INTRODUCTION TO R

Vector Arithmetic

Vector Arithmetic

```
> my_apples <- 5
> my_oranges <- 6
> my_apples + my_oranges
[1] 11
```

`my_apples` **is a vector!**
`my_oranges` **is a vector!**

Computations are performed **element-wise**

```
> earnings <- c(50, 100, 30)

> earnings * 3
[1] 150 300 90
```

Vector Arithmetic

```
> earnings/10
[1]  5 10  3

> earnings - 20
[1] 30 80 10

> earnings + 100
[1] 150 200 130

> earnings^2
[1]  2500 10000   900
```

Mathematics naturally extend!

Element-wise

```
> earnings <- c(50, 100, 30)
> expenses <- c(30, 40, 80)

> earnings - expenses
[1]  20  60 -50

> earnings + c(10, 20, 30)
[1]  60 120  60

> earnings * c(1, 2, 3)
[1]  50 200  90

> earnings / c(1, 2, 3)
[1] 50 50 10
```

multiplication and division are done element-wise!

sum() and >

```
> earnings <- c(50, 100, 30)
> expenses <- c(30, 40, 80)

> bank <- earnings - expenses
> bank
[1]  20  60 -50

> sum(bank)
[1] 30

> earnings > expenses
[1]  TRUE  TRUE FALSE
```

INTRODUCTION TO R

Let’s practice!