R을 이용한 데이터 분석

4주차 실습

20185109 길홍배

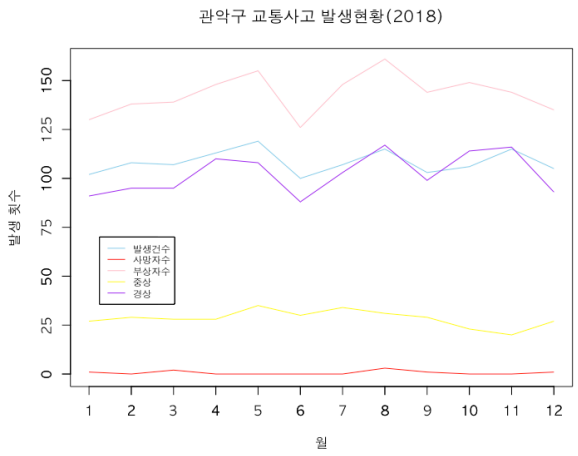
실습 1

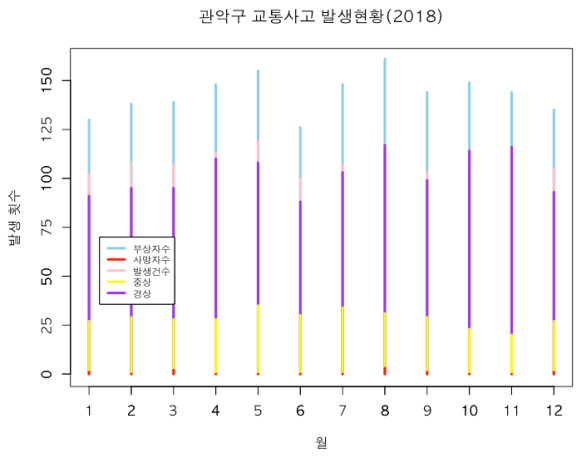
(1) 데이터 설정

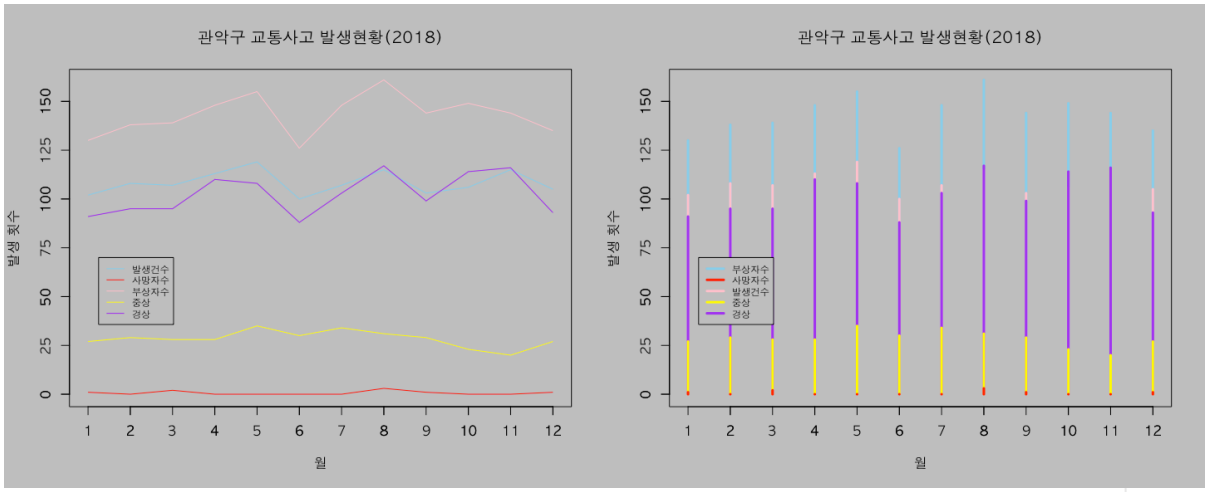
```
data <- read.csv("/Users/chr1s0/desktop/2022-1/R/week4/src/data(2018).csv")
df_1 <- data %>% filter(시군구 == "관악구") %>% select(발생건수, 사망자수, 부상자수, 중상, 경상)
count <- df_1$발생건수
death_count <- df_1$사망자수
injury_count <- df_1$부상자수
serious_count <- df_1$중상
slight_count <- df_1$경상
colors <- c("skyblue", "red", "pink", "yellow", "purple")
month <- c(1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12)
month <- paste(month, "월")
mdf_1 <- as.matrix(df_1)
df_1_colsum <- colSums(df_1)
```

(2) 데이터 출력

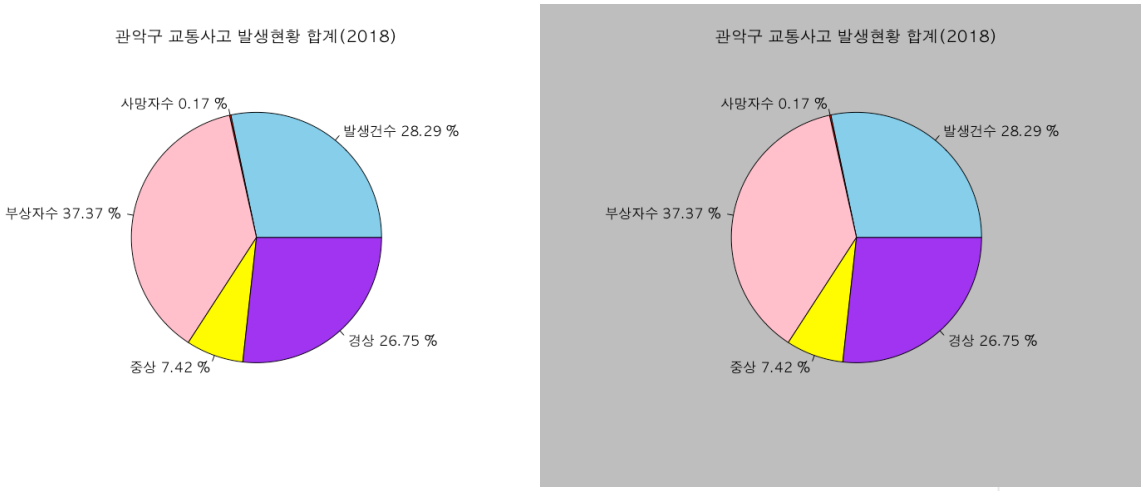
```
plot(month, count, type="l", xlab="월", ylab="발생 횟수",
     main="관악구 교통사고 발생현황(2018)", col="skyblue", ylim=c(0, 160))
par(new="T")
lines(death_count, col="red")
lines(injury_count, col="pink")
lines(serious_count, col="yellow")
lines(slight_count, col="purple")
axis(side=1, at=seq(1, 12, by=1))
axis(side=2, at=seq(0, 150, by=25))
legend(1.25, 70, label, cex=0.7, lty=1, col=colors)
```



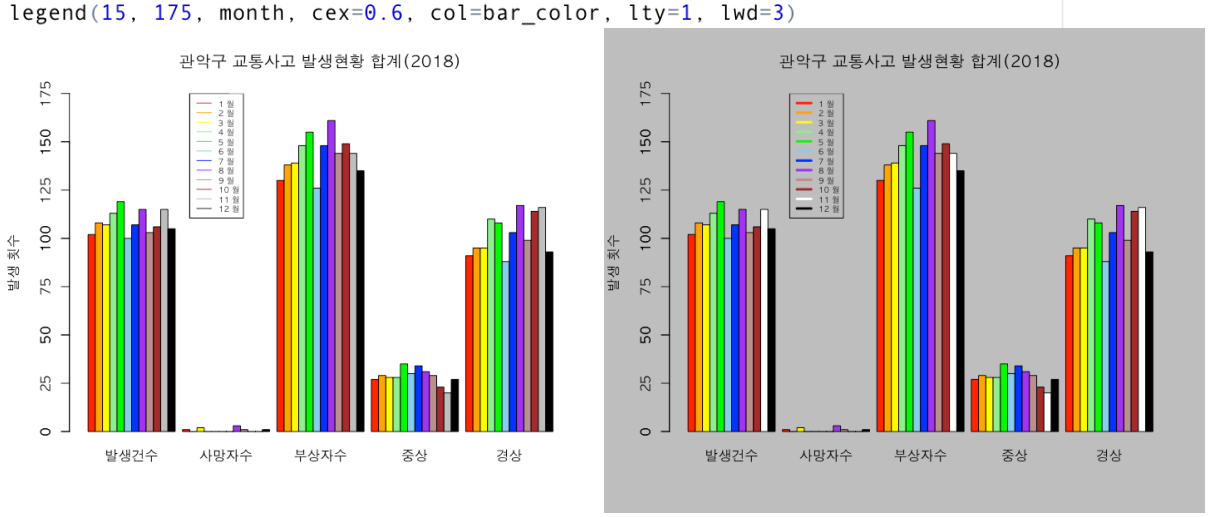


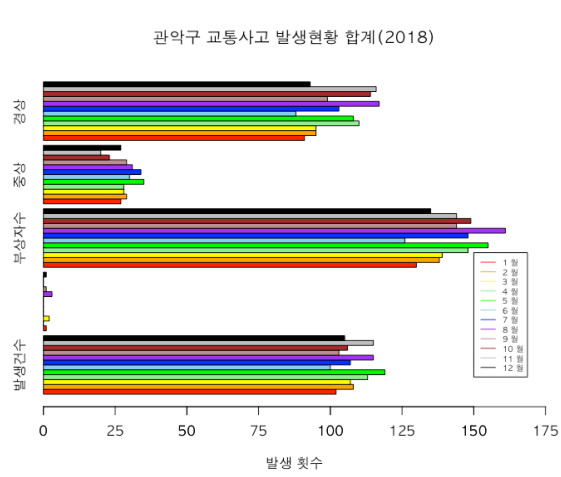


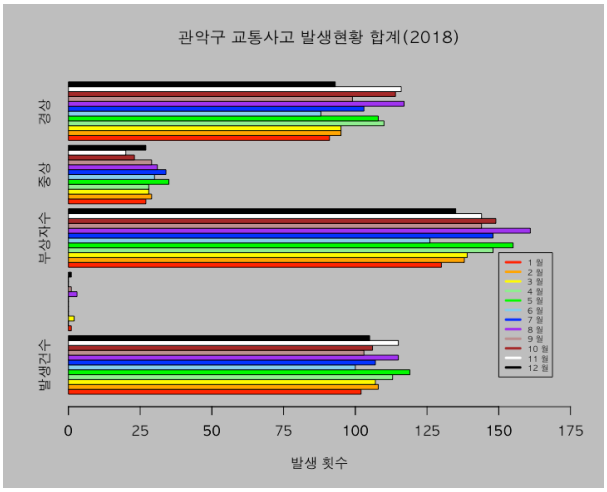

```
pct <- round(df_1_colsum/sum(df_1_colsum)*100, 2)
label <- c("발생건수", "사망자수", "부상자수", "중상", "경상")
label <- paste(label, pct,"%")
pie(df_1_colsum, col=colors, labels=label, main="관악구 교통사고 발생현황 합계(2018)")
```




```
bar_color <- c("red", "orange", "yellow", "lightgreen",
               "green", "skyblue", "blue", "purple", "rosybrown", "brown", "white", "black"
barplot(mdf_1, beside=T, col=bar_color,
        main="관악구 교통사고 발생현황 합계(2018)", ylim=c(0, 175), ylab="발생 횟수")
axis(side=2, at=seq(0, 175, by=25))
legend(15, 175, month, cex=0.6, col=bar_color, lty=1, lwd=3)
```







실습 2

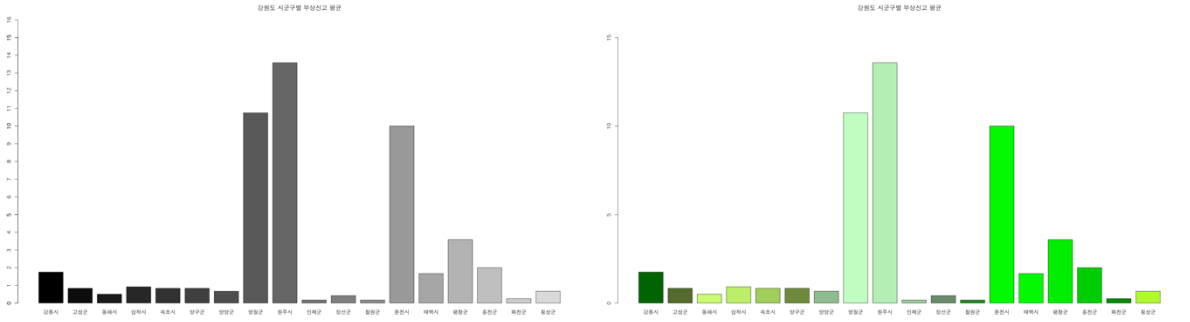
(1) 데이터 설정

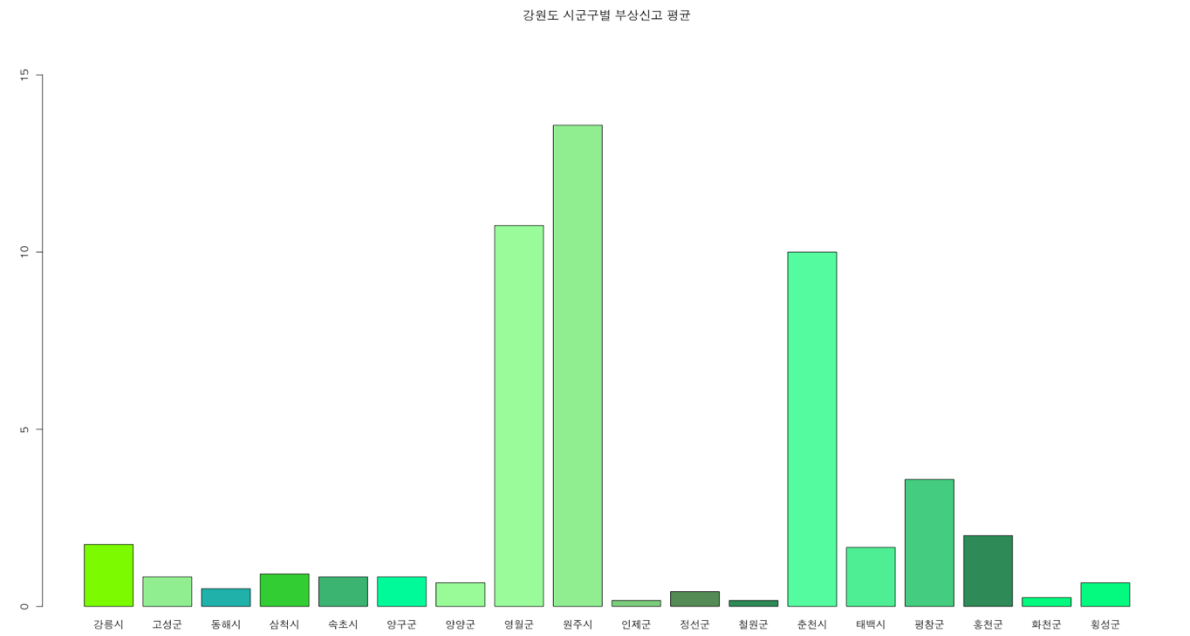
```
t2_data <- read.csv("/Users/chr1s0/desktop/2022-1/R/week4/src/data(2018).csv")
df_2 <- subset(t2_data, 시도=="강원", select=c("시군구", "부상신고"))
df_2_mean <- df_2 %>% group_by(시군구) %>% summarise(report_count=mean(부상신고))
mdf_2 <- as.matrix(df_2_mean)


report_count <- df_2_mean$report_count
location <- df_2_mean$시군구
gray_colors <-
c("gray0", "gray5"
  ,"gray10", "gray15"
  ,"gray20", "gray25"
  ,"gray30", "gray35"
  ,"gray40", "gray45"
  ,"gray50", "gray55"
  ,"gray60", "gray65"
  ,"gray70", "gray75"
  ,"gray80", "gray85")
green_colors <-
c("darkgreen", "darkolivegreen"
  ,"darkolivegreen1", "darkolivegreen2"
  ,"darkolivegreen3", "darkolivegreen4"
  ,"darkseagreen", "darkseagreen1"
  ,"darkseagreen2", "darkseagreen3"
  ,"darkseagreen4", "forestgreen"
  ,"green", "green1"
  ,"green2", "green3"
  ,"green4", "greenyellow")
```

```
green_colors_2 <-
c("lawngreen", "lightgreen"
  ,"lightseagreen", "limegreen"
  ,"mediumseagreen", "mediumspringgreen"
  ,"palegreen", "palegreen1"
  ,"palegreen2", "palegreen3"
  ,"palegreen4", "seagreen"
  ,"seagreen1", "seagreen2"
  ,"seagreen3", "seagreen4"
  ,"springgreen", "springgreen1")
```

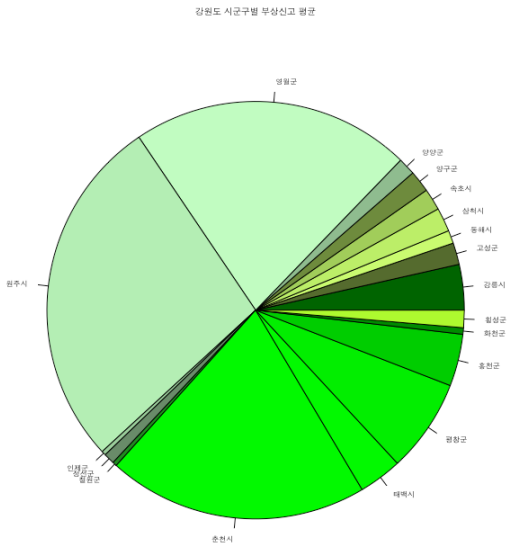
(2) 데이터 출력

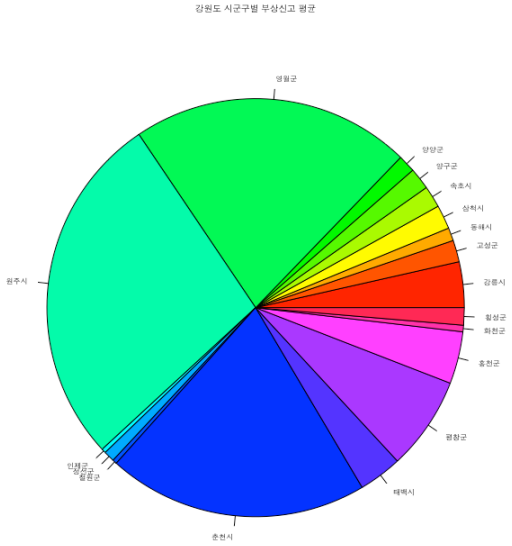
```
barplot(report_count, names.arg=location,
        main="강원도 시군구별 부상신고 평균", col=green_colors_2, ylim=c(0, 16))
axis(side=2, at=seq(0, 16, by=1))
```



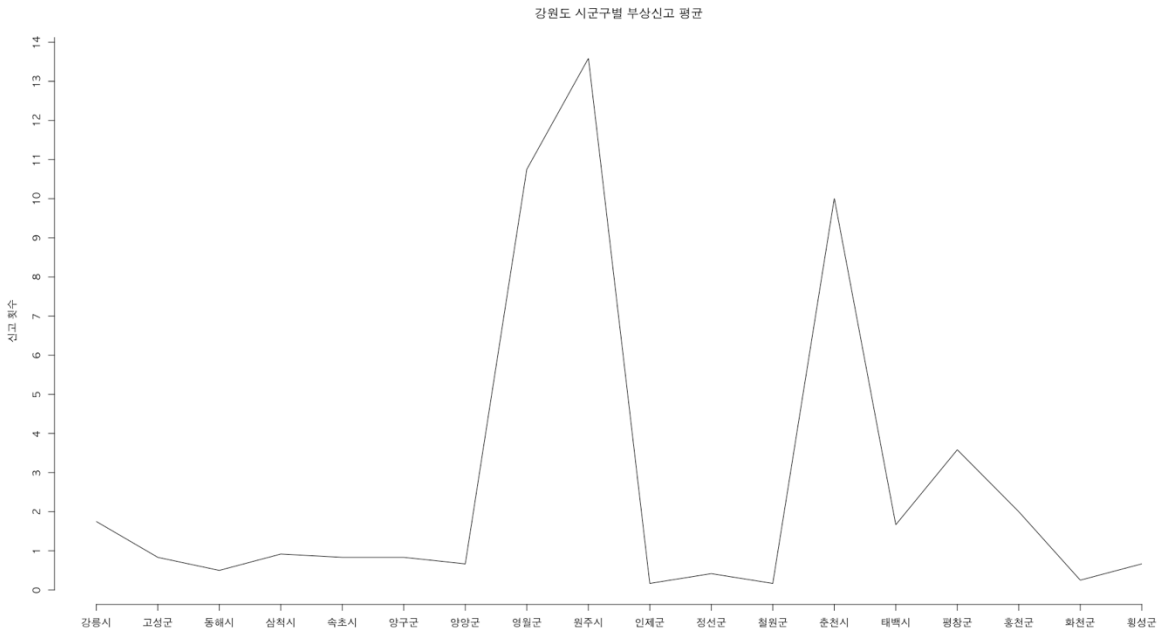


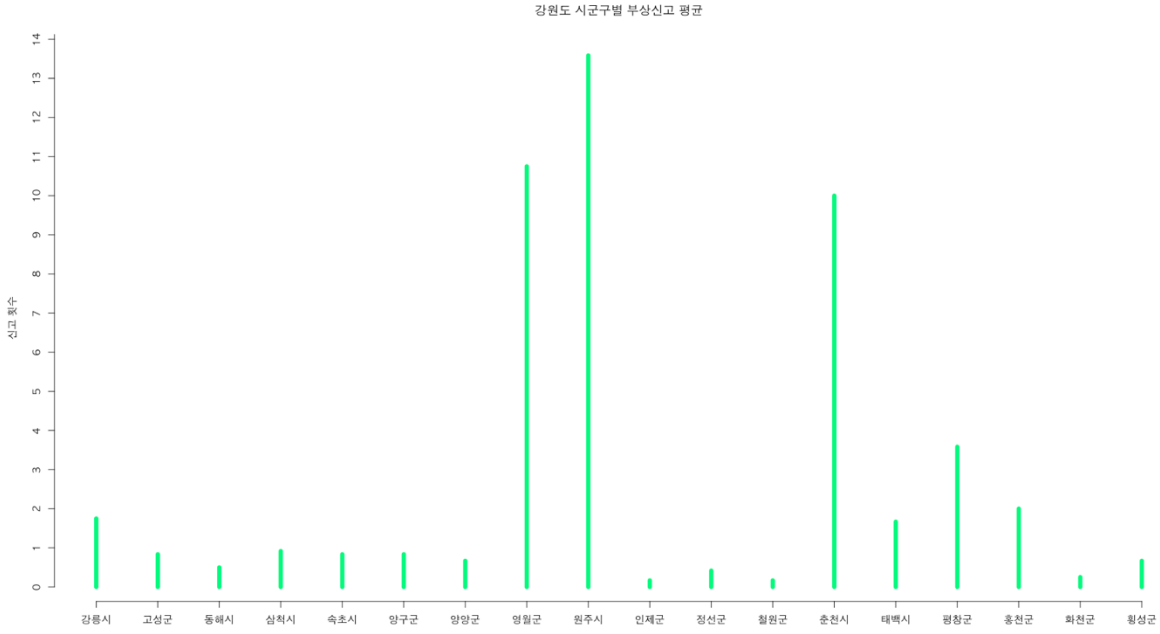

```
pie(report_count, location, main="강원도 시군구별 부상신고 평균", col=rainbow(18))
```

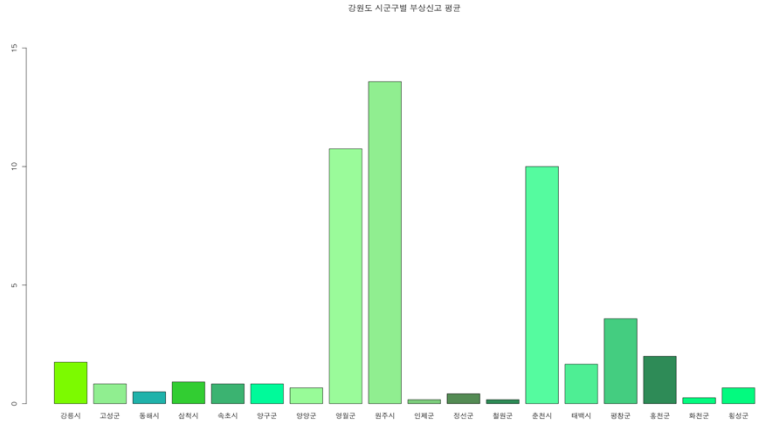





```
plot(report_count, axes=FALSE, type="p", main="강원도 시군구별 부상신고 평균",
     xlab="", ylab="신고 횟수", lwd=7, col="orangered")
axis(side=1, at=1:18, labels=location)
axis(side=2, at=0:16)
```


강원도 시군구별 부상신고 평균
신고 횟수
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
강릉시
고성군
동해시
삼척시
속초시
양구군
양양군
영월군
원주시
인제군
정선군
철원군
춘천시
태백시
평창군
홍천군
화천군
횡성군


강원도 시군구별 부상신고 평균
신고 횟수
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
강릉시
고성군
동해시
삼척시
속초시
양구군
양양군
영월군
원주시
인제군
정선군
철원군
춘천시
태백시
평창군
홍천군
화천군
횡성군


강원도 시군구별 부상신고 평균
0
5
10
15
강릉시
고성군
동해시
삼척시
속초시
양구군
양양군
영월군
원주시
인제군
정선군
철원군
춘천시
태백시
평창군
홍천군
화천군
횡성군