# Exponential distribution in R vs the Central Limit Theorem
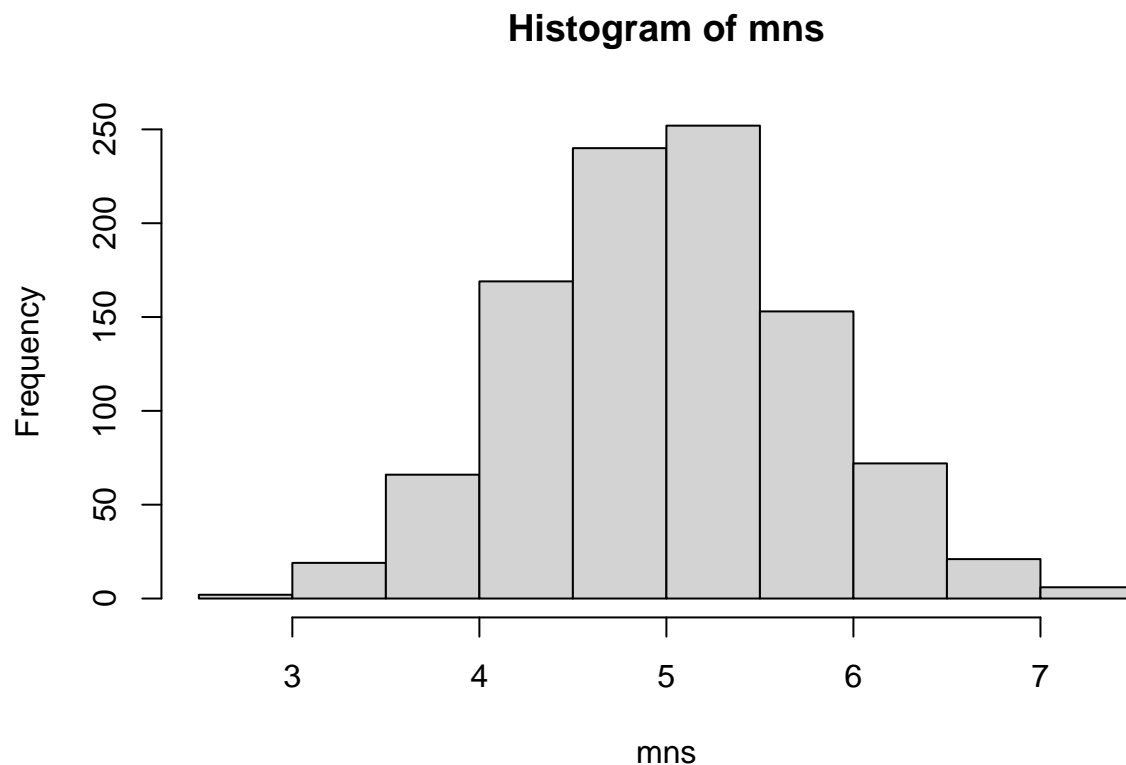
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## Exponential Distribution
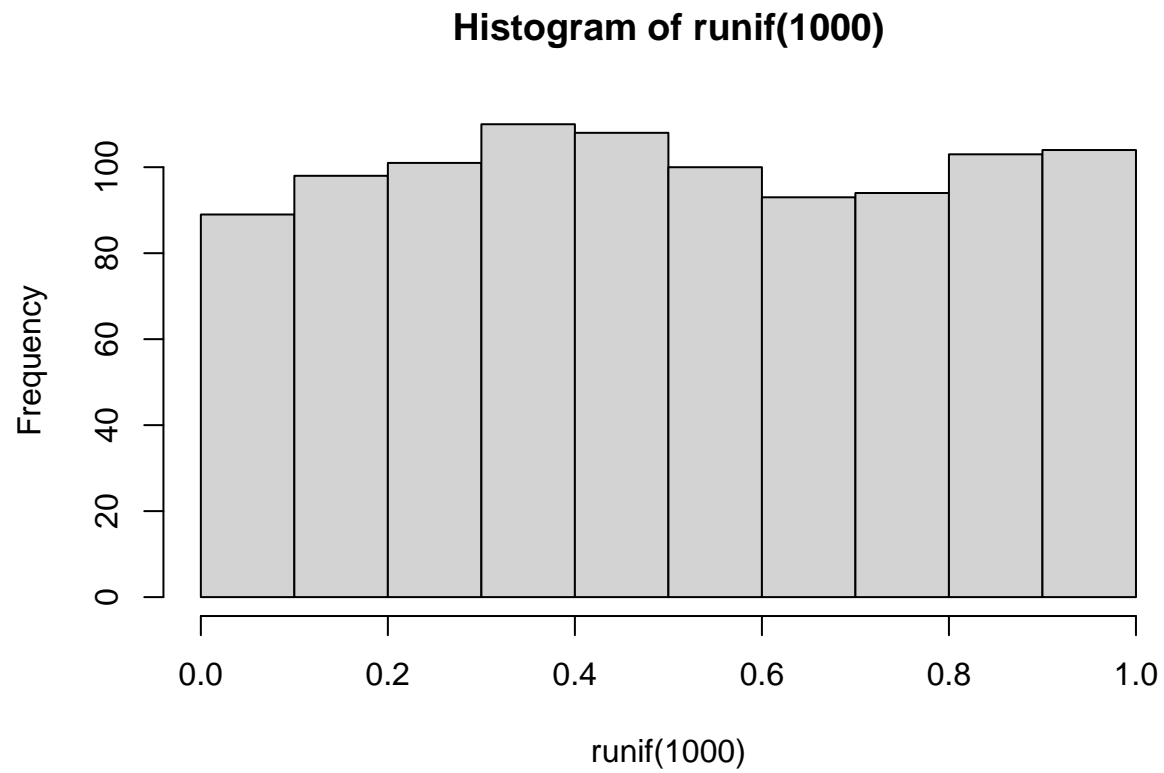
- Rate = lambda = 0.2
- Standard deviation = 1/lambda = 5
- Mean = 1/lambda = 5

```r
n<-40 #Number of observations
lambda <- 0.2 # Rate parameter
mns = NULL
for (i in 1 : 1000) mns = c(mns, mean(rexp(n,lambda)))
hist(mns)
```



**Histogram of mns**

## 1000 Random Uniforms

```
hist(runif(1000))
```

### Histogram of runif(1000)



```
mns = NULL
for (i in 1 : 1000) mns = c(mns, mean(runif(40)))
hist(mns)
```

**Histogram of mns**