Histogram

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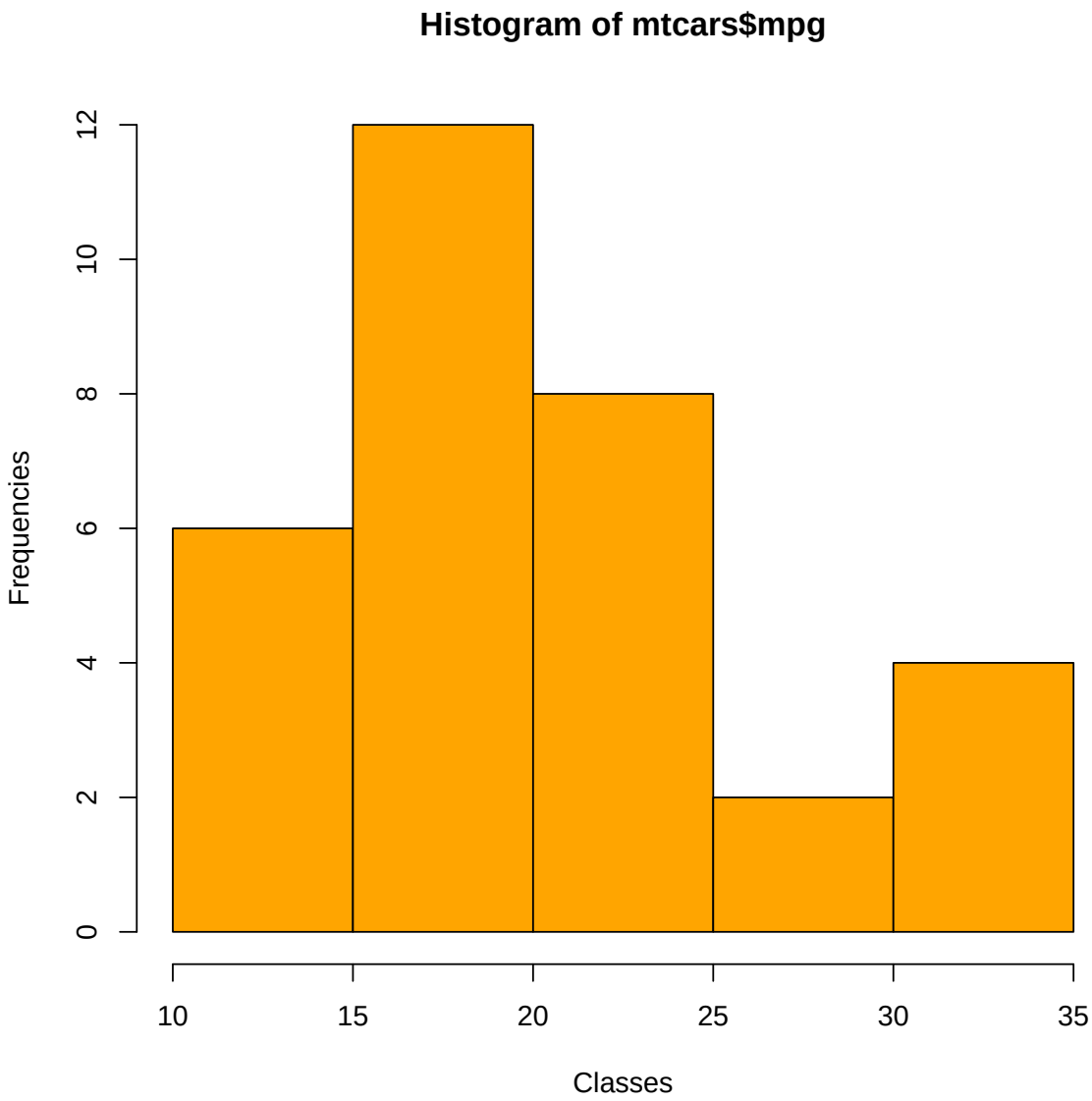
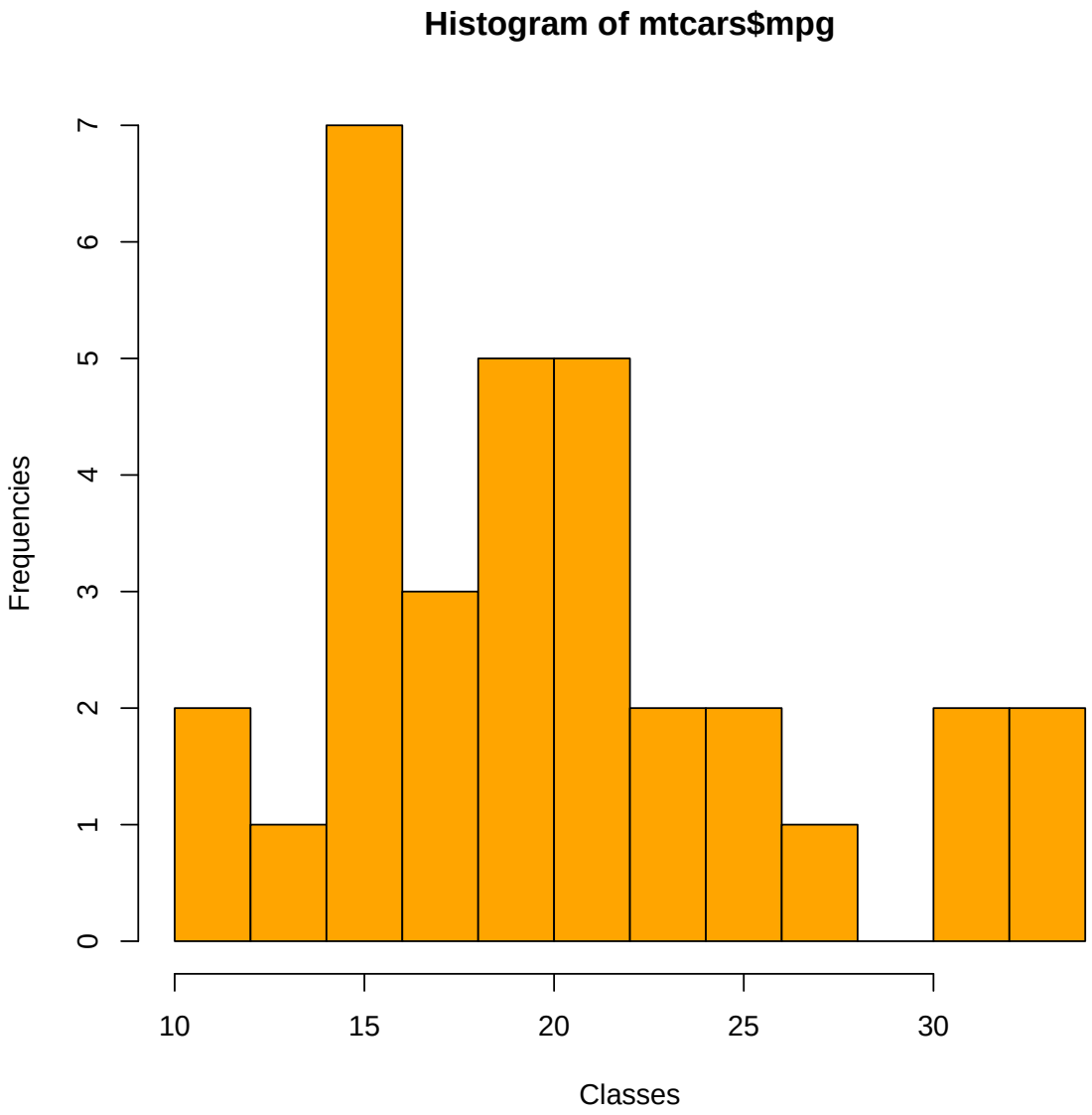
```r
hist(mtcars$mpg,
     xlab = "Classes",
     ylab = "Frequencies",
     col = "orange")
```



• When **breaks** is a number, it denotes the number of classes, i.e. the number of vertical cells in the diagram.

```
hist(mtcars$mpg,
     xlab = "Classes",
     ylab = "Frequencies",
     col = "orange",
     breaks = 10)
```



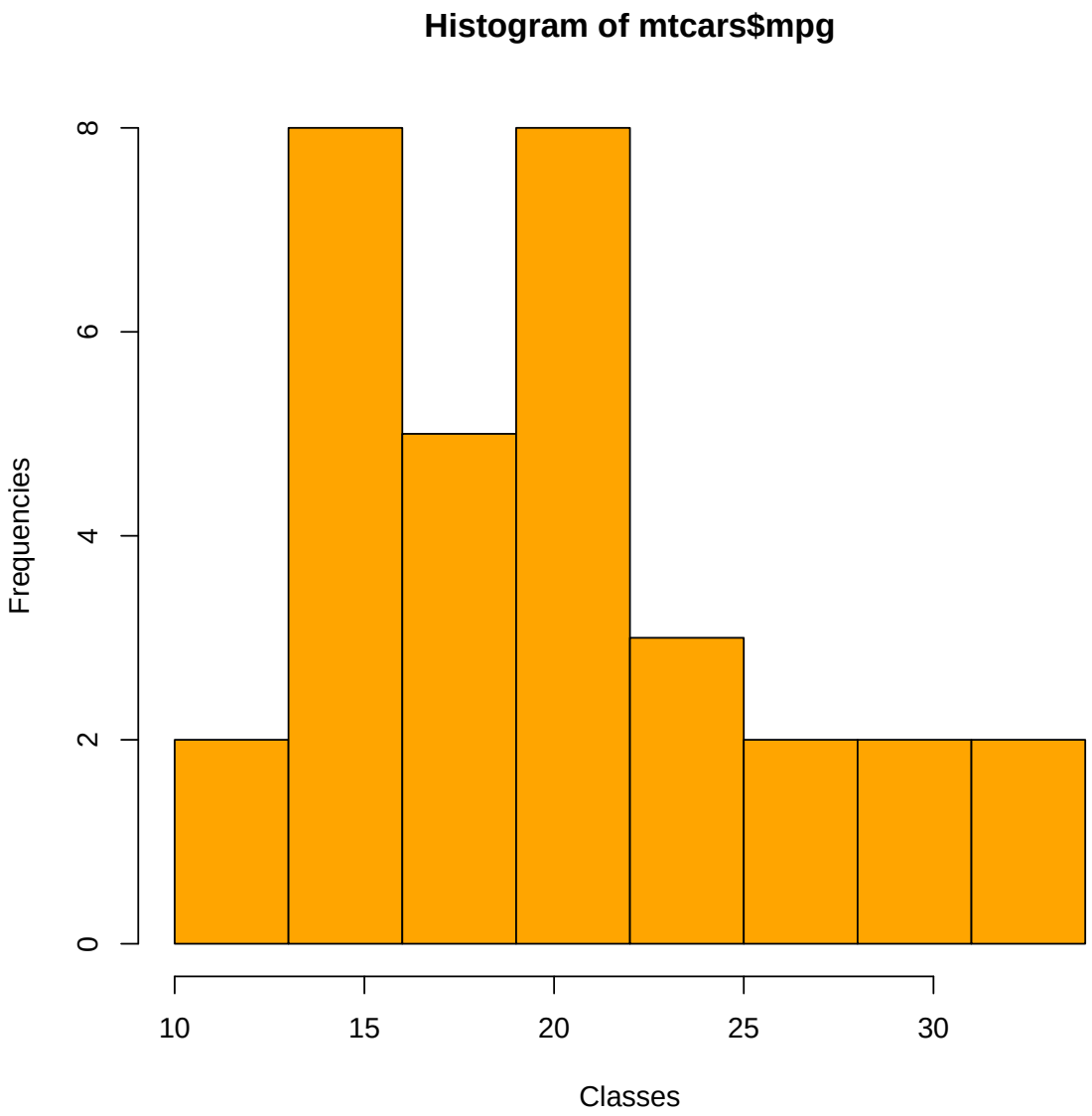
- When **breaks** is a vector, it gives the breakpoints between the histogram cells.

```
range(mtcars$mpg)

## [1] 10.4 33.9

breaks_vector <- seq(from = 10, to = 34, by = 3)

hist(mtcars$mpg,
     xlab = "Classes",
     ylab = "Frequencies",
     col = "orange",
     breaks = breaks_vector)
```

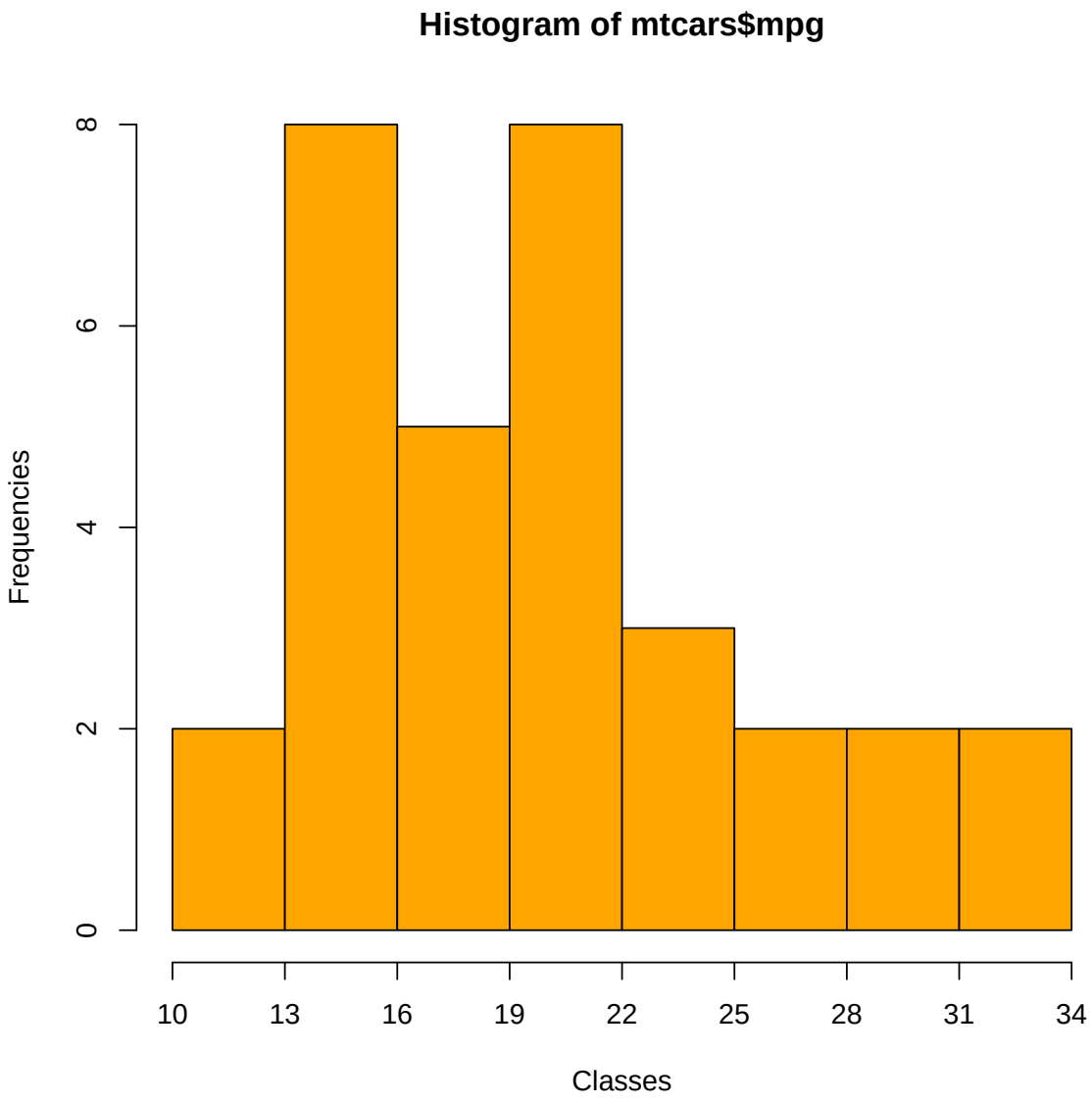


• *xaxp = c(10, 34, 8)* displays 8 equidistant breakpoints in the histogram, starting from 10 up to 34.

xaxt argument and *axis()* function can also be used here.

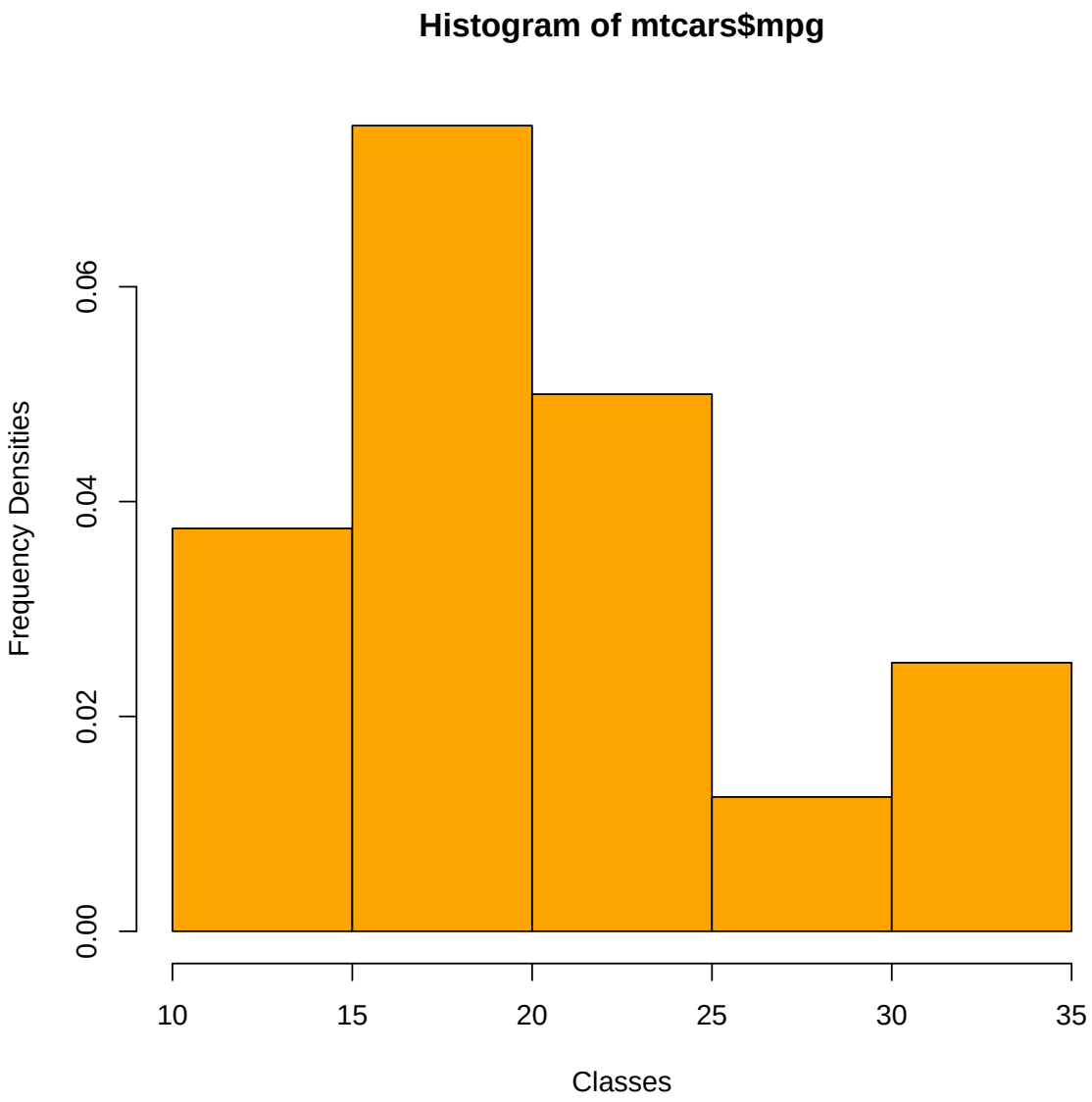
```
breaks_vector <- seq(from = 10, to = 34, by = 3)

hist(mtcars$mpg,
     xlab = "Classes",
     ylab = "Frequencies",
     col = "orange",
     breaks = breaks_vector,
     xaxp = c(10, 34, 8))
```

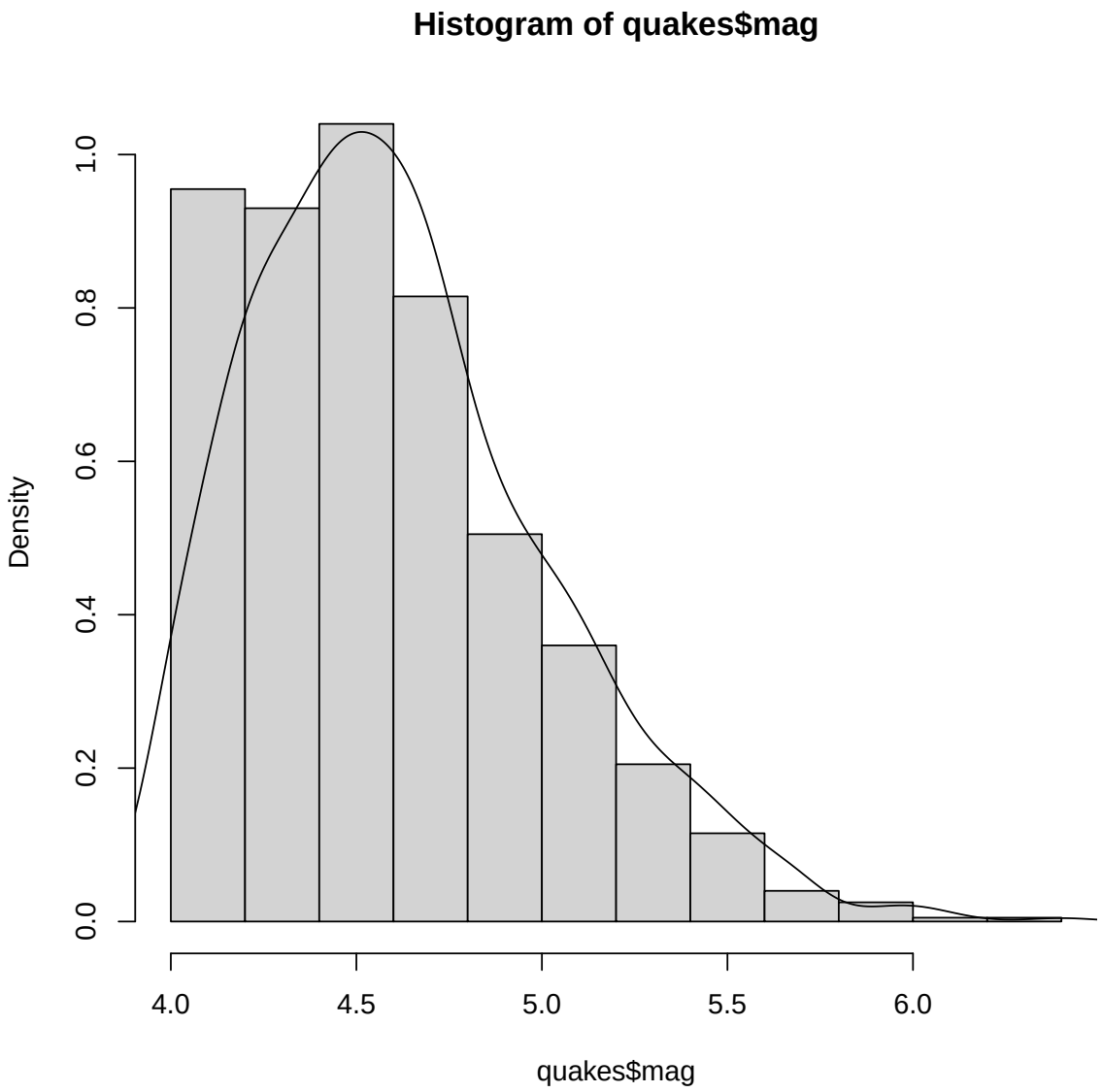


- Histogram with frequency density

```
hist(mtcars$mpg,
     xlab = "Classes",
     ylab = "Frequency Densities",
     col = "orange",
     probability = TRUE)
```



```r
hist(quakes$mag, probability = TRUE)
lines(density(quakes$mag))
```



- A plot that resembles a “discrete histogram” :

```
plot(table(airquality$Temp),
     type = "h",
     lwd = 5,
     xlab = "Temperatures",
     ylab = "Frequencies",
     main = "Frequencies of the Temperatures",
     col = "blue")
```