Simulation Exercise

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Overview:

This paper explores simulations on an Exponential Distribution.

```r
# Set parameters for distribution
n <- 40
lambda <- 0.2


# Generate random deviates for distribution
rexp(n, lambda)
```

```
##  [1] 10.28365909  4.10312653  7.48038935  2.66987870  6.13597047
##  [6]  0.85494179  4.80878703  9.49568743  0.58027955  0.41881537
## [11] 10.97739297  2.89869027  1.88899494  4.81928728  0.81763812
## [16]  0.38720357  0.25183840  4.12617038 12.14890796  5.67075531
## [21]  9.83159943 13.00662617 10.36798405 12.43598889  7.19664052
## [26]  8.98313511  1.37671792 14.08851806  0.02409396  3.39073339
## [31] 17.93265405  4.51978441  0.07174924 14.35649544  2.47090622
## [36]  7.37542746  8.27102653  1.32594527  3.87568350  8.50061088
```

```r
# An exploratory plot
```

Simulations:

Sample Mean versus Theoretical Mean

This distribution is centered at . . . The theoretical center, or mean of the distribution is centered at . . .

Sample Variance versus Theoretical Variance

This distribution's variance is . . . The theoretical variance of this distribution would be . . .
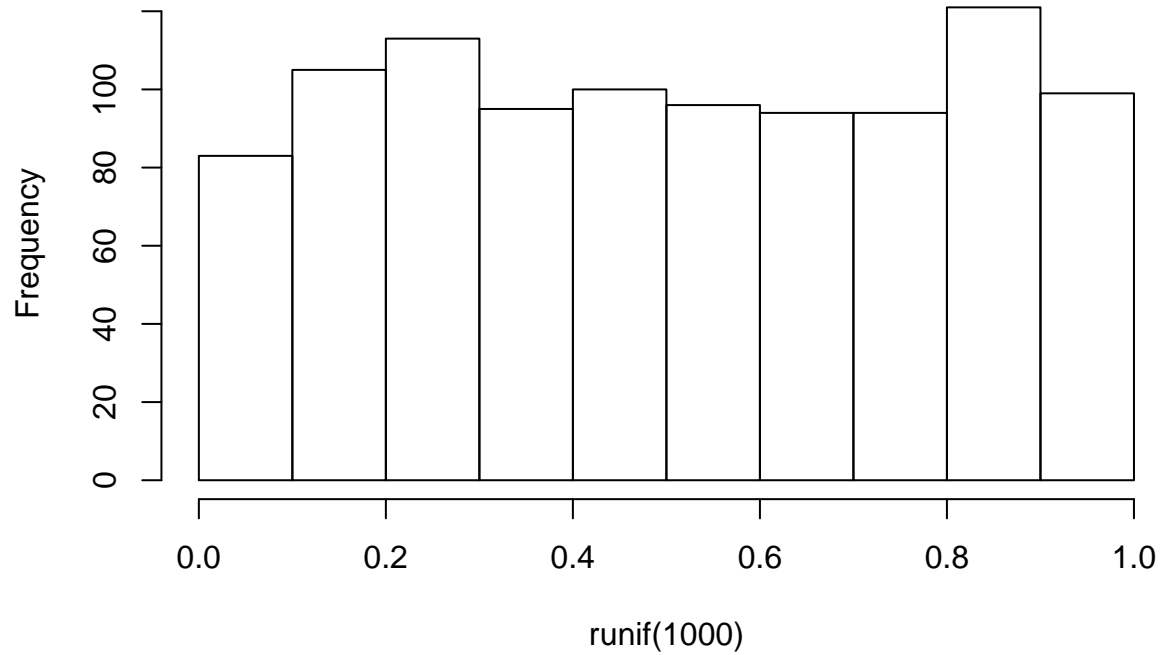
Distribution

We know this distribuion is normal because . . .

Our conclusions and assumptions . . .

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

Histogram of runif(1000)

runif(1000)

```
#---

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

Histogram of mns