

IT24100512

PS Lab 08

```
1 setwd("C:\\Users\\ASUS\\OneDrive\\Desktop\\Lab08")
2
3 # Population data
4 weights <- c(1.2,1.5,1.3,1.7,1.6,1.4,1.8,1.5,1.3,1.6)
5
6 # Population mean & SD
7 mean(weights)
8 sd(weights)
9
10 # 25 random samples of size 6
11 set.seed(123)
12 sample_means <- replicate(25, mean(sample(weights, 6, replace=TRUE)))
13 sample_sds <- replicate(25, sd(sample(weights, 6, replace=TRUE)))
14
15 # Display sample means and SDs
16 sample_means
17 sample_sds
18
19 # Mean & SD of sample means
20 mean(sample_means)
21 sd(sample_means)
22 |
```

```
R - R 4.5.1 - C:/Users/ASUS/AppData/Local/Microsoft/Windows/INetCache/IE/Y6YV24KN/
> # Population data
> weights <- c(1.2,1.5,1.3,1.7,1.6,1.4,1.8,1.5,1.3,1.6)
> # Population mean & SD
> mean(weights)
[1] 1.49
> sd(weights)
[1] 0.1911951
> # 25 random samples of size 6
> set.seed(123)
> sample_means <- replicate(25, mean(sample(weights, 6, replace=TRUE)))
> sample_sds <- replicate(25, sd(sample(weights, 6, replace=TRUE)))
> # Display sample means and SDs
> sample_means
[1] 1.450000 1.483333 1.383333 1.483333 1.566667 1.633333 1.433333 1.416667 1.533333 1.416667 1.450000 1.416667 1.533333 1.516667
[15] 1.500000 1.366667 1.700000 1.583333 1.516667 1.516667 1.533333 1.516667 1.483333 1.516667 1.566667
> sample_sds
[1] 0.09831921 0.18348479 0.21602469 0.17224014 0.18618987 0.20655911 0.19663842 0.19663842 0.18708287 0.18348479 0.20000000
[12] 0.16431677 0.22286020 0.20736441 0.16431677 0.13662601 0.15491933 0.24494897 0.20976177 0.23380904 0.15491933 0.10327956
[23] 0.10327956 0.19663842 0.16431677
> # Mean & SD of sample means
> mean(sample_means)
[1] 1.500667
> sd(sample_means)
[1] 0.07660021
> |
```