Oefening 3.8

Opgave

Gebruik de functies mean en range om het gemiddelde en bereik van:

1. de cijfers 1, 2, . . . , 21
2. 50 willekeurige normale waarden, die worden gegenereerd vanuit een normale distributie met gemiddelde 0 en variantie 1 (functie rnorm)
3. de kolommen height en weight in de data frame women (standaard in R).

Gegeven

```
# Data oefening 1
data1 <- 1:21
data1
```

```
##  [1]  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21
```

```
# Data oefening 2
data2 <- rnorm(n = 50, mean = 0, sd = sqrt(1))
data2
```

```
##  [1] -0.65596452  0.49547752 -0.79033645 -0.42047386 -0.92933394
##  [6] -0.38422918  0.95151553 -0.72149022  0.72067807  1.19983162
## [11] -0.91946715 -1.04891347 -3.26009515  0.01845421  0.10106477
## [16] -0.30376599 -0.24180577  0.89479687 -1.11920603 -0.27727383
## [21] -0.09212133 -0.98120997  0.38799587  0.51452273  0.09697640
## [26] -0.61315821 -1.39819628  0.88436685 -0.41907267 -0.79414494
## [31]  0.74976503 -0.74615521  0.08799342 -0.93797436  0.07535838
## [36] -0.30297081 -0.72424966 -0.69265237 -1.72672527  1.66209452
## [41]  0.08194051  2.68851114  0.59110352  0.02267981 -0.07097009
## [46] -0.66525837  0.09157230  1.12643520  0.43901619  0.08695359
```

```
# Data oefening 3
data3 <- subset(x = women, select=c("height", "weight"))
data3
```

```
##    height weight
## 1      58    115
## 2      59    117
## 3      60    120
## 4      61    123
## 5      62    126
## 6      63    129
## 7      64    132
## 8      65    135
## 9      66    139
## 10     67    142
## 11     68    146
## 12     69    150
## 13     70    154
## 14     71    159
## 15     72    164
```

Oplossing

LET OP: enkel centrummaten opgeven is nooit voldoende!

1

```
# Gemiddelde
mean(data1)
```

```
## [1] 11
```

```
# Bereik
range(data1)
```

```
## [1]  1 21
```

```
# Standaardafwijking
#sd(data1)
# Kwartielen
#quantile(data1)
```

2

```
# Gemiddelde
mean(data2)
```

```
## [1] -0.1453622
```

```
# Bereik
range(data2)
```

```
## [1] -3.260095  2.688511
```

```
# Standaardafwijking
sd(data2)
```

```
## [1] 0.9406868
```

```
# Kwartielen
#quantile(data2)
```

3

```
# Gemiddelde
mean(data3$height)
```

```
## [1] 65
```

```
# Bereik
range(data3$height)
```

```
## [1] 58 72
```

```
# Standaardafwijking
sd(data3$height)
```

```
## [1] 4.472136
```

```r
# Kwartielen
quantile(data3$height)
```

```
##   0%  25%  50%  75% 100%
## 58.0 61.5 65.0 68.5 72.0
```

```r
# Mediaan
median(data3$height)
```

```
## [1] 65
```

```r
# Gemiddelde
mean(data3$weight)
```

```
## [1] 136.7333
```

```r
# Bereik
range(data3$weight)
```

```
## [1] 115 164
```

```r
# Standaardafwijking
sd(data3$weight)
```

```
## [1] 15.49869
```

```r
# Kwartielen
quantile(data3$weight)
```

```
##    0%   25%   50%   75%  100%
## 115.0 124.5 135.0 148.0 164.0
```

```r
# Mediaan
median(data3$weight)
```

```
## [1] 135
```