

# Exercise 1

## Sampling

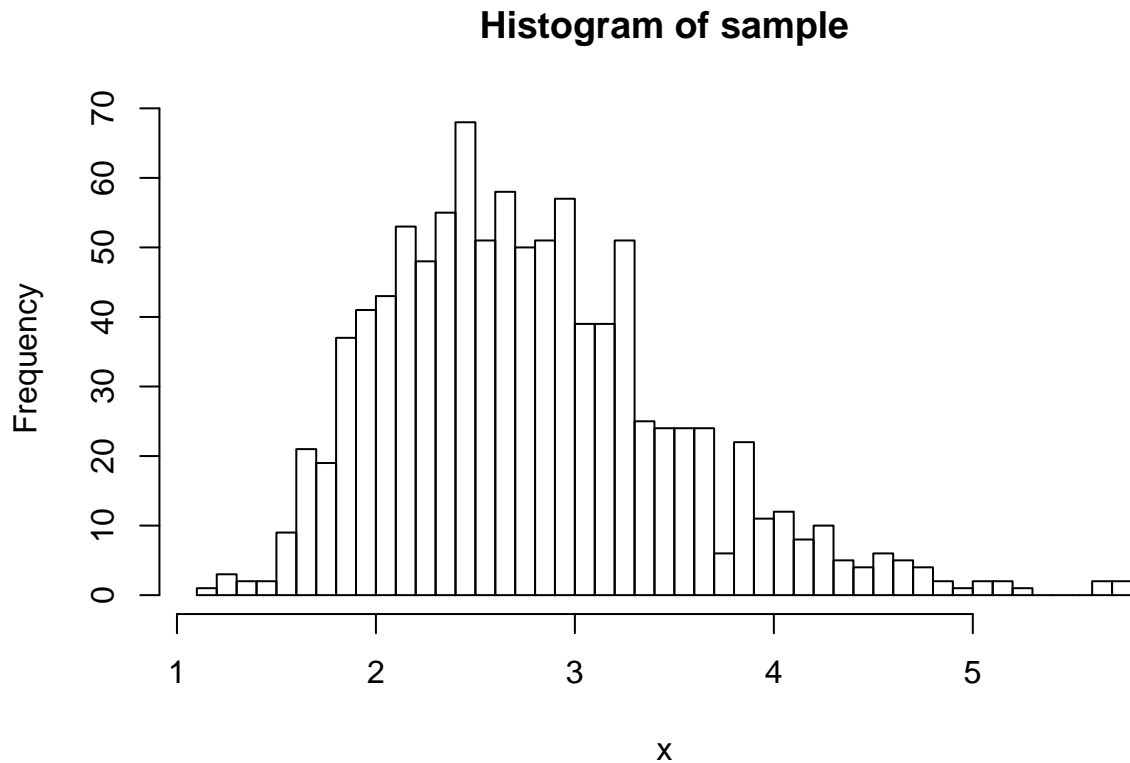
This is to sample 1000 values from a log-normal distribution with mean 1 and standard deviation 0.25

```
x<-rlnorm(1000,meanlog = 1,sdlog = 0.25)
```

## Plots

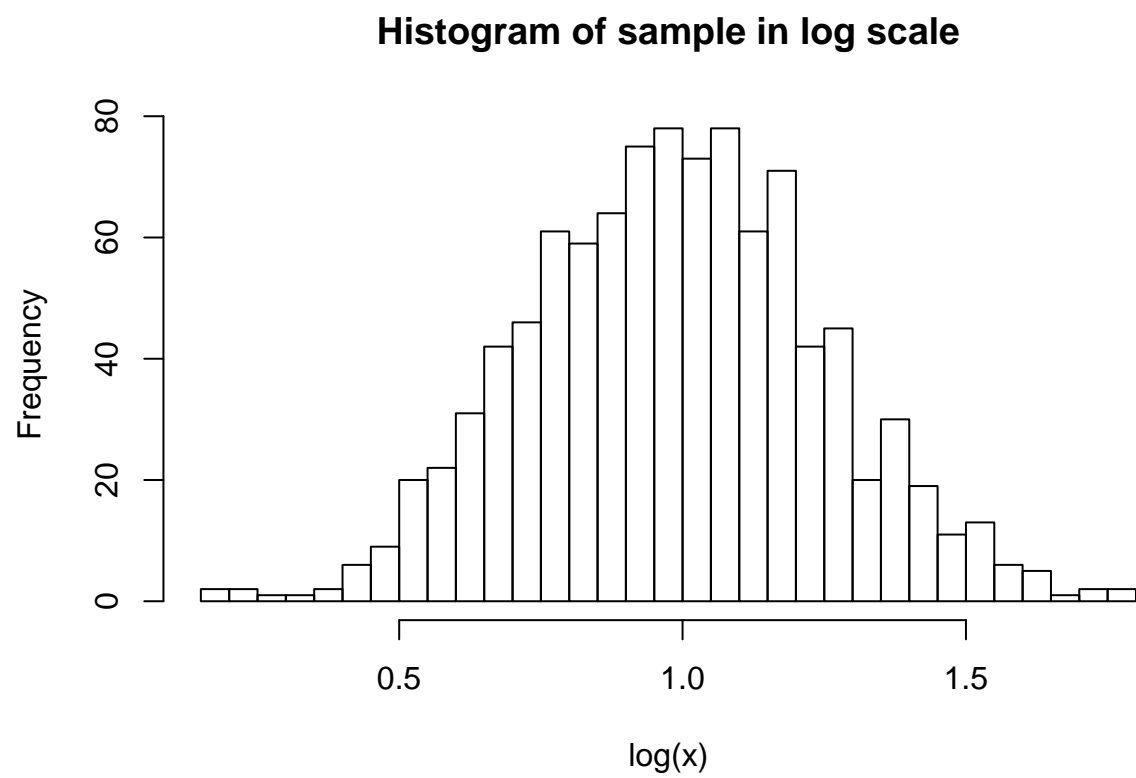
To see how the distribution look like, a histogram of the sample is plotted as below.

```
hist(x,breaks = 50,main="Histogram of sample")
```



The sample has mean 2.776 and variance 0.54.

```
hist(log(x),breaks = 50,main="Histogram of sample in log scale")
```



After log-transformation, the transformed sample has mean 0.987 and variance 0.067.