VECTORS

```
x = c(1.25, 3.39, 3.74, 7.17, 6.29)
```

```
x
```

Vector of systematic elements

```
y = seq(1, 3, .1)
```

```
y
```

```
x1 = 1:5  # Or, seq(1, 5, 1)
```

```
x1
```

```
x2 = rep(1, 10)
```

```
x2
```

log of each value of 'x'

```
log(x)
```

The output is also a vector

```
floor(x) # previous integer
```

ceiling(x) # next integer

round(x) # closer integer

round(x, 1)

sort(x) # Arranges data in ascending order

sort(x, decreasing = T) # descending order

sort(x, T)

Adding a value to all elements

x + 1

Make a new vector 'w' from above

w = x + 1

Multiplying each element by a value

2 * w

Addition of 2 vectors: element-wise addition

x + x1

Element-wise subtraction

x – x1

Element-wise multiplication

x * x1

Element-wise division

X / x1

See the 3rd element of 'y'

y[3]

Replace the 3rd element of 'y' by 7

y[3] = 7

Replace 5th, 6th and 7th elements by 13

y[5:7] = 13

length(y) # See the no. of elements in 'y'

Square each element of y & make vector ‘u’

u = y ^ 2

calculate sum, mean, variance & SD of ‘x’

sum(x)

mean(x)

var(x)

sd(x)

Calculate

$$\sum_{i=1}^{5} x_i^3$$

sum(x^3)

Calculate

$$\frac{1}{5}\sum_{i=1}^{5}(x_i - \bar{x})^4$$

mean((x-mean(x))^4)

CONCATENATION

Combine 2 vectors (to make a bigger vector)

u = c(x, y)