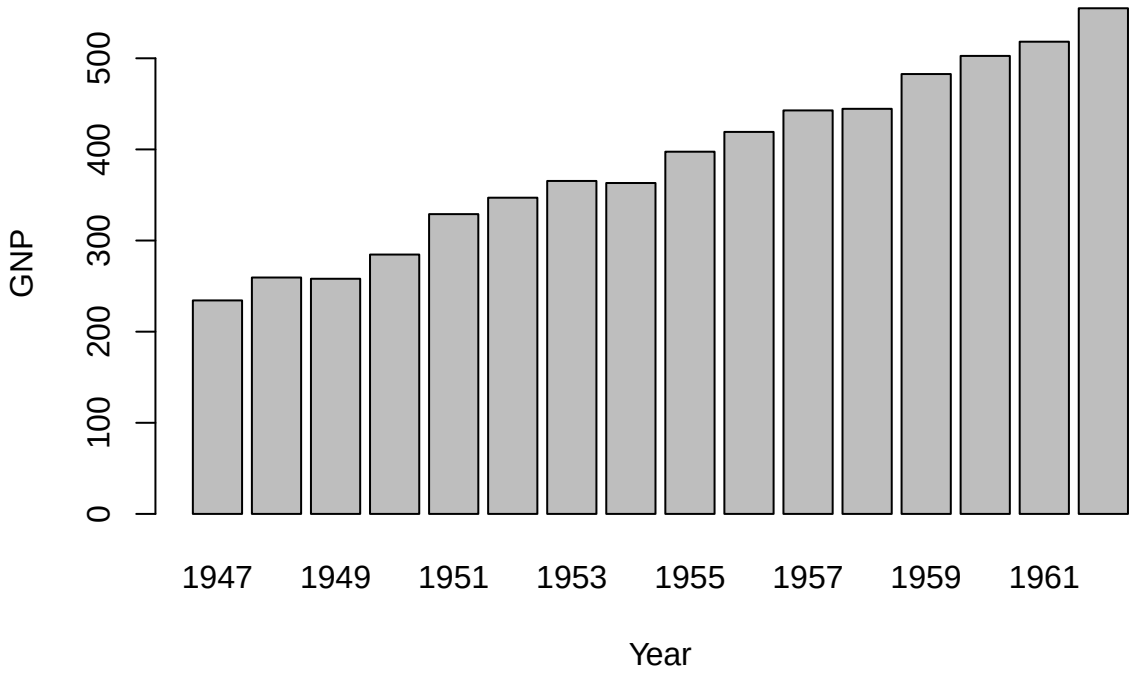
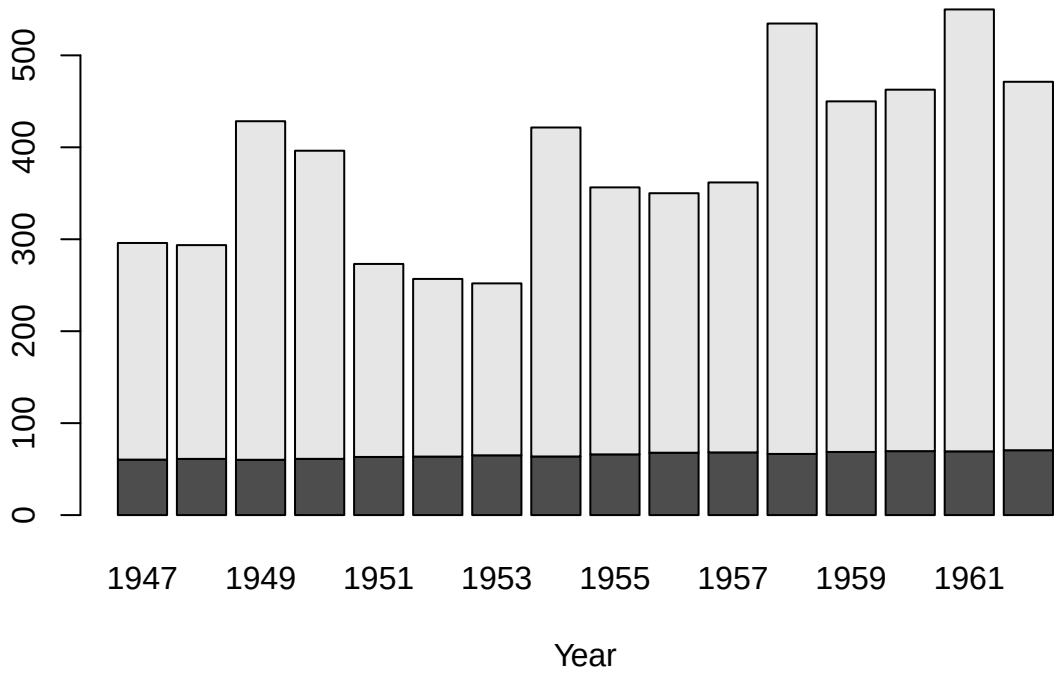
BAR

```
example("barplot")
```

```
##
## barplt> # Formula method
## barplt> barplot(GNP ~ Year, data = longley)
```

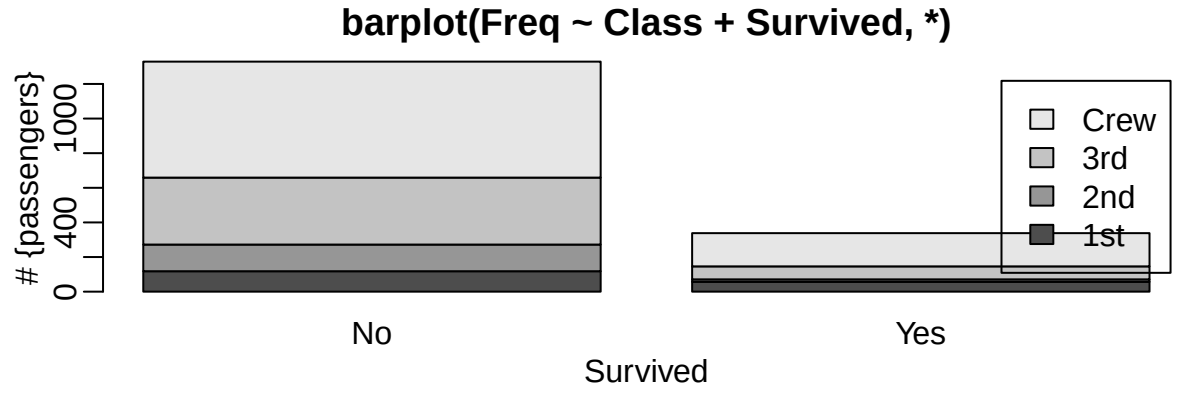


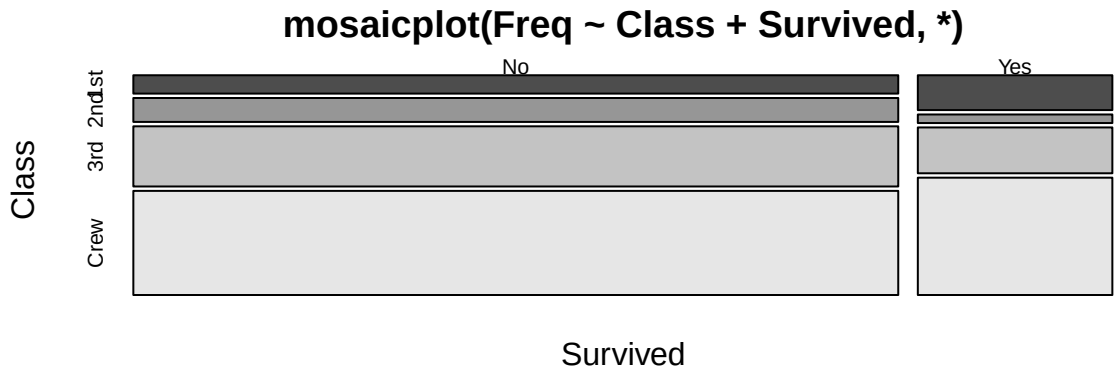

```
##
## barplt> barplot(cbind(Employed, Unemployed) ~ Year, data = longley)
```



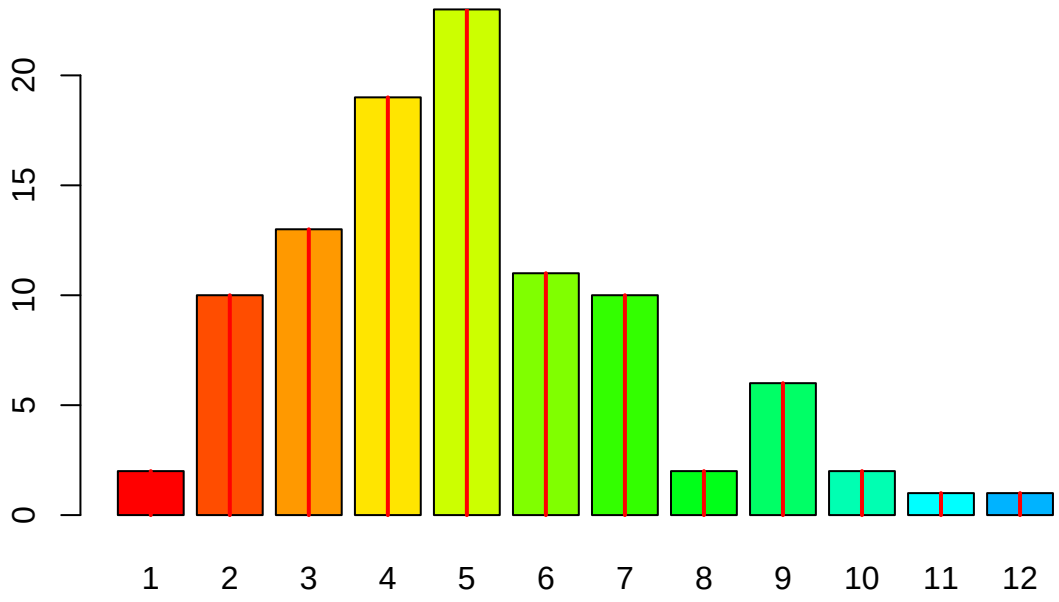

```
##
## barplt> ## 3rd form of formula - 2 categories :
## barplt> op <- par(mfrow = 2:1, mgp = c(3,1,0)/2, mar = .1+c(3,3:1))
##
## barplt> summary(d.Titanic <- as.data.frame(Titanic))
##   Class       Sex         Age     Survived      Freq
##  1st :8   Male  :16   Child:16   No :16   Min.   :  0.00
##  2nd :8   Female:16   Adult:16   Yes:16   1st Qu.:  0.75
##  3rd :8                                  Median : 13.50
##  Crew:8                                  Mean   : 68.78
##                                          3rd Qu.: 77.00
##                                          Max.   :670.00
##
## barplt> barplot(Freq ~ Class + Survived, data = d.Titanic,
## barplt+         subset = Age == "Adult" & Sex == "Male",
## barplt+         main = "barplot(Freq ~ Class + Survived, *)", ylab = "# {passengers}", legend.text =
##
## barplt> # Corresponding table :
## barplt> (xt <- xtabs(Freq ~ Survived + Class + Sex, d.Titanic, subset = Age=="Adult"))
## , , Sex = Male
##
##         Class
## Survived 1st 2nd 3rd Crew
##      No  118 154 387  670
##      Yes  57  14  75  192
##
```

```
## , , Sex = Female
##
##         Class
## Survived 1st 2nd 3rd Crew
##      No    4  13  89    3
##      Yes 140  80  76   20
##
##
## barplt> # Alternatively, a mosaic plot :
## barplt> mosaicplot(xt[,,"Male"], main = "mosaicplot(Freq ~ Class + Survived, *)", color=TRUE)
```

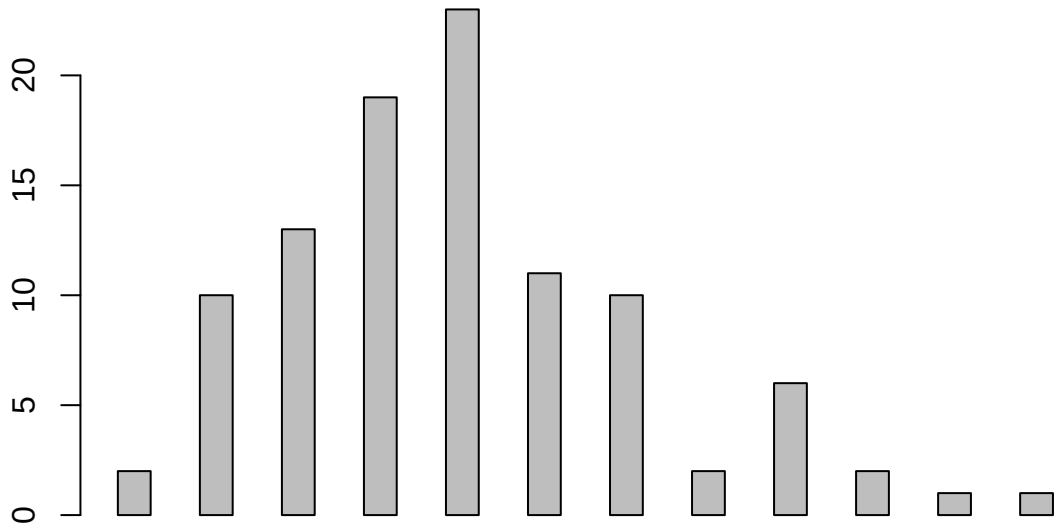





```
##
## barplt> par(op)
##
## barplt> # Default method
## barplt> require(grDevices) # for colours
##
## barplt> tN <- table(Ni <- stats::rpois(100, lambda = 5))
##
## barplt> r <- barplt(tN, col = rainbow(20))
```

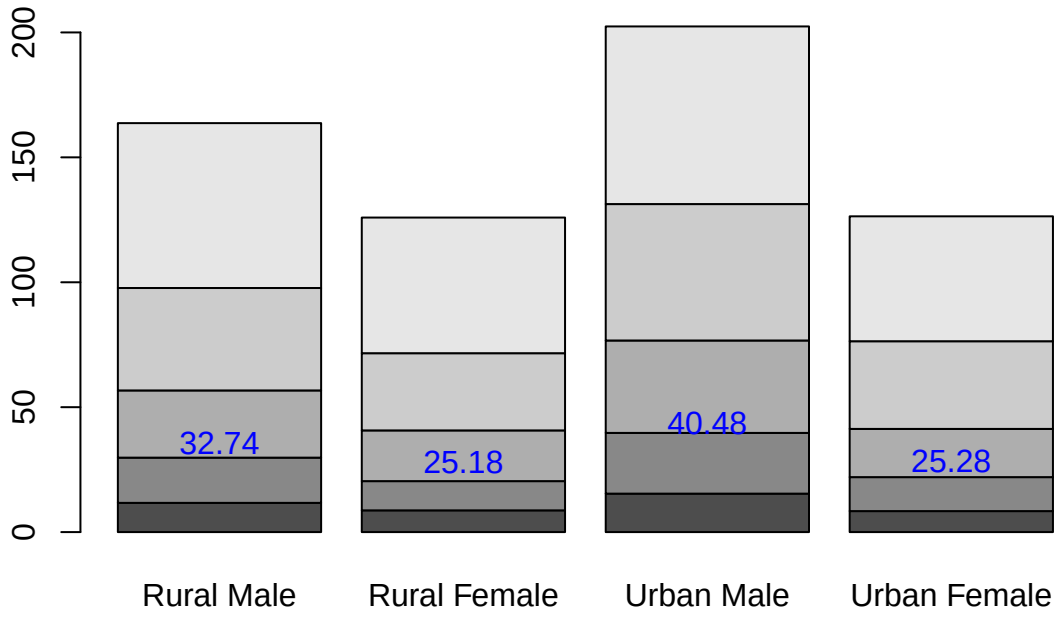



```
##
## barplt> #- type = "h" plotting *is* 'bar'plot
## barplt> lines(r, tN, type = "h", col = "red", lwd = 2)
##
## barplt> barplot(tN, space = 1.5, axisnames = FALSE,
## barplt+         sub = "barplot(..., space= 1.5, axisnames = FALSE)")
```

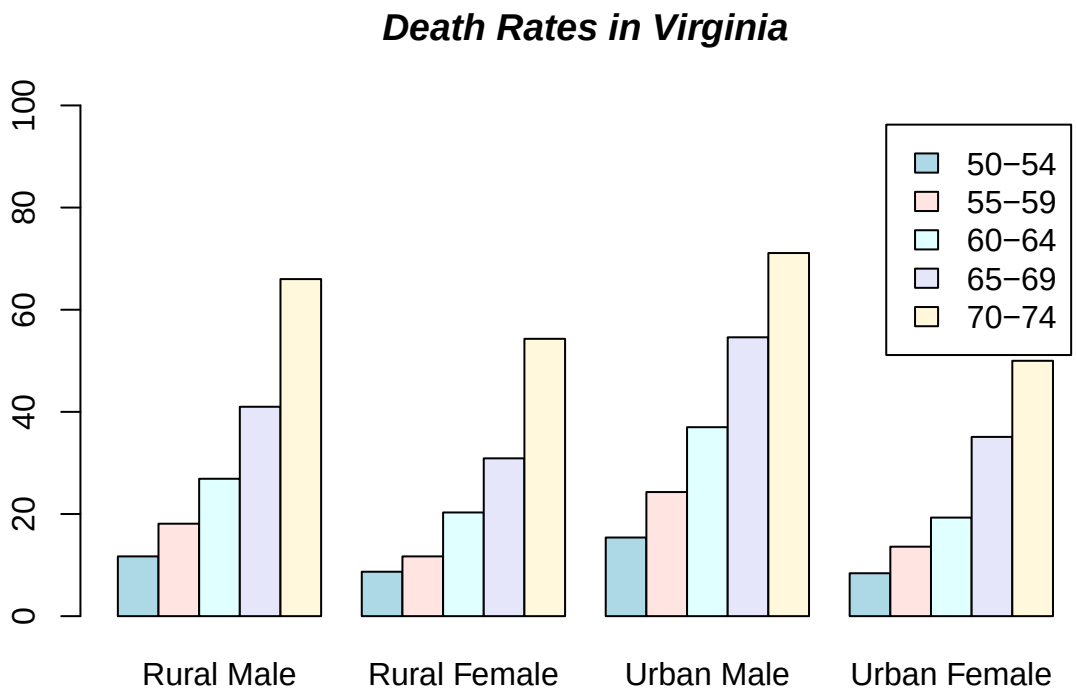


barplot(..., space= 1.5, axisnames = FALSE)

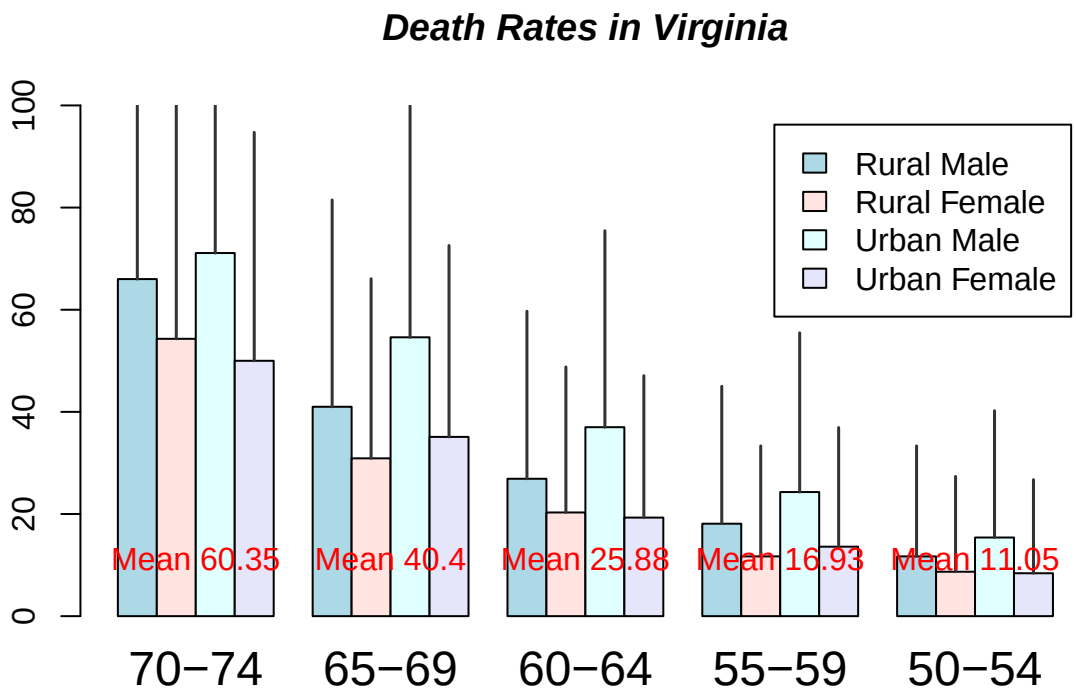
```
##
## barplt> barplot(VADeaths, plot = FALSE)
## [1] 0.7 1.9 3.1 4.3
##
## barplt> barplot(VADeaths, plot = FALSE, beside = TRUE)
##      [,1] [,2] [,3] [,4]
## [1,]  1.5  7.5 13.5 19.5
## [2,]  2.5  8.5 14.5 20.5
## [3,]  3.5  9.5 15.5 21.5
## [4,]  4.5 10.5 16.5 22.5
## [5,]  5.5 11.5 17.5 23.5
##
## barplt> mp <- barplot(VADeaths) # default
```




```
##
## barplt> tot <- colMeans(VADeaths)
##
## barplt> text(mp, tot + 3, format(tot), xpd = TRUE, col = "blue")
##
## barplt> barplot(VADeaths, beside = TRUE,
## barplt+         col = c("lightblue", "mistyrose", "lightcyan",
## barplt+                 "lavender", "cornsilk"),
## barplt+         legend.text = rownames(VADeaths), ylim = c(0, 100))
```

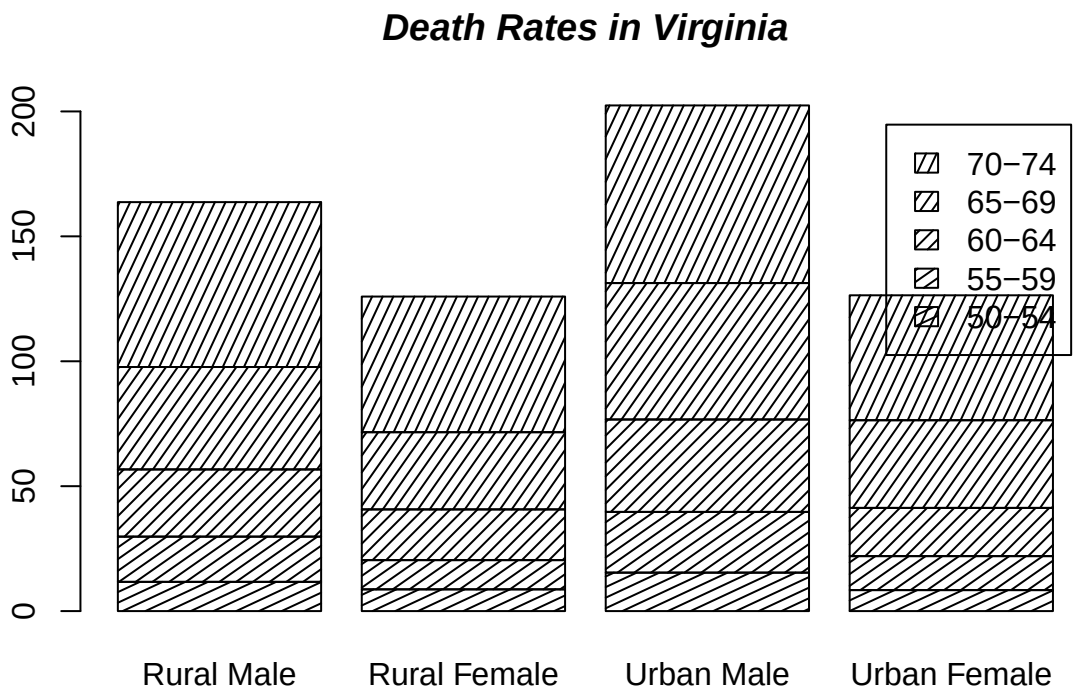



```
##
## barplt> title(main = "Death Rates in Virginia", font.main = 4)
##
## barplt> hh <- t(VADeaths)[, 5:1]
##
## barplt> mybarcol <- "gray20"
##
## barplt> mp <- barplot(hh, beside = TRUE,
## barplt+         col = c("lightblue", "mistyrose",
## barplt+                 "lightcyan", "lavender"),
## barplt+         legend.text = colnames(VADeaths), ylim = c(0,100),
## barplt+         main = "Death Rates in Virginia", font.main = 4,
## barplt+         sub = "Faked upper 2*sigma error bars", col.sub = mybarcol,
## barplt+         cex.names = 1.5)
```

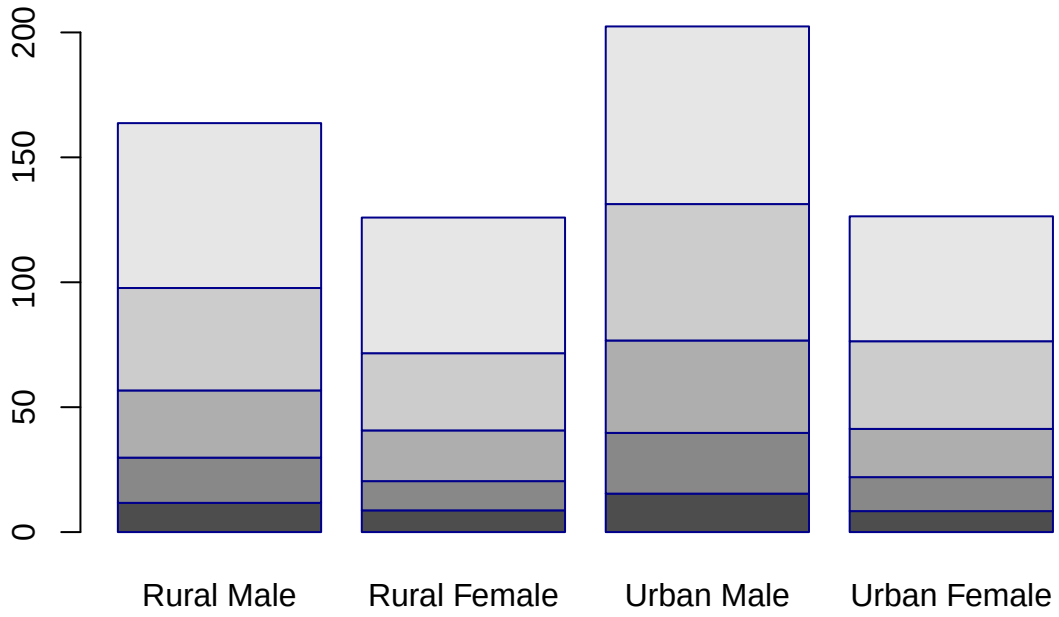


Faked upper 2*sigma error bars

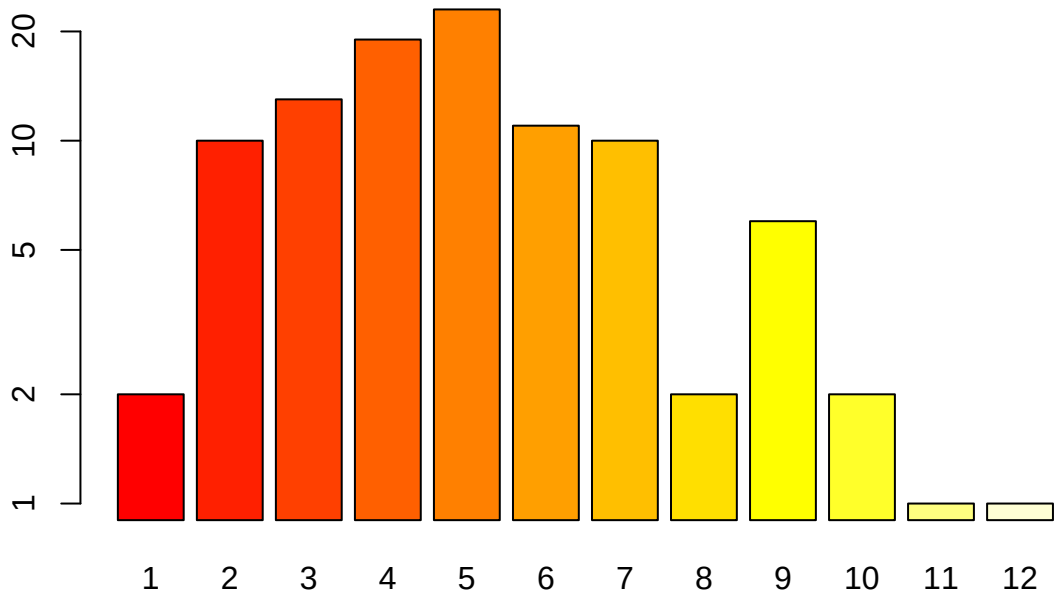
```
##
## barplt> segments(mp, hh, mp, hh + 2*sqrt(1000*hh/100), col = mybarcol, lwd = 1.5)
##
## barplt> stopifnot(dim(mp) == dim(hh))  # corresponding matrices
##
## barplt> mtext(side = 1, at = colMeans(mp), line = -2,
## barplt+       text = paste("Mean", formatC(colMeans(hh))), col = "red")
##
## barplt> # Bar shading example
## barplt> barplot(VADeaths, angle = 15+10*1:5, density = 20, col = "black",
## barplt+         legend.text = rownames(VADeaths))
```



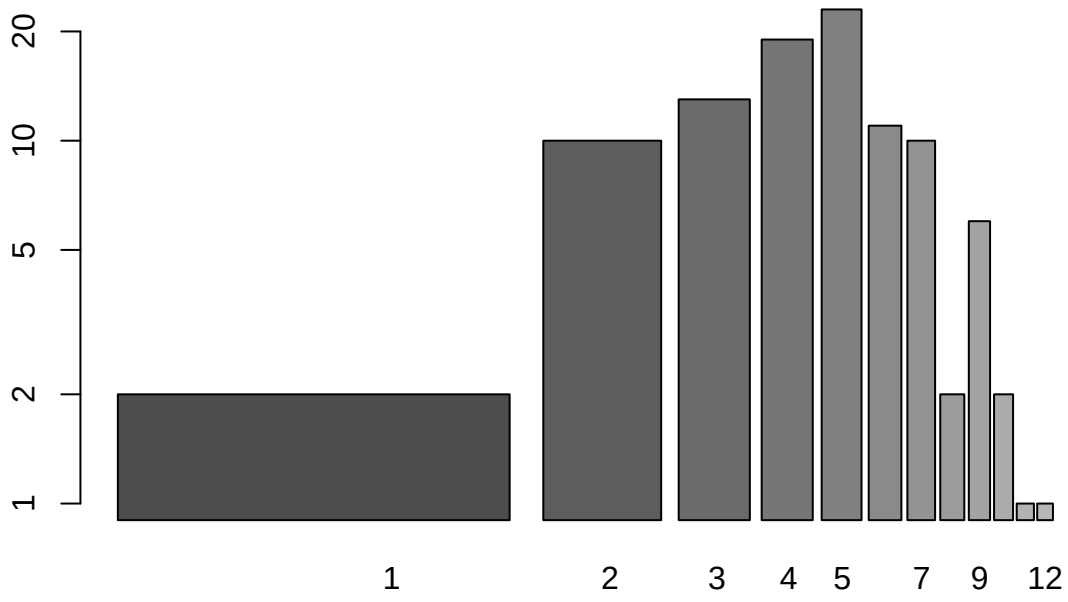

```
##
## barplt> title(main = list("Death Rates in Virginia", font = 4))
##
## barplt> # Border color
## barplt> barplot(VADeaths, border = "dark blue")
```



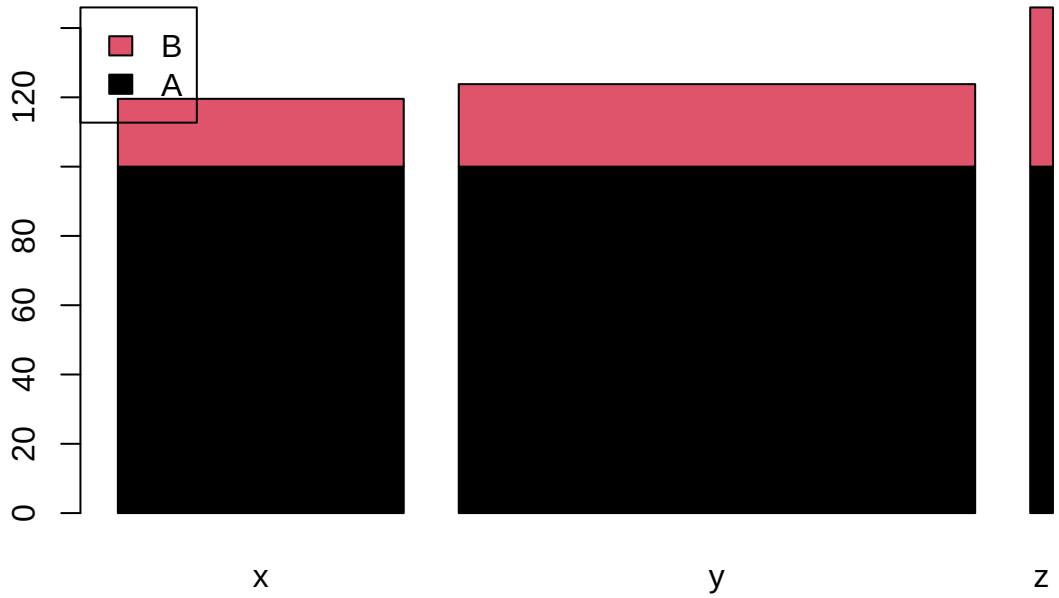

```
##
## barplt> # Log scales (not much sense here)
## barplt> barplot(tN, col = heat.colors(12), log = "y")
```




```
##
## barplt> barplot(tN, col = gray.colors(20), log = "xy")
```

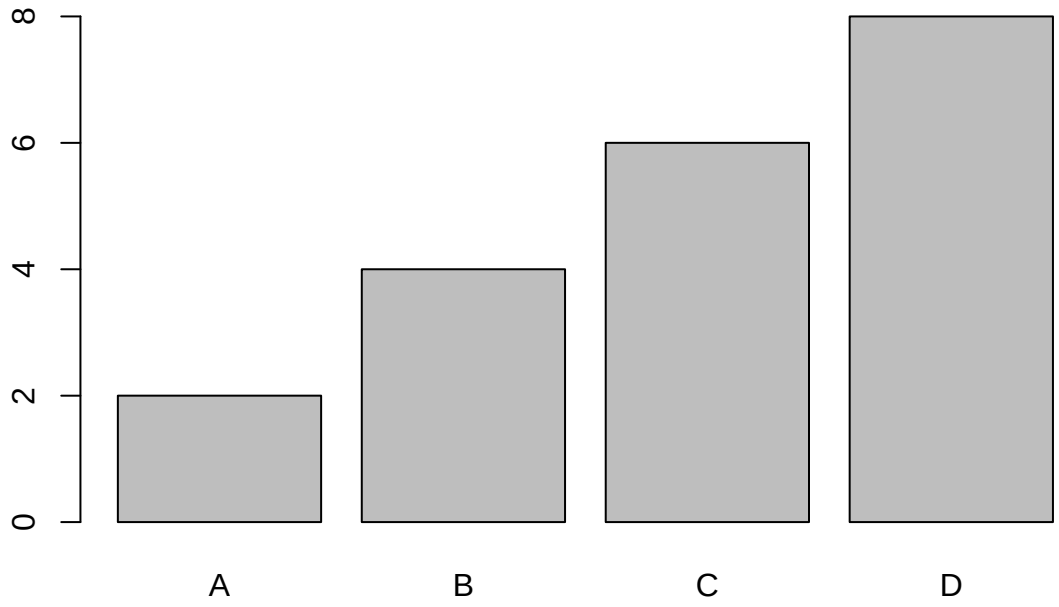



```
##
## barplt> # Legend location
## barplt> barplot(height = cbind(x = c(465, 91) / 465 * 100,
## barplt+                        y = c(840, 200) / 840 * 100,
## barplt+                        z = c(37, 17) / 37 * 100),
## barplt+         beside = FALSE,
## barplt+         width = c(465, 840, 37),
## barplt+         col = c(1, 2),
## barplt+         legend.text = c("A", "B"),
## barplt+         args.legend = list(x = "topleft"))
```



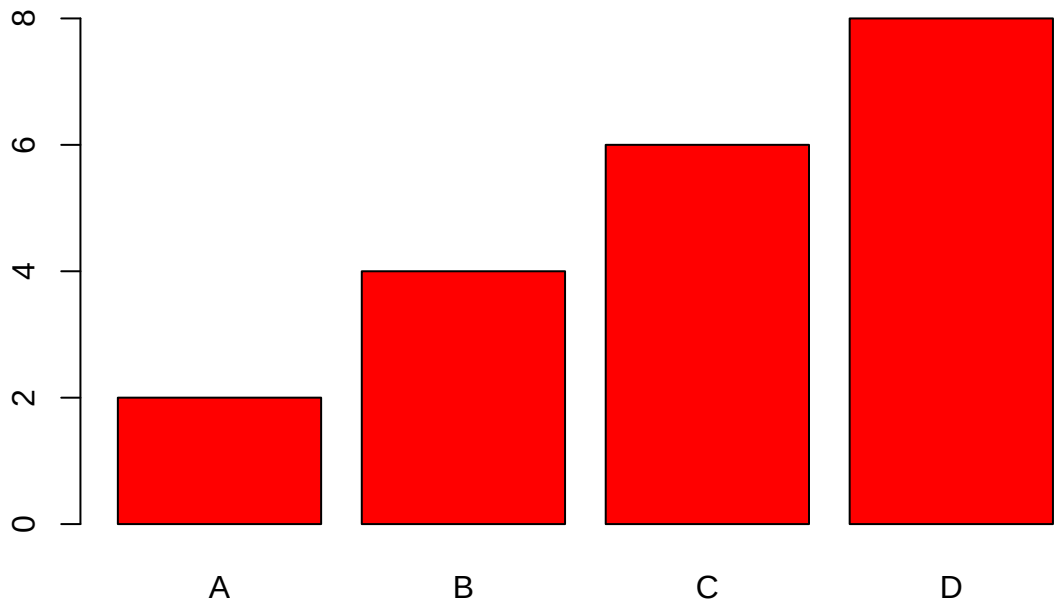

```
x <- c("A", "B", "C", "D")
y <- c(2, 4, 6, 8)

barplot(y, names.arg = x)
```



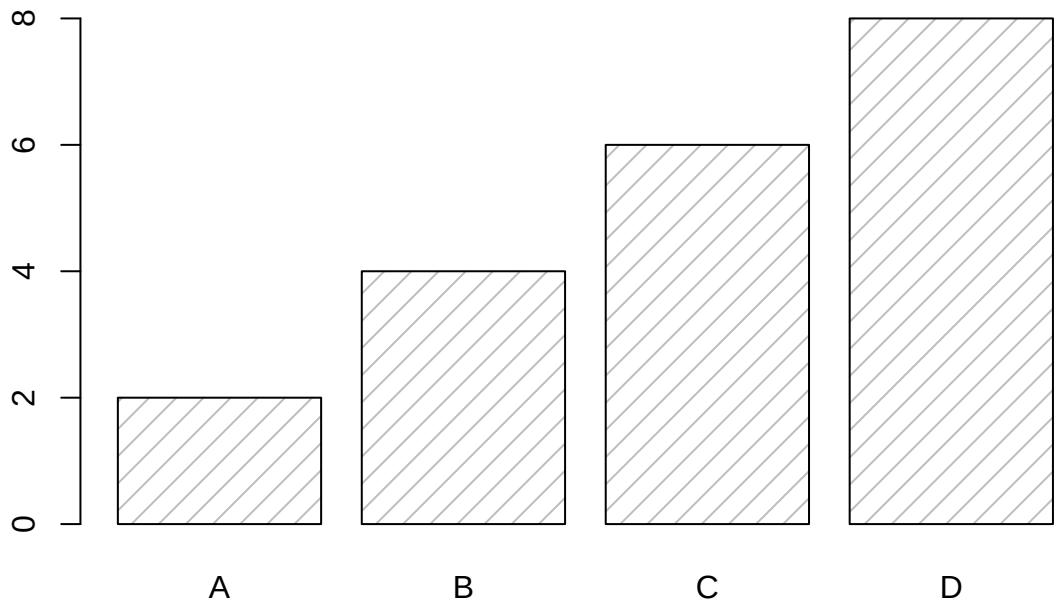

```
x <- c("A", "B", "C", "D")
y <- c(2, 4, 6, 8)

barplot(y, names.arg = x, col = "red")
```



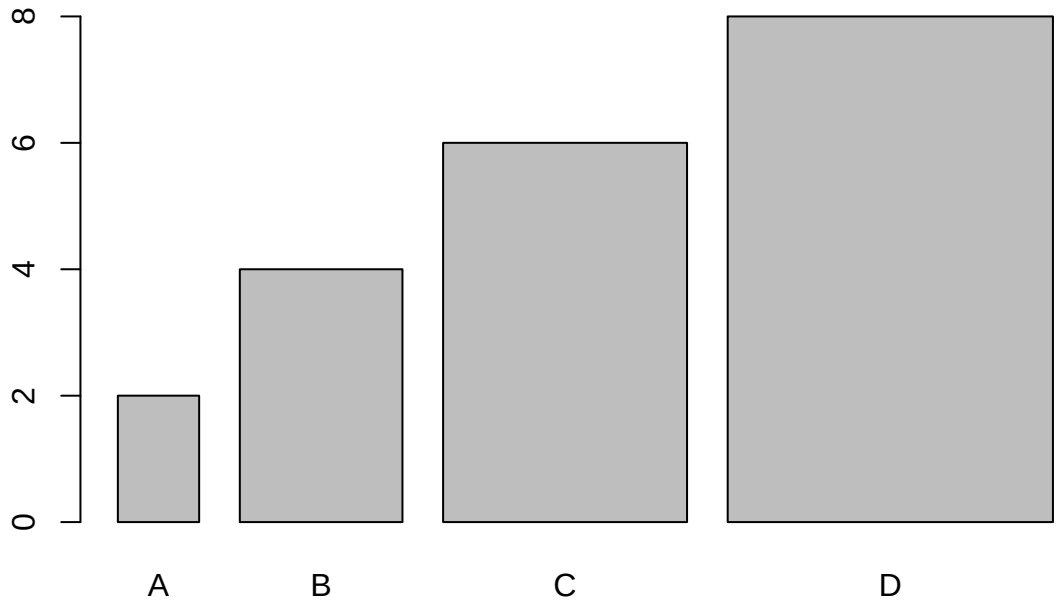

```
x <- c("A", "B", "C", "D")
y <- c(2, 4, 6, 8)

barplot(y, names.arg = x, density = 10)
```



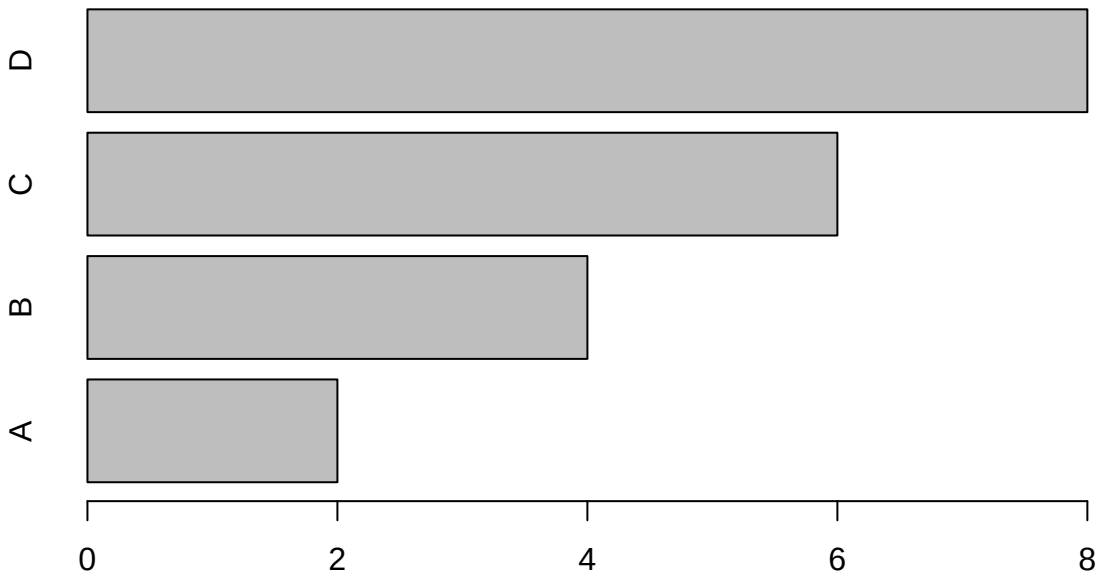

```r
x <- c("A", "B", "C", "D")
y <- c(2, 4, 6, 8)

barplot(y, names.arg = x, width = c(1,2,3,4))
```




```
x <- c("A", "B", "C", "D")
y <- c(2, 4, 6, 8)

barplot(y, names.arg = x, horiz = TRUE)
```


D
C
B
A
0
2
4
6
8