

Dot Plots

Source

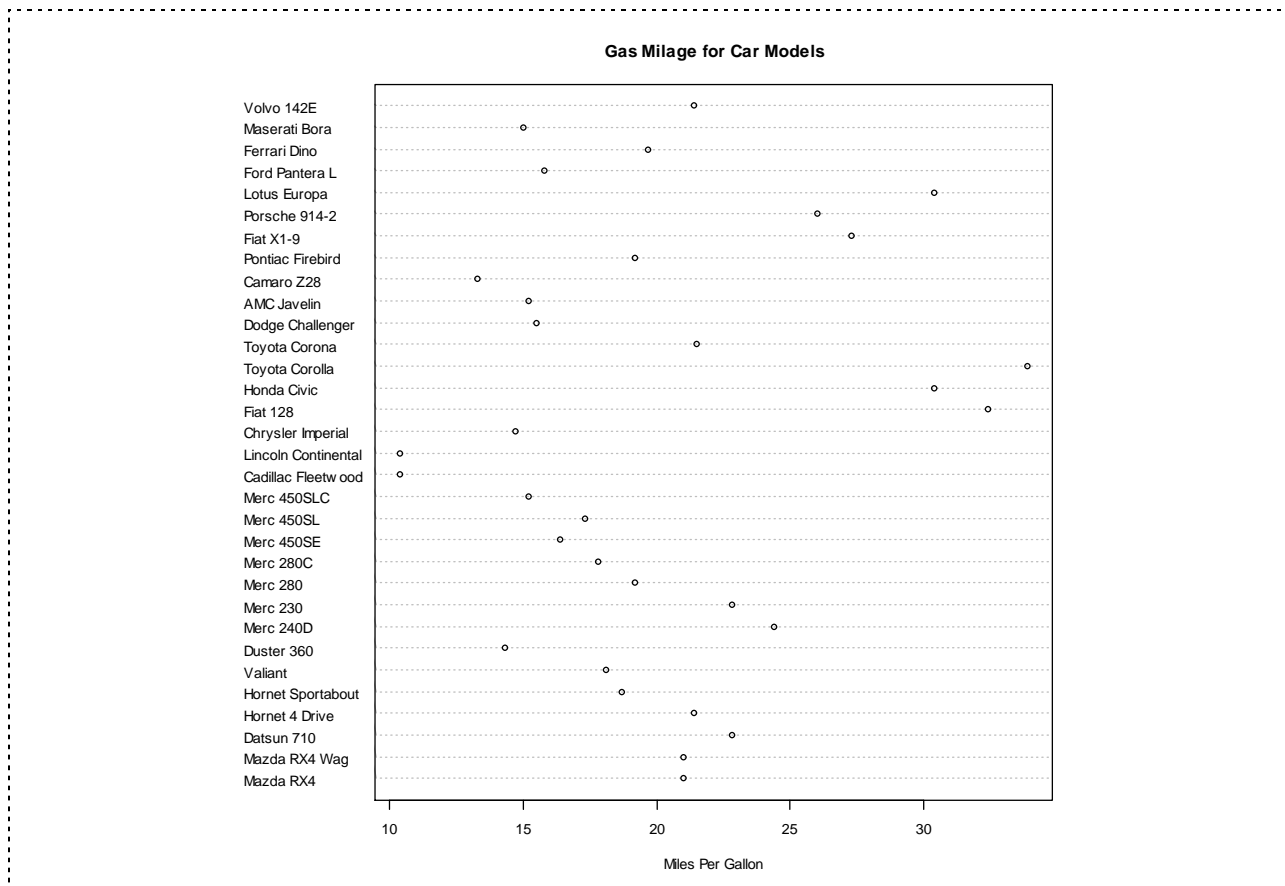
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Background

Create dotplots with the `dotchart(x, labels=)` function, where `x` is a numeric vector and `labels` is a vector of labels for each point. You can add a `groups=` option to designate a factor specifying how the elements of `x` are grouped. If so, the option `gcolor=` controls the color of the groups label. `cex` controls the size of the labels.

Simple Dotplot

```
dotchart(
  mtcars$mpg,
  labels=row.names(mtcars),
  cex=.7,
  main="Gas Milage for Car Models",
  xlab="Miles Per Gallon"
)
```

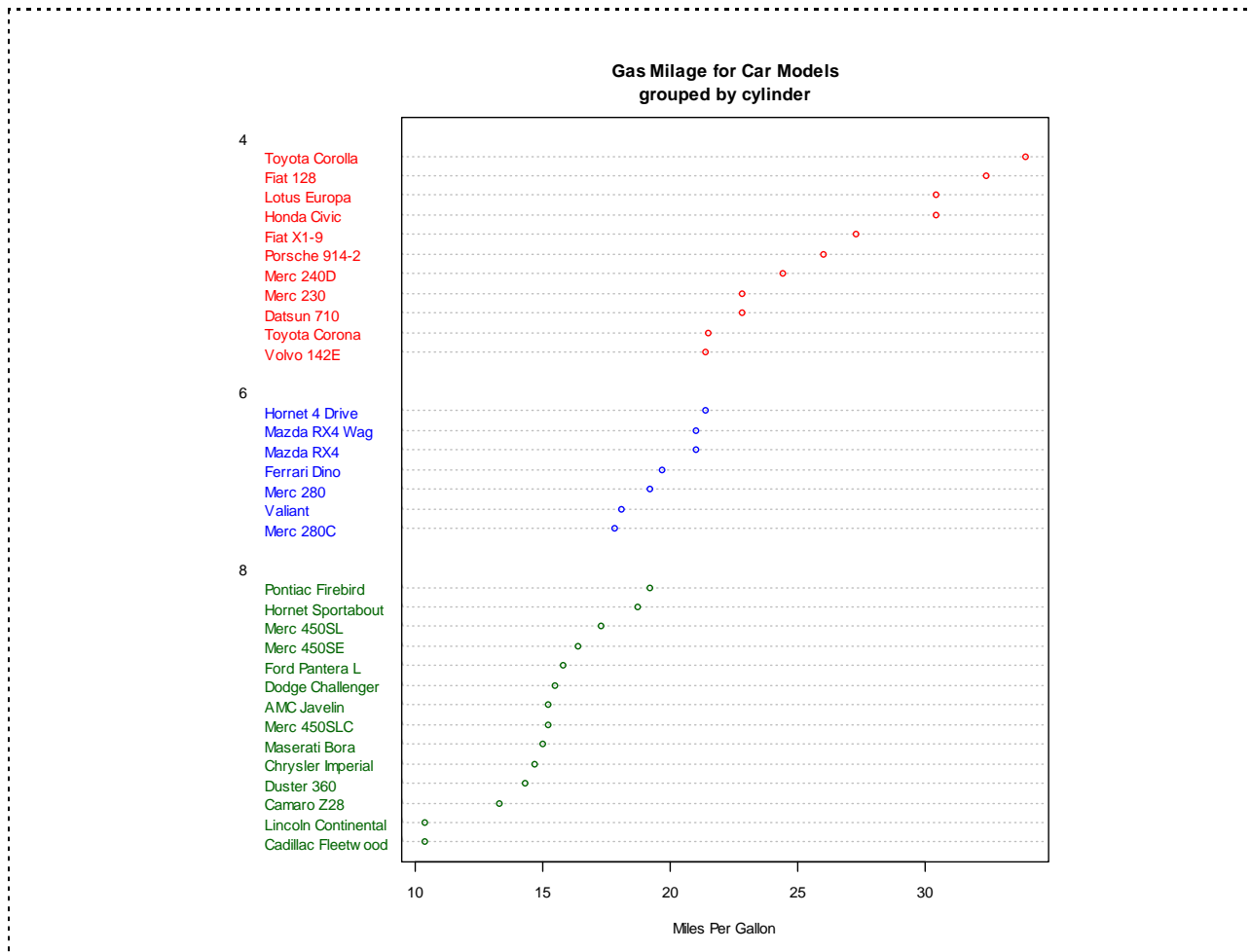


Dotplot: Grouped Sorted by mpg and Colored by Cylinder

```
# sort by mpg
x <- mtcars[order(mtcars$mpg),]

# it must be a factor
x$cyl <- factor(x$cyl)
x$color[x$cyl==4] <- "red"
x$color[x$cyl==6] <- "blue"
x$color[x$cyl==8] <- "darkgreen"

dotchart(
  x$mpg,
  labels=row.names(x),
  cex=.7,groups= x$cyl,
  main="Gas Milage for Car Models\ngrouped by cylinder",
  xlab="Miles Per Gallon",
  gcolor="black",
  color=x$color
)
```



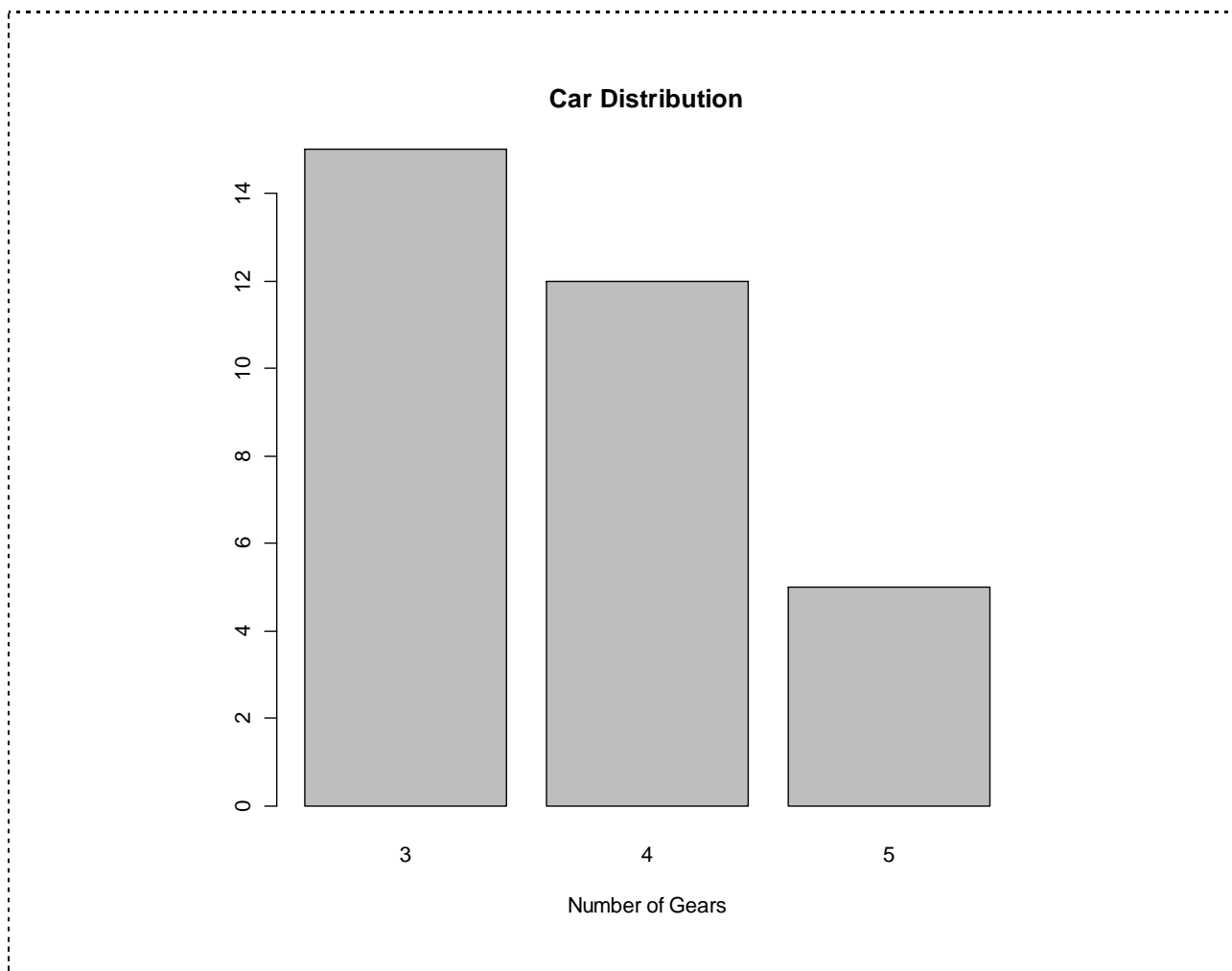
Bar Plots

Create barplots with the `barplot(height)` function, where `height` is a vector or matrix. If `height` is a vector, the values determine the heights of the bars in the plot. If `height` is a matrix and the option `beside=FALSE` then each bar of the plot corresponds to a column of `height`, with the values in the column giving the heights of stacked "sub-bars". If `height` is a matrix and `beside=TRUE`, then the values in each column are juxtaposed rather than stacked. Include option `names.arg=(character vector)` to label the bars. The option `horiz=TRUE` to create a horizontal barplot.

Simple Bar Plot

```
counts <- table(mtcars$gear)
```

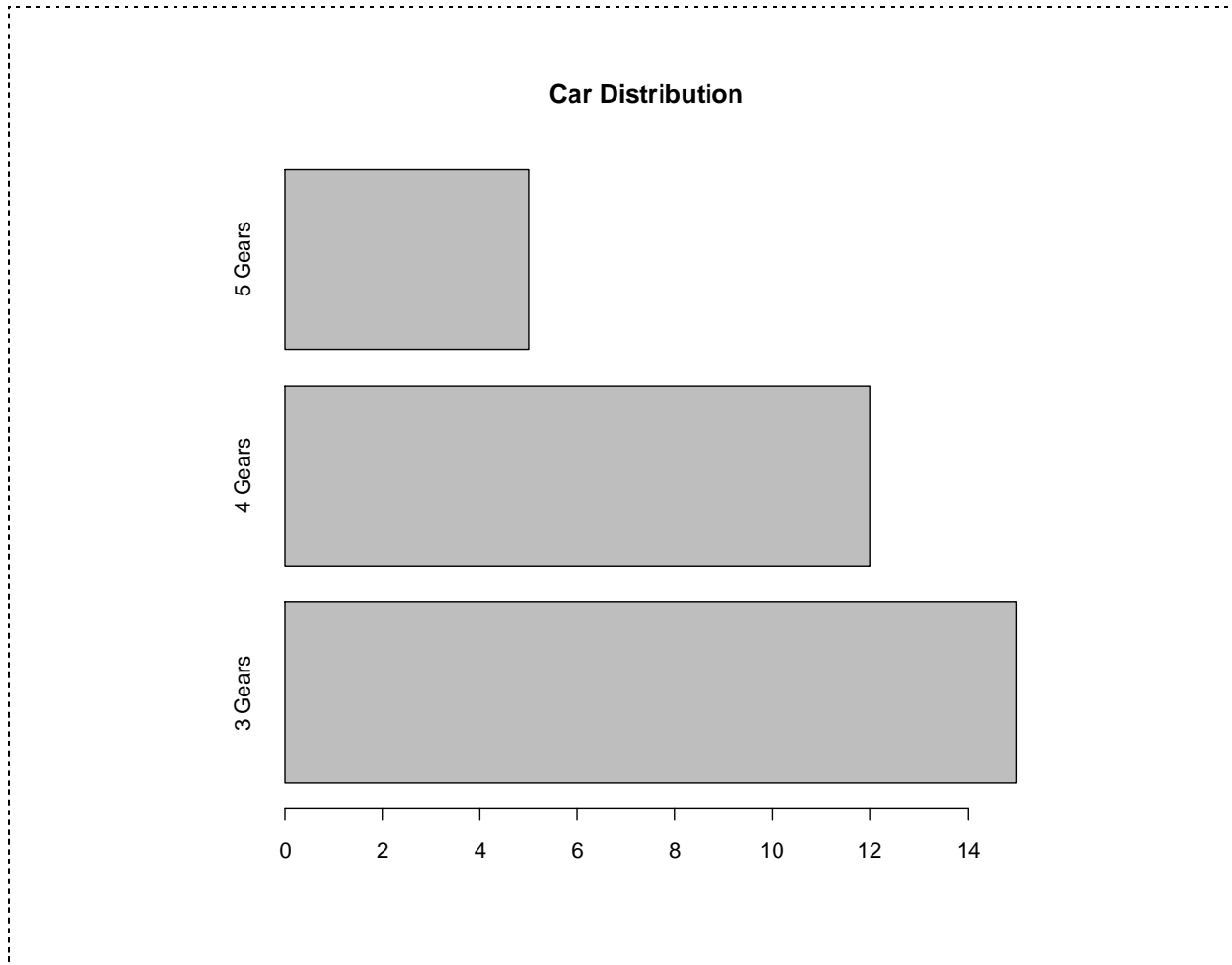
```
barplot(
  counts,
  main="Car Distribution",
  xlab="Number of Gears"
)
```



Simple Horizontal Bar Plot with Added Labels

```
counts <- table(mtcars$gear)

barplot(
  counts,
  main="Car Distribution",
  horiz=TRUE,
  names.arg=c("3 Gears", "4 Gears", "5 Gears")
)
```

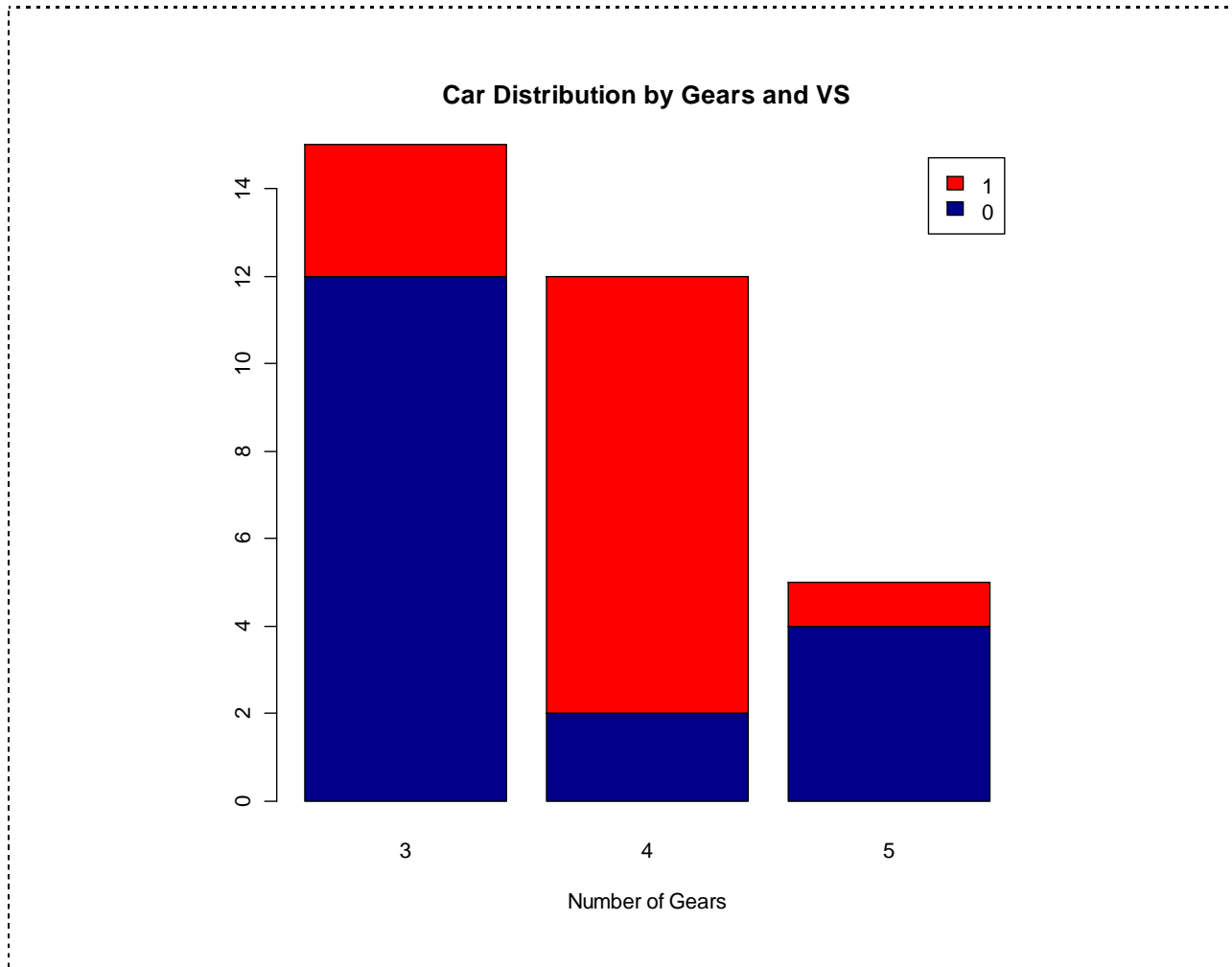


Stacked Bar Plot with Colors and Legend

```
counts <- table(mtcars$vs, mtcars$gear)

barplot(
  counts,
  main="Car Distribution by Gears and VS",
  xlab="Number of Gears",
  col=c("darkblue","red"),
  legend = rownames(counts)
)
```

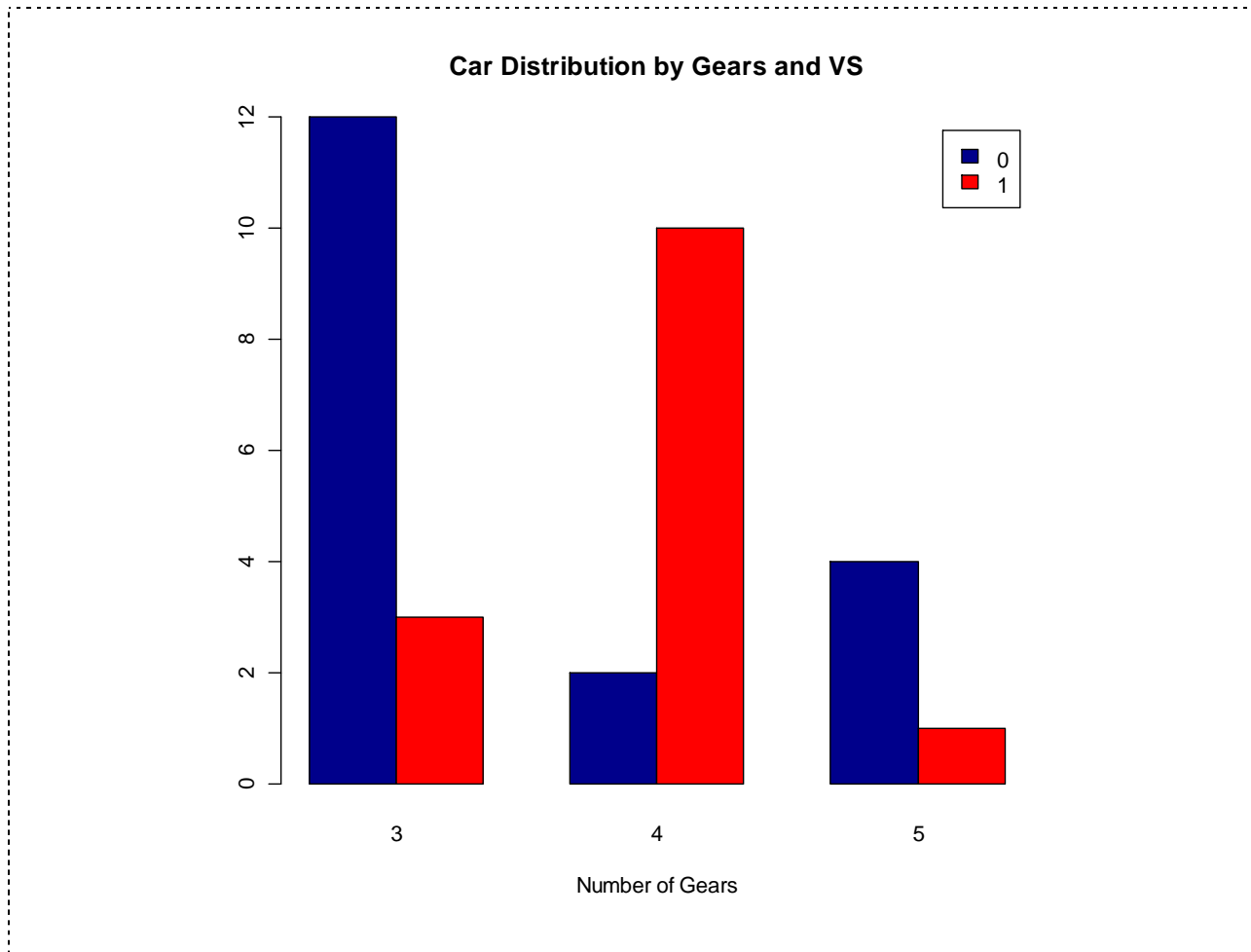
)



Grouped Bar Plot

```
counts <- table(mtcars$vs, mtcars$gear)

barplot(
  counts,
  main="Car Distribution by Gears and VS",
  xlab="Number of Gears",
  col=c("darkblue","red"),
  legend = rownames(counts),
  beside=TRUE
)
```



Notes

Bar plots need not be based on counts or frequencies. You can create bar plots that represent means, medians, standard deviations, etc. Use the `aggregate()` function and pass the results to the `barplot()` function.

With many bars, bar labels may start to overlap. You can decrease the font size using the `cex=` option. Values smaller than one will shrink the size of the label.

By default, the categorical axis line is suppressed. Include the option `axis.lty=1` to draw it.