pos=16)
```

```
> numSummary(Dataset[,c("Bathrooms", "Bedrooms", "Offers", "Price", "SqFt")],
+   statistics=c("mean", "sd", "IQR", "quantiles"), quantiles=c(0,.25,.5,.75,1))
```

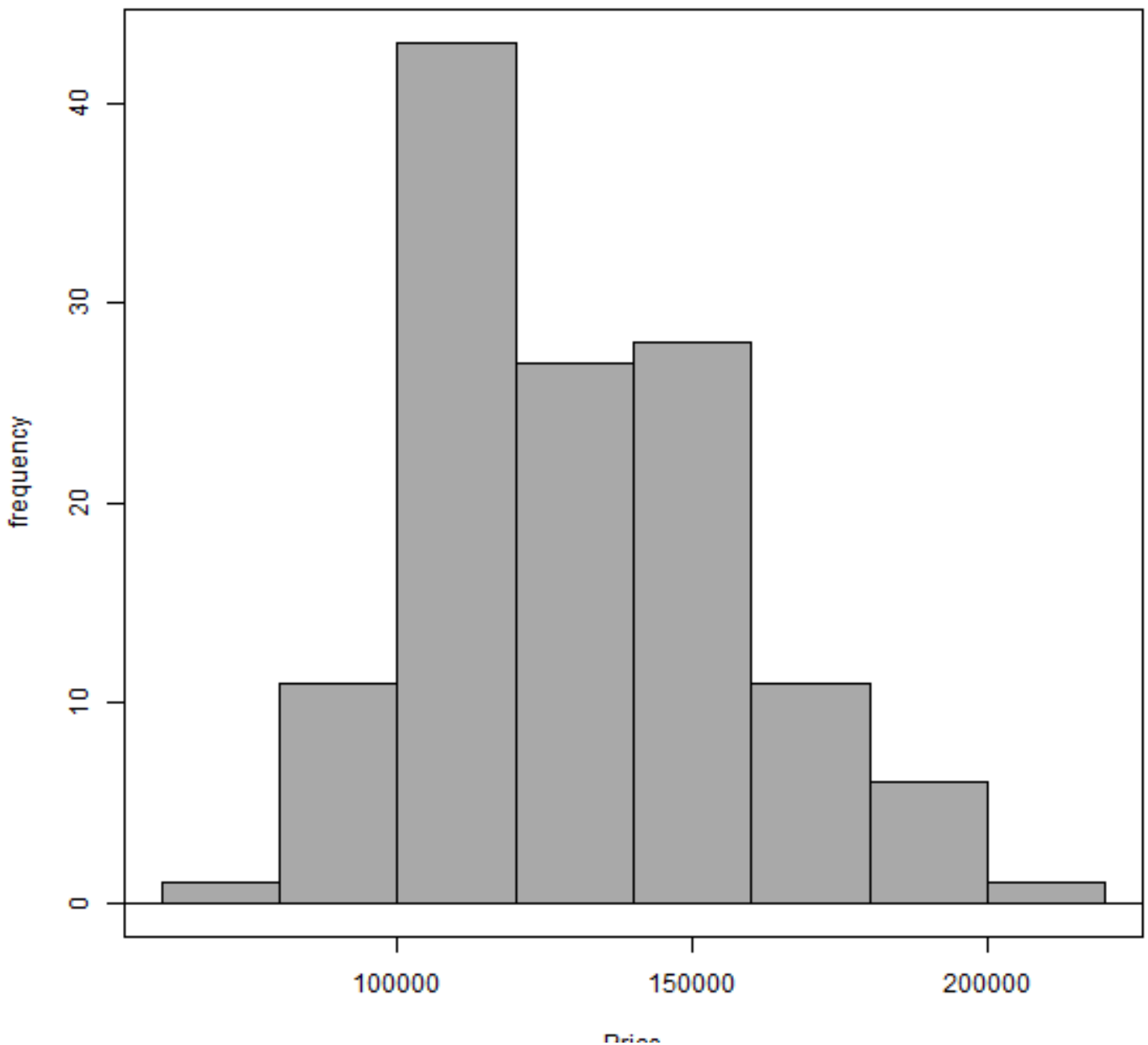
```
                mean           sd   IQR    0%    25%    50%    75%
Bathrooms 2.445312e+00 5.144922e-01     1     2      2      2      3
Bedrooms  3.023438e+00 7.259514e-01     0     2      3      3      3
Offers    2.578125e+00 1.069324e+00     1     1      2      3      3
Price     1.304273e+05 2.686877e+04 36925 69100 111325 125950 148250
SqFt      2.000937e+03 2.115724e+02   260  1450   1880   2000   2140
            100%   n
Bathrooms      4 128
Bedrooms       5 128
Offers         6 128
Price     211200 128
SqFt        2590 128
```

```
> with(Dataset, indexplot(Price, type='h', id.method='y', id.n=2,
+   labels=rownames(Dataset)))
```

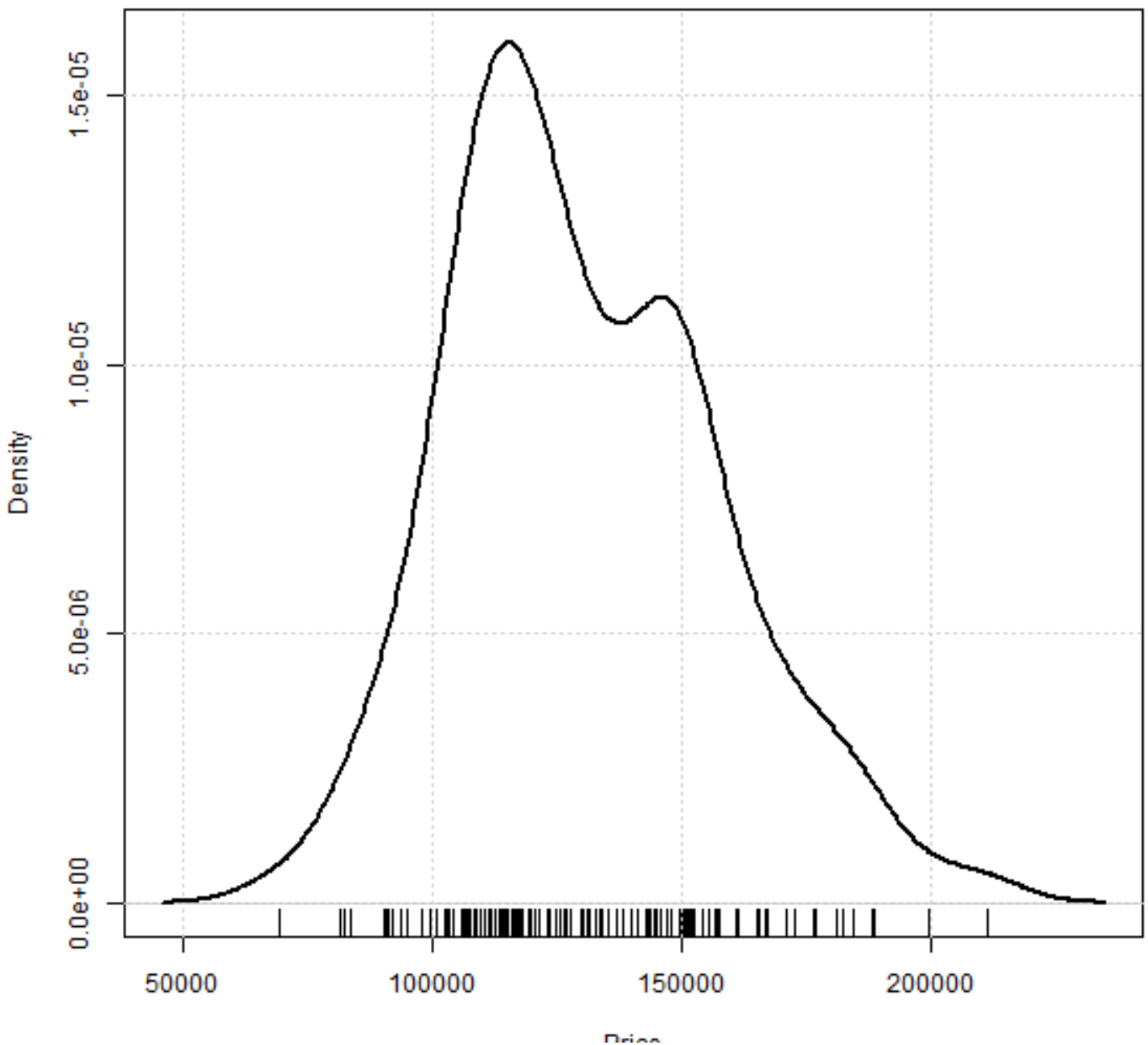

104
117
Price
80000
100000
120000
140000
160000
180000
200000
0
20
40
60
80
100
120

```
104 117
104 117
```

```
> with(Dataset, Hist(Price, scale="frequency", breaks="Sturges",
+   col="darkgray"))
```


frequency
0
10
20
30
40
100000
150000
200000

```
> densityPlot( ~ Price, data=Dataset, bw="SJ", adjust=1, kernel="gaussian")
```


Density
0.0e+00
5.0e-06
1.0e-05
1.5e-05
50000
100000
150000
200000

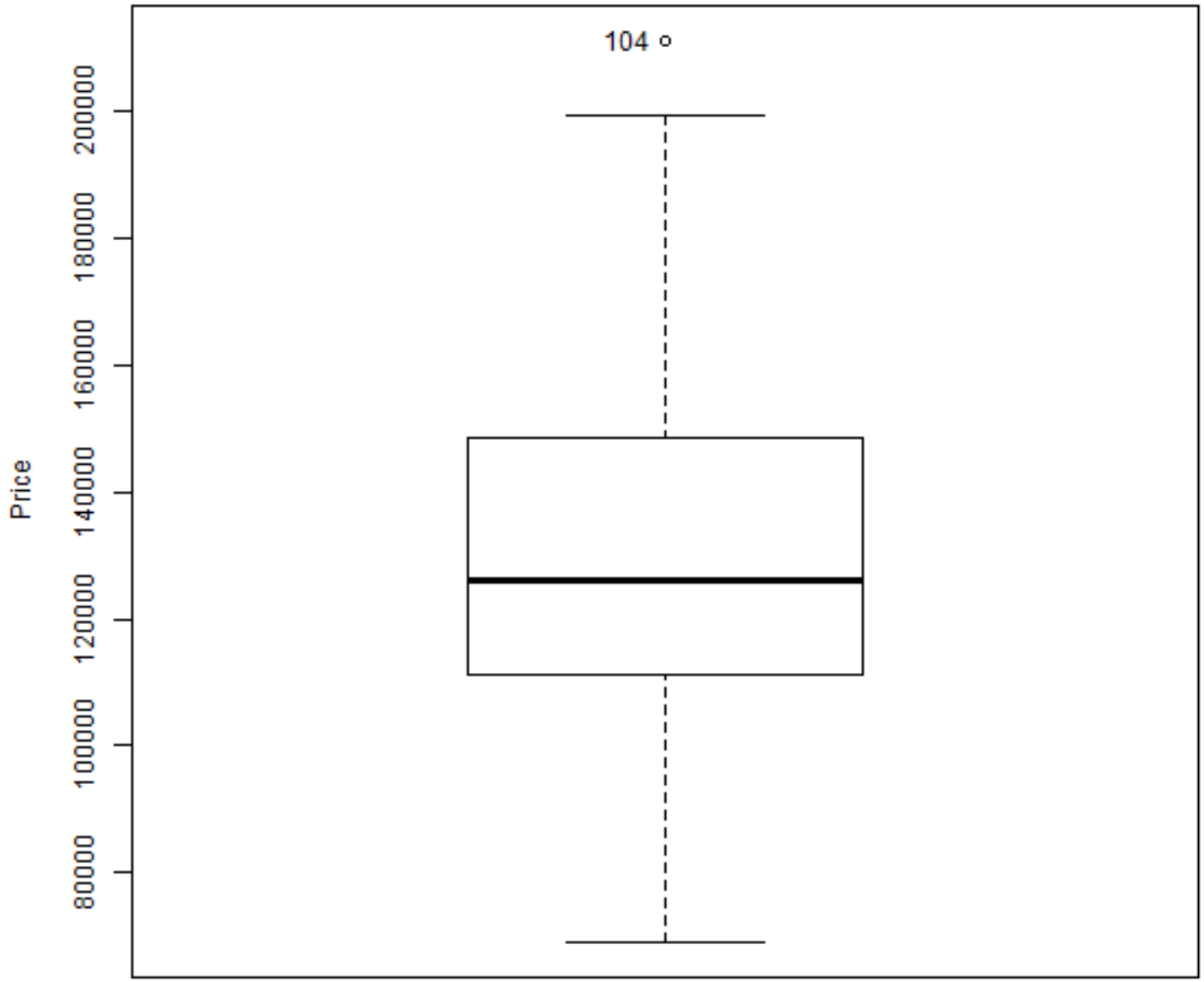
```
> library(tcltk, pos=17)
```

```
> library(aplpack, pos=17)
```

```
> with(Dataset, stem.leaf(Price, na.rm=TRUE))
```

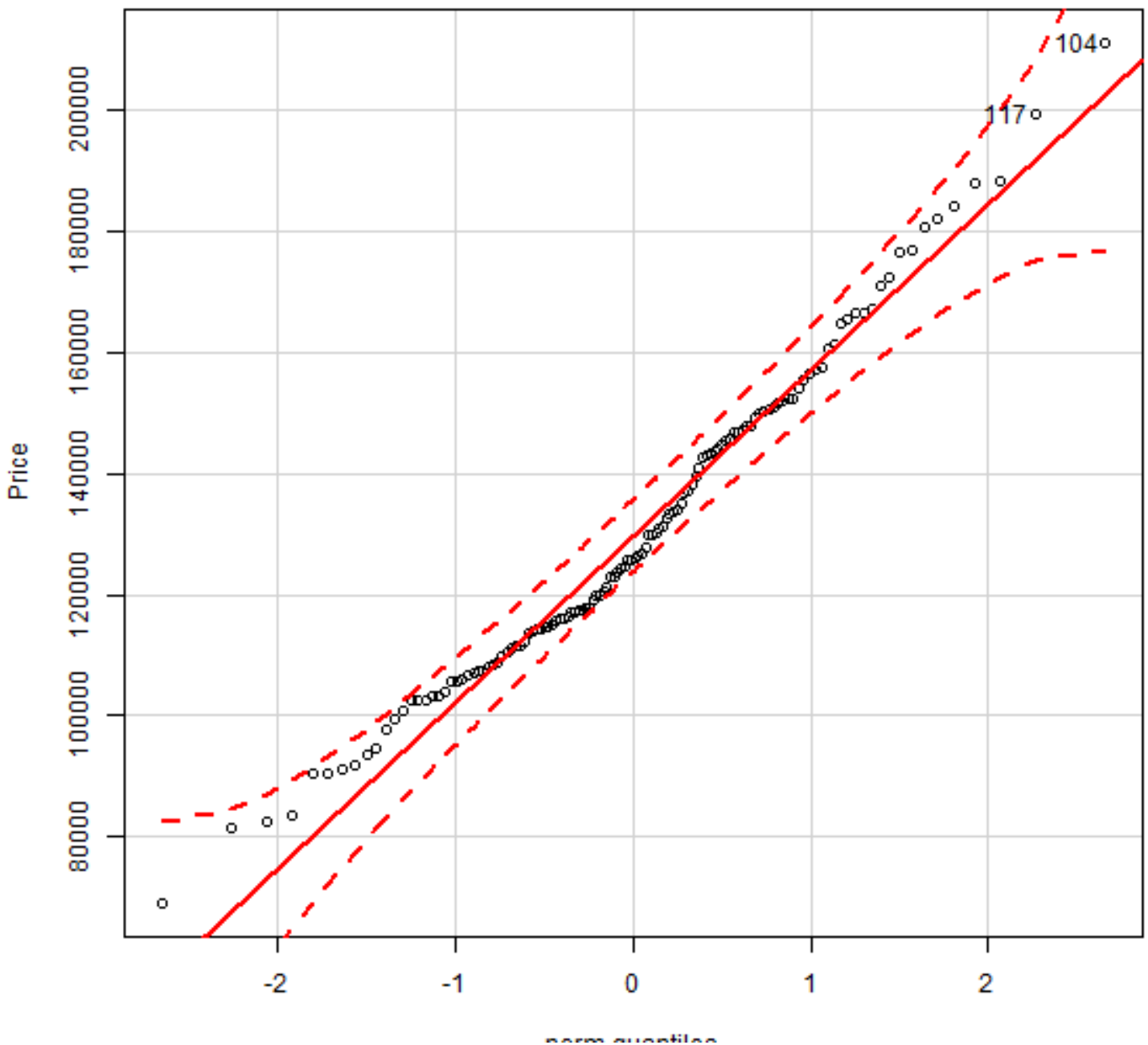
```
1 | 2: represents 12000
 leaf unit: 1000
            n: 128
    1     6 | 9
          7 |
    4     8 | 123
   12     9 | 00113479
   30    10 | 022233455666778889
   55    11 | 01112334444455566777777999
  (15)   12 | 013334455666799
   58    13 | 001233456789
   46    14 | 0233344556777799
   30    15 | 001112245677
   18    16 | 0145667
   11    17 | 1266
    7    18 | 02488
    2    19 | 9
HI: 211200
```

```
> Boxplot( ~ Price, data=Dataset, id.method="y")
```


104
Price
80000
100000
120000
140000
160000
180000
200000

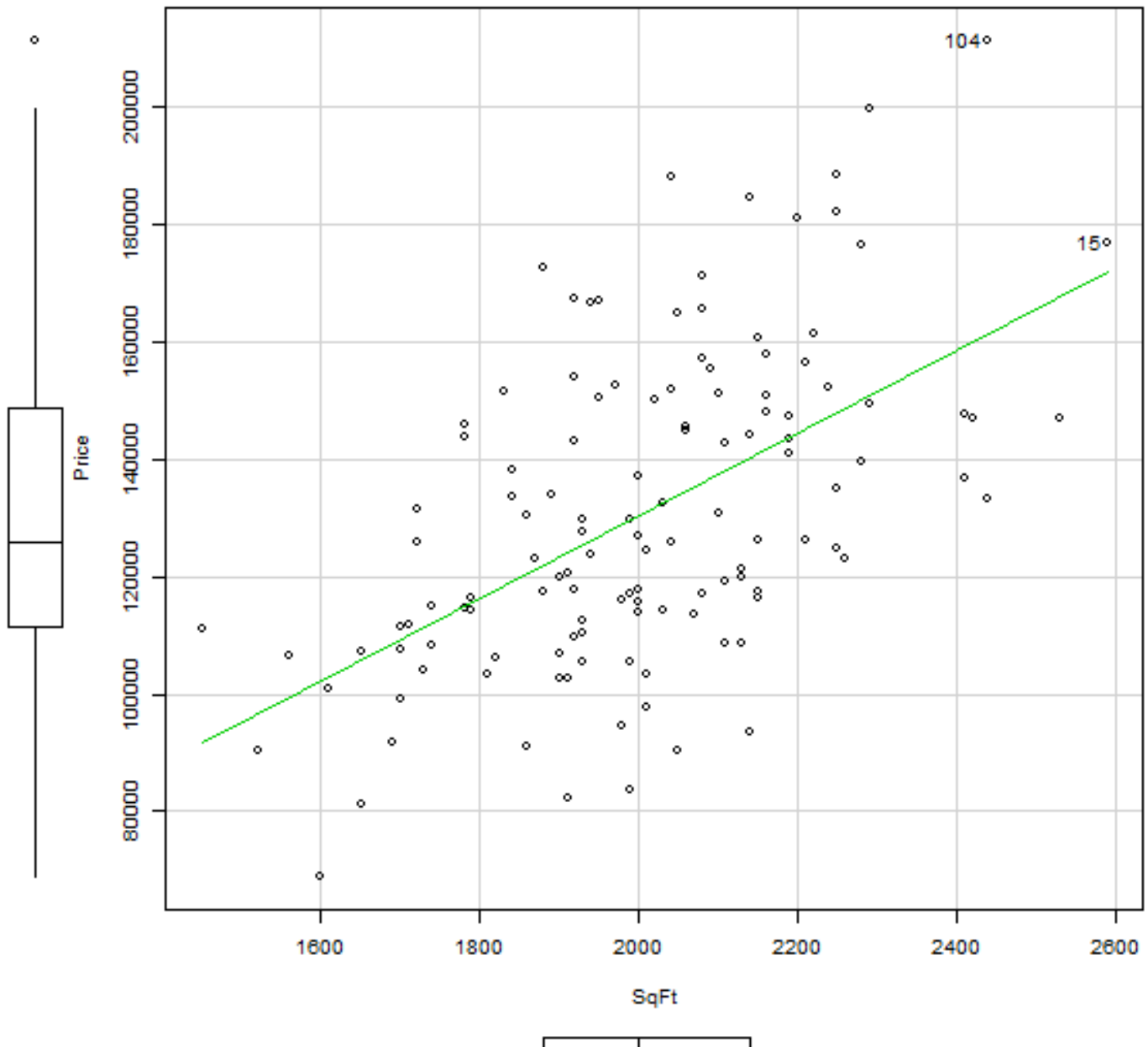
```
[1] "104"
```

```
> with(Dataset, qqPlot(Price, dist="norm", id.method="y", id.n=2,
+   labels=rownames(Dataset)))
```


Price
80000
100000
120000
140000
160000
180000
200000
-2
-1
0
1
2
104
117

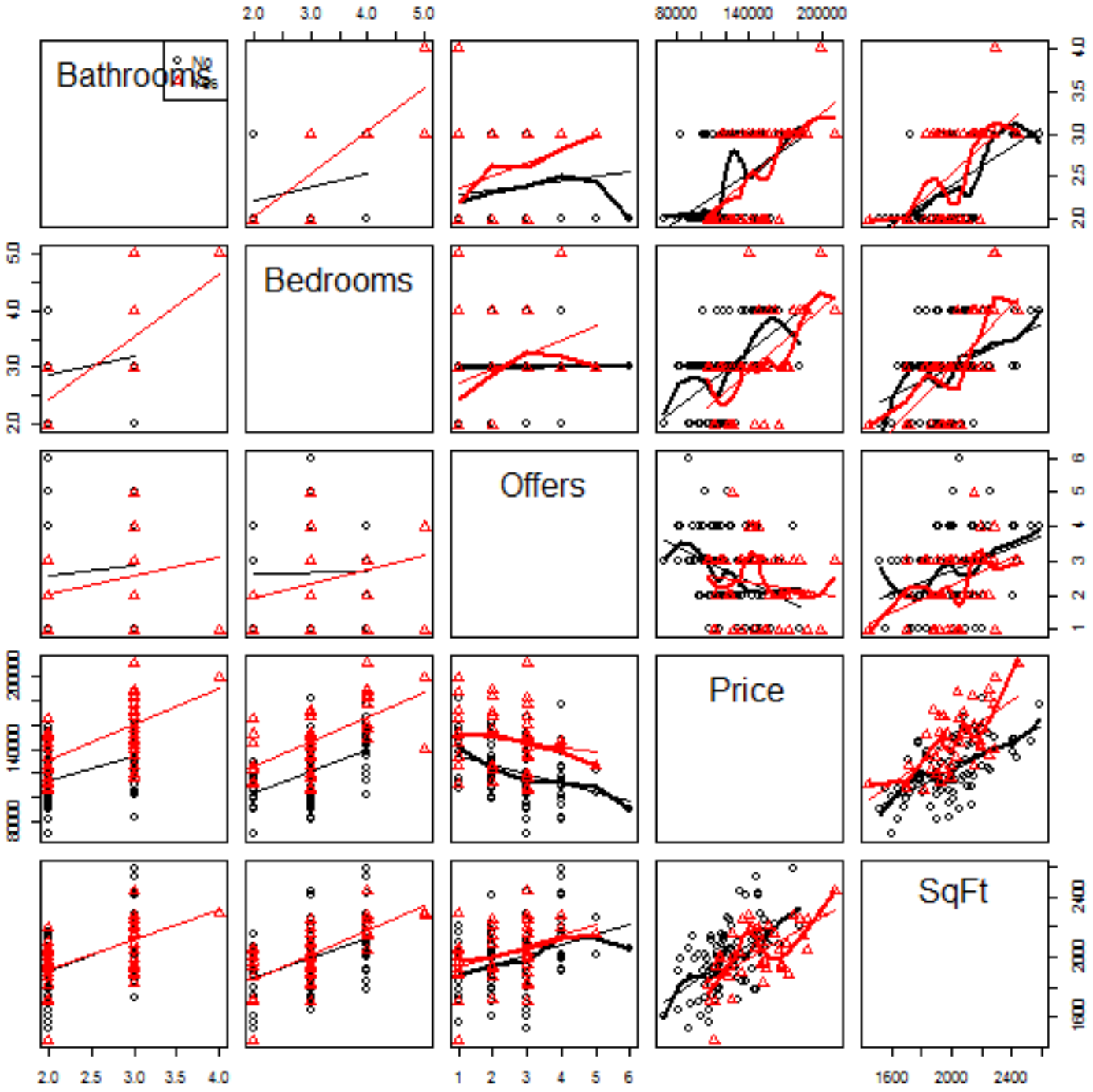
```
104 117
128 127
```

```
> scatterplot(Price~SqFt, reg.line=lm, smooth=FALSE, spread=FALSE,
+   id.method='mahal', id.n = 2, boxplots='xy', span=0.5, data=Dataset)
```

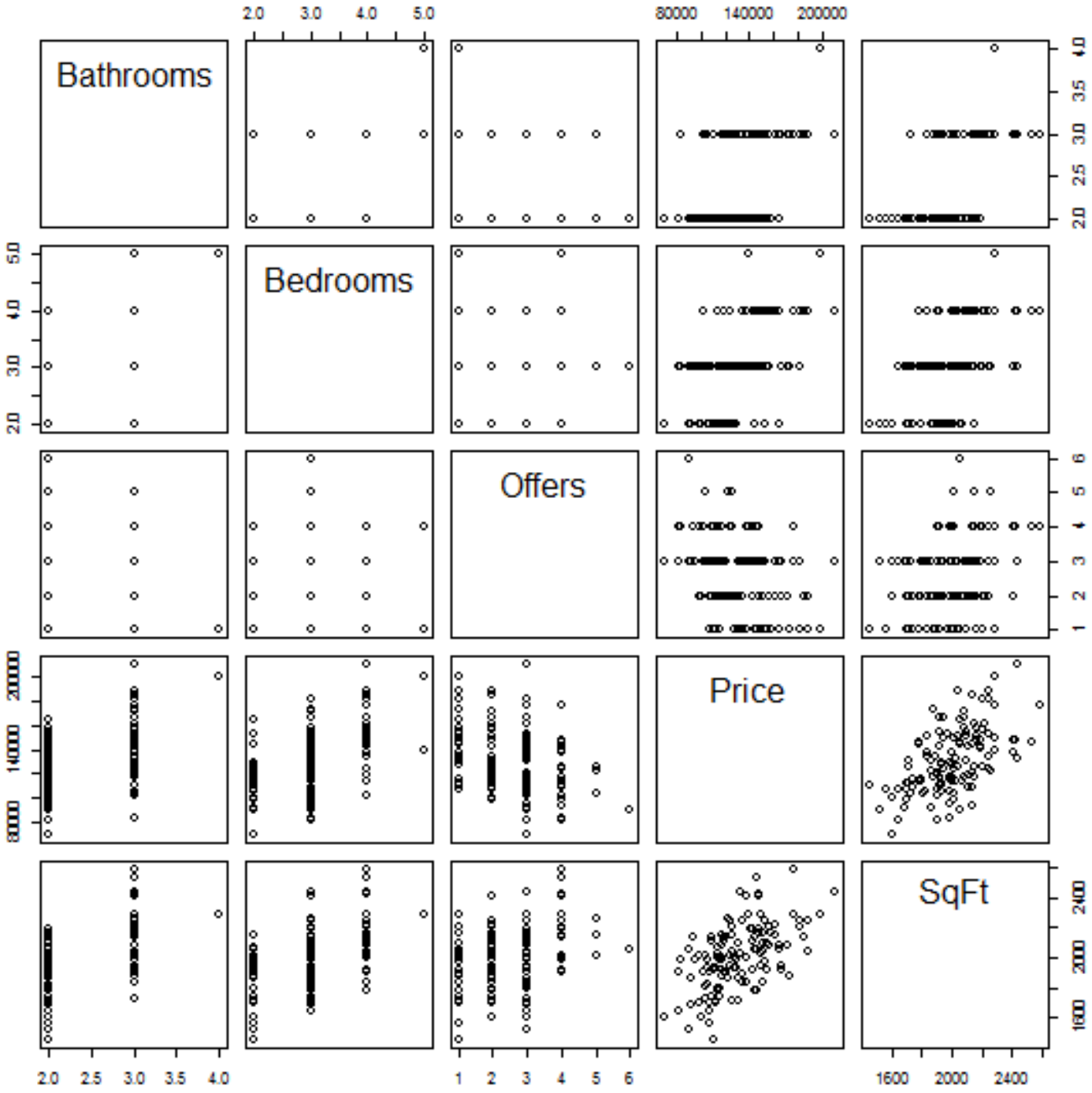

104
15
Price
80000
100000
120000
140000
160000
180000
200000
1600
1800
2000
2200
2400
2600
SqFt

```
 15 104
 15 104
```

```
> scatterplotMatrix(~Bathrooms+Bedrooms+Offers+Price+SqFt | Brick,
+   reg.line=lm, smooth=TRUE, spread=FALSE, span=0.5, id.n=0, diagonal= 'none',
+   by.groups=TRUE, data=Dataset)
```

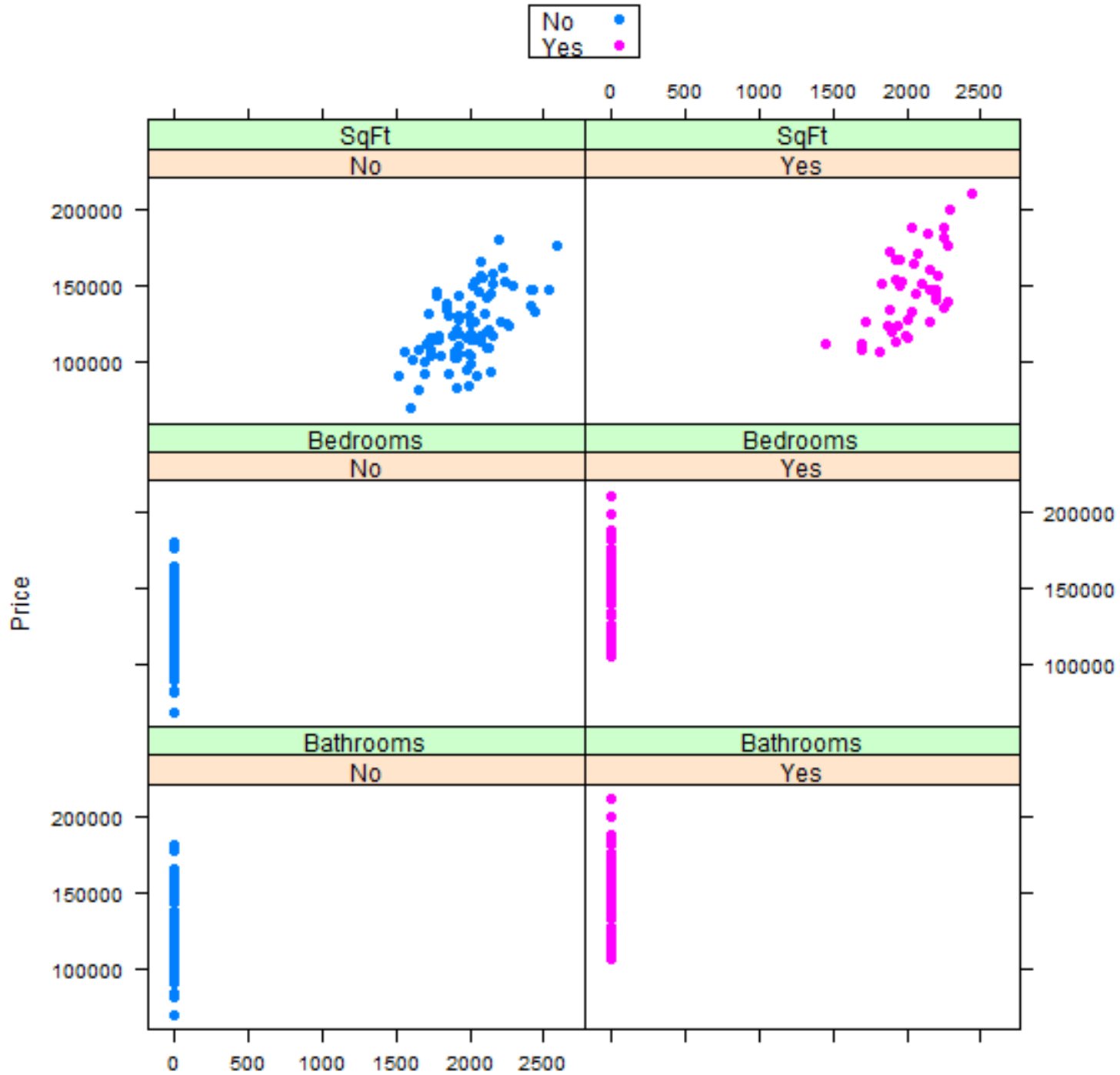

Bathrooms
Bedrooms
Offers
Price
SqFt
No
Yes

```
> scatterplotMatrix(~Bathrooms+Bedrooms+Offers+Price+SqFt, reg.line=FALSE,
+   smooth=FALSE, spread=FALSE, span=0.5, id.n=0, diagonal = 'none',
+   data=Dataset)
```

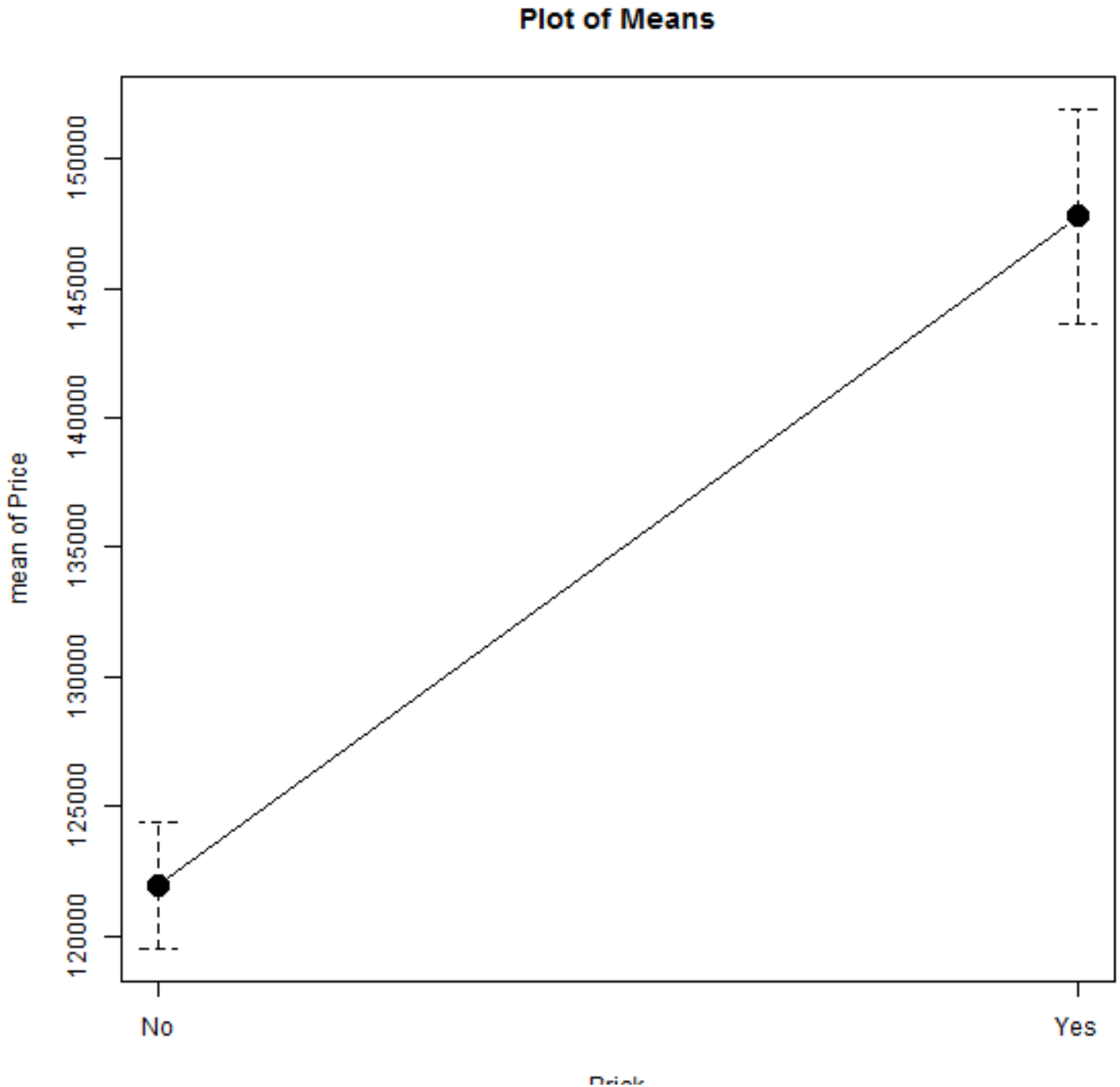

Bathrooms
Bedrooms
Offers
Price
SqFt

```
> library(lattice, pos=19)
```

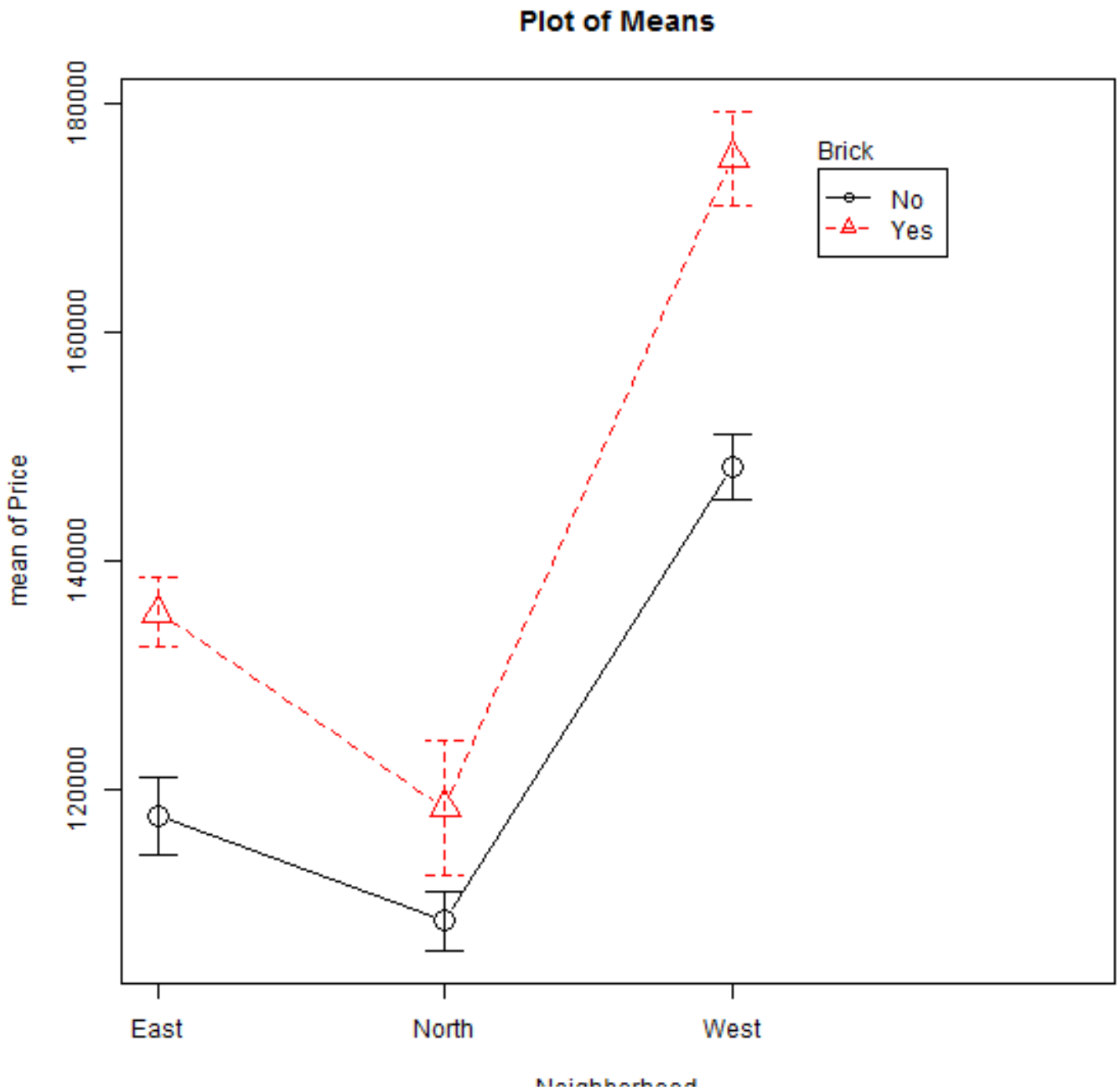
```
> xyplot(Price ~ Bathrooms + Bedrooms + SqFt | Brick, groups=Brick, type="p",
+   pch=16, auto.key=list(border=TRUE), par.settings=simpleTheme(pch=16),
+   scales=list(x=list(relation='same'), y=list(relation='same')), data=Dataset)
```


No
Yes
SqFt
No
SqFt
Yes
Bedrooms
No
Bedrooms
Yes
Bathrooms
No
Bathrooms
Yes
Price
0
500
1000
1500
2000
2500
100000
150000
200000

```
> with(Dataset, plotMeans(Price, Brick, error.bars="se"))
```


Plot of Means
mean of Price
120000
125000
130000
135000
140000
145000
150000
No
Yes

```
> with(Dataset, plotMeans(Price, Neighborhood, Brick, error.bars="se"))
```


Plot of Means
mean of Price
120000
140000
160000
180000
East
North
West
Brick
No
Yes