



Basic Syntax

#	Comments
<- or =	Assignment
<<-	Global Assignment
v[1]	First element in a vector
*	Scalar Multiplication
%%	Matrix Multiplication
/	Division
/%	Integer Division
%%	Remainder

Example

```
# This is not interpreted
a <- 1; b = 2
a <<- 10 # Not recommended
v[1]
c(1,1)*c(1,1) # 1 1
c(1,1)%%c(1,1) # 2
1/2 # 0.5
1/%2 # 0
7%%6 # 1
```

Vector and Matrix Operations

Construction

c()	Concatenate
cbind()	Column Concatenate
rbind()	Row Concatenate
matrix()	Create matrix

```
v <- c(1,2,3,4) # 1 2 3 4
cbind(v,v) # 2 Columns
rbind(v,v) # 2 Rows
mat <- matrix(v,nrow=2,ncol=2)
```

Selection

v[1]	Select first
tail(v,1)	Select last
mat[2,1]	Select row 2, column 1
mat[1,]	Select row 1
mat[,2]	Select column 2
v[c(1,3)]	Select the first and third values
v[-c(1,3)]	Select all but the first and third values
mat[,c(1,2)]	Select columns 1 and 2
mat[,1:5]	Select columns 1 to 5
mat[, "col"]	Select column named "col"

Utility

length()	Length of vector
dim()	Dimensions of vector/matrix/dataframe
sort()	Sorts vector
order()	Index to sort vector e.g. sort(v) == v[order(v)]
names()	Names of columns