Question6ToothGrowth

Justice Ruwona

2023-03-08

## Load the datset

data(ToothGrowth)  
str(ToothGrowth)

## 'data.frame': 60 obs. of 3 variables:  
## $ len : num 4.2 11.5 7.3 5.8 6.4 10 11.2 11.2 5.2 7 ...  
## $ supp: Factor w/ 2 levels "OJ","VC": 2 2 2 2 2 2 2 2 2 2 ...  
## $ dose: num 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 ...

## Using Subset method

### Subset ToothGrowth to include rows such that supp is equal to VC:

VC\_data <- subset(ToothGrowth, supp == "VC")  
str(VC\_data)

## 'data.frame': 30 obs. of 3 variables:  
## $ len : num 4.2 11.5 7.3 5.8 6.4 10 11.2 11.2 5.2 7 ...  
## $ supp: Factor w/ 2 levels "OJ","VC": 2 2 2 2 2 2 2 2 2 2 ...  
## $ dose: num 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 ...

### Subset ToothGrowth to include rows such that supp is equal to VC and dose is equal to 0.5:

VC\_dose\_data <- subset(ToothGrowth, supp == "VC" & dose == 0.5)  
str(VC\_dose\_data)

## 'data.frame': 10 obs. of 3 variables:  
## $ len : num 4.2 11.5 7.3 5.8 6.4 10 11.2 11.2 5.2 7  
## $ supp: Factor w/ 2 levels "OJ","VC": 2 2 2 2 2 2 2 2 2 2  
## $ dose: num 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5

### Subset ToothGrowth to include the values of len such that supp is equal to VC and dose is equal to 0.5:

VC\_dose\_len <- subset(ToothGrowth, supp == "VC" & dose == 0.5, select = len)  
str(VC\_dose\_len)

## 'data.frame': 10 obs. of 1 variable:  
## $ len: num 4.2 11.5 7.3 5.8 6.4 10 11.2 11.2 5.2 7

## Using Indexing method

### Subset ToothGrowth to include rows such that supp is equal to VC:

toothgrowth\_vc <- ToothGrowth[ToothGrowth$supp == "VC", ]  
str(toothgrowth\_vc)

## 'data.frame': 30 obs. of 3 variables:  
## $ len : num 4.2 11.5 7.3 5.8 6.4 10 11.2 11.2 5.2 7 ...  
## $ supp: Factor w/ 2 levels "OJ","VC": 2 2 2 2 2 2 2 2 2 2 ...  
## $ dose: num 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 ...

### Subset ToothGrowth to include rows such that supp is equal to VC and dose is equal to 0.5:

toothgrowth\_vc\_dose <- ToothGrowth[ToothGrowth$supp == "VC" & ToothGrowth$dose == 0.5, ]  
str(toothgrowth\_vc\_dose)

## 'data.frame': 10 obs. of 3 variables:  
## $ len : num 4.2 11.5 7.3 5.8 6.4 10 11.2 11.2 5.2 7  
## $ supp: Factor w/ 2 levels "OJ","VC": 2 2 2 2 2 2 2 2 2 2  
## $ dose: num 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5

### Subset ToothGrowth to include the values of len such that supp is equal to VC and dose is equal to 0.5:

toothgrowth\_vc\_dose\_len <- ToothGrowth$len[ToothGrowth$supp == "VC" & ToothGrowth$dose == 0.5]  
str(toothgrowth\_vc\_dose\_len)

## num [1:10] 4.2 11.5 7.3 5.8 6.4 10 11.2 11.2 5.2 7