# R Plots

In [1]:
```r
library('magrittr')
library('ggmap')
library('ggplot2')
library('usmap')
```

Warning message:
"package 'ggmap' was built under R version 3.6.3"Loading required packag
e: ggplot2
Registered S3 methods overwritten by 'ggplot2':
  method         from
  [.quosures     rlang
  c.quosures     rlang
  print.quosures rlang
Google's Terms of Service: https://cloud.google.com/maps-platform/terms/.
(https://cloud.google.com/maps-platform/terms/.)
Please cite ggmap if you use it! See citation("ggmap") for details.

Attaching package: 'ggmap'

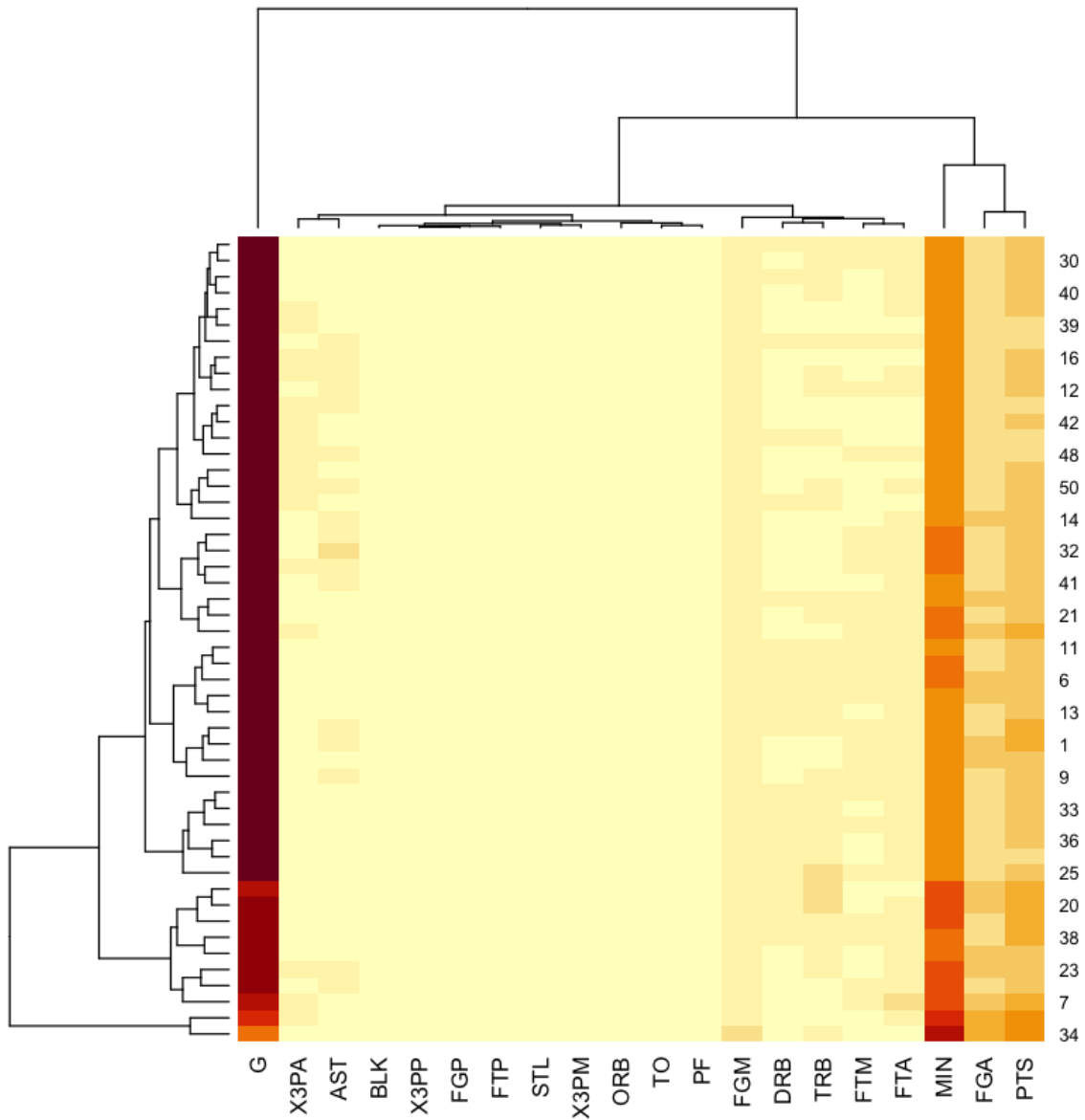The following object is masked from 'package:magrittr':

    inset


In [2]:
```r
costco <- read.csv('costcos-geocoded.csv')
ppg <- read.csv('ppg2008.csv')
costco_sum <- costco %>%
  dplyr::mutate(state = State) %>%
  dplyr::group_by(state) %>%
  dplyr::summarise(store_count = dplyr::n())
```
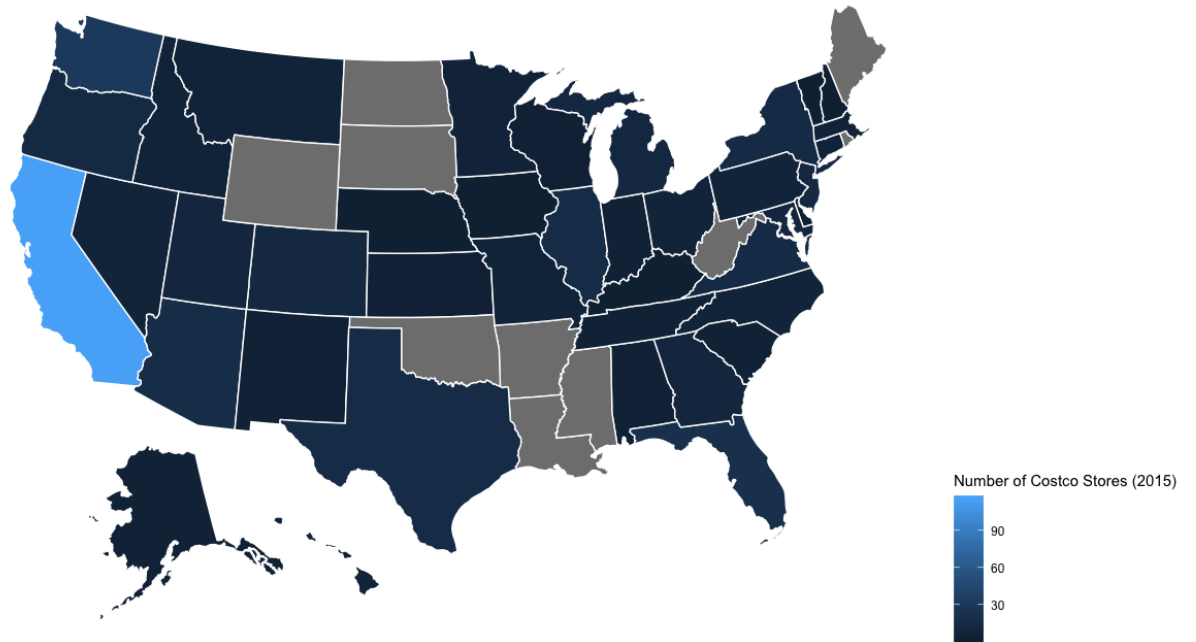
# R- Heat Map

In [3]: # options(repr.plot.width = 10, repr.plot.height = 7)
        heatmap(as.matrix(ppg[,2:ncol(ppg)]))

# R - Spatial Chart

```
In [4]: options(repr.plot.width = 10, repr.plot.height = 7)

plot_usmap(data = costco_sum, values = "store_count", lines = "white") +
    scale_fill_continuous(name = "Number of Costco Stores (2015)", label = sc
    theme(legend.position = "right")
```



Number of Costco Stores (2015)

90

60

30

# R - Contour plot

```r
options(repr.plot.width = 10, repr.plot.height = 7)
ggplot(ppg, aes(x=FTM, y=FTA))+
  theme_bw()+
  geom_point(alpha=0.1, col='red')+
  geom_density2d(color='black')+
  ggtitle('Contour Plot')+
  theme(plot.title = element_text(hjust = 0.5))+
  labs(x='FTM', y='FTA')
```



Contour Plot