

```
# create matrix
x <- matrix(c(1,2,3,4) , nrow = 2 , ncol =2)
```

```
## access elems
```

```
# x[1][1] # 1
# x[1,2] # x[1][2]
# x[2,] # print 2nd row
# x[,2] # print 2nd col
# x[c(1,2),] # print 1 and 2 row
# x[,c(1)] # print 1st col
```

```
## insert a row
```

```
# x <- rbind(x,c(5,6)) # no. of elem in row same to prev
# x
```

```
## insert col
```

```
# x <- cbind(x,c(7,8,9))
# x
```

```
## remove row or col
```

```
# x <- x[-c(1),] # remove first row
# x <- x[, -c(1)] # remove first col
# x <- x[-c(1), -c(1)] # first row first col
```

```
## functions
```

```
# length(x) # no. of elem
# dim(x) # row col (dimension)
```

```
## combine matrix
```

```
y <- matrix(c(5,6,7,8) , nrow = 2 , ncol =2)
c <- rbind(x,y) # row-wise similarly col wise
c <- cbind(x,y)
c
```