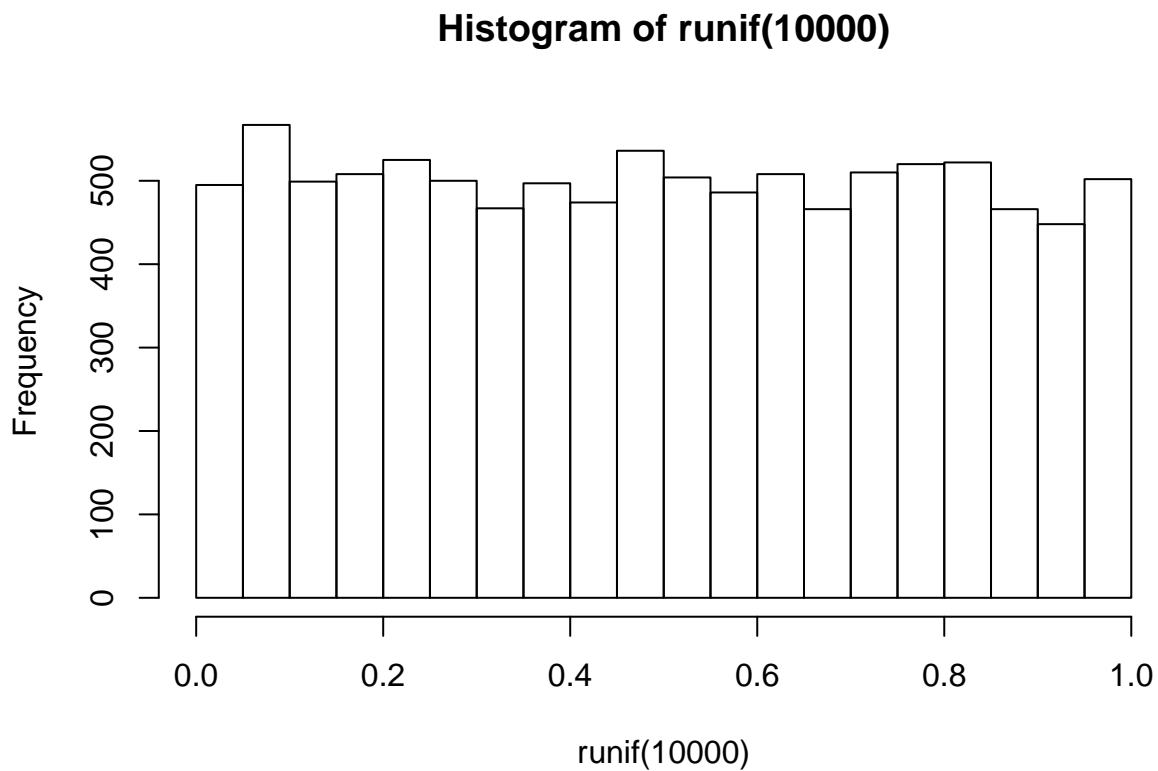


IST 772 Week 1 Distributions demo

```
library(MASS)
```

A uniform distribution

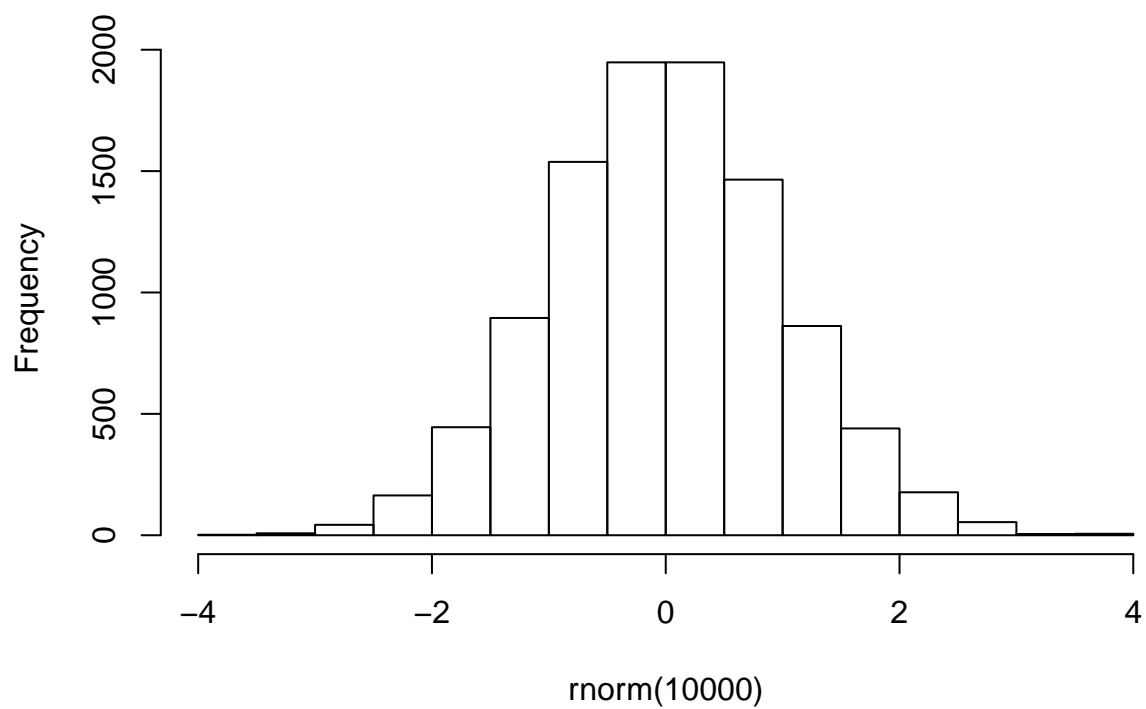
```
hist(runif(10000))
```



The normal distribution

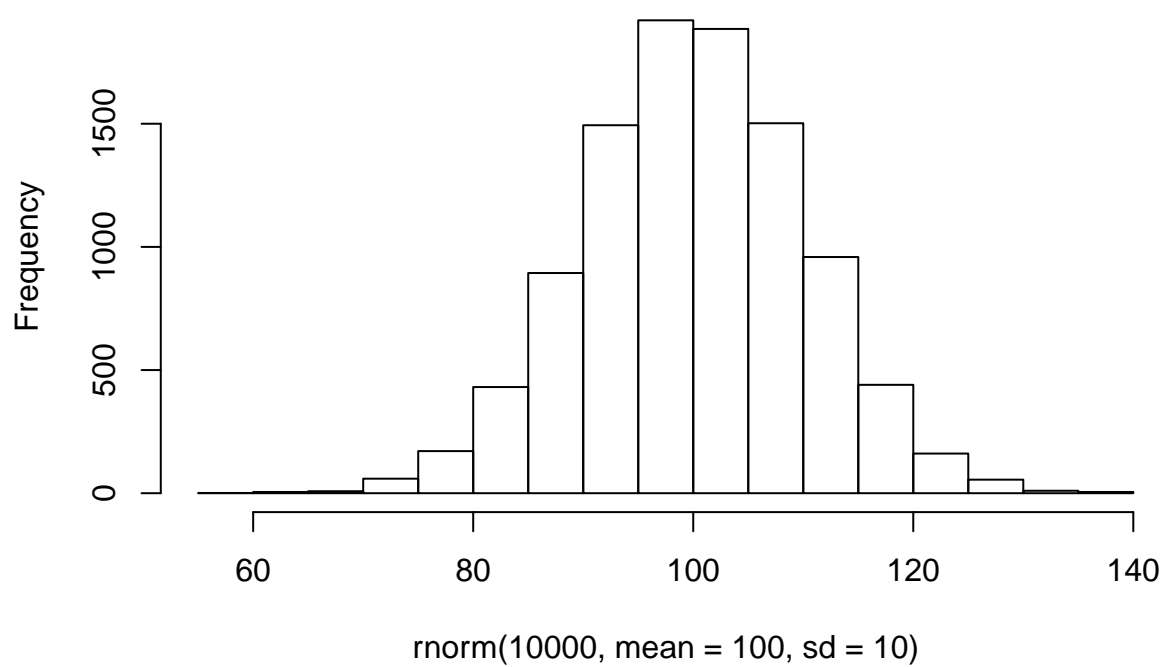
```
hist(rnorm(10000))
```

Histogram of rnorm(10000)



```
hist(rnorm(10000,mean=100,sd=10))
```

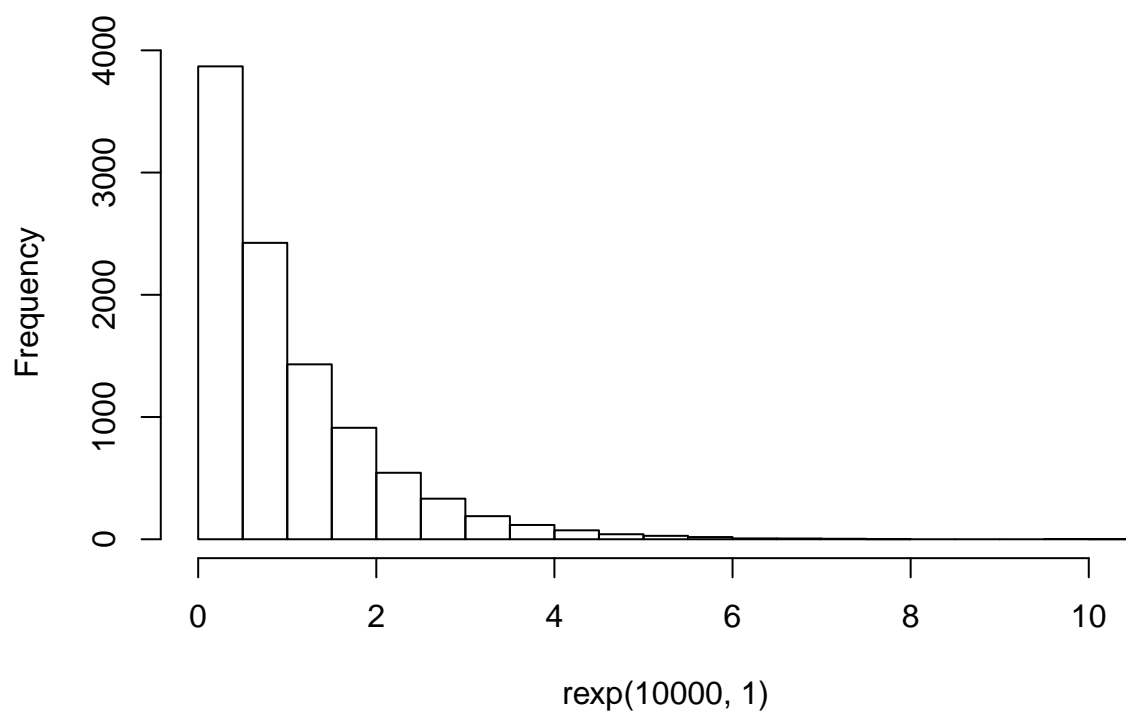
Histogram of rnorm(10000, mean = 100, sd = 10)



Waiting times have an exponential distribution

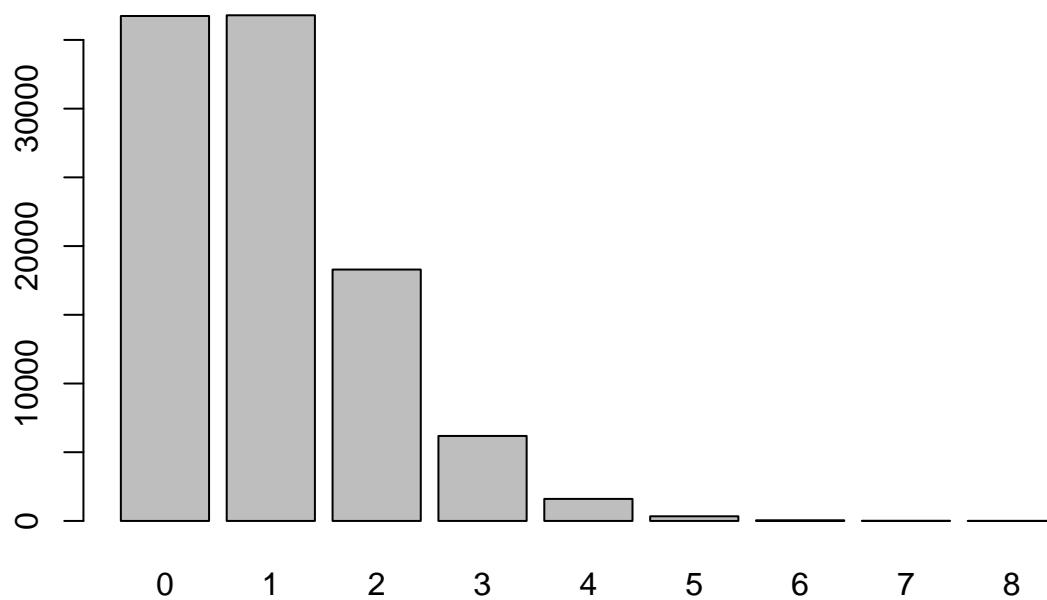
```
hist(rexp(10000, 1))
```

Histogram of rexp(10000, 1)



Number of arrivals in a period of time have a Poisson distribution

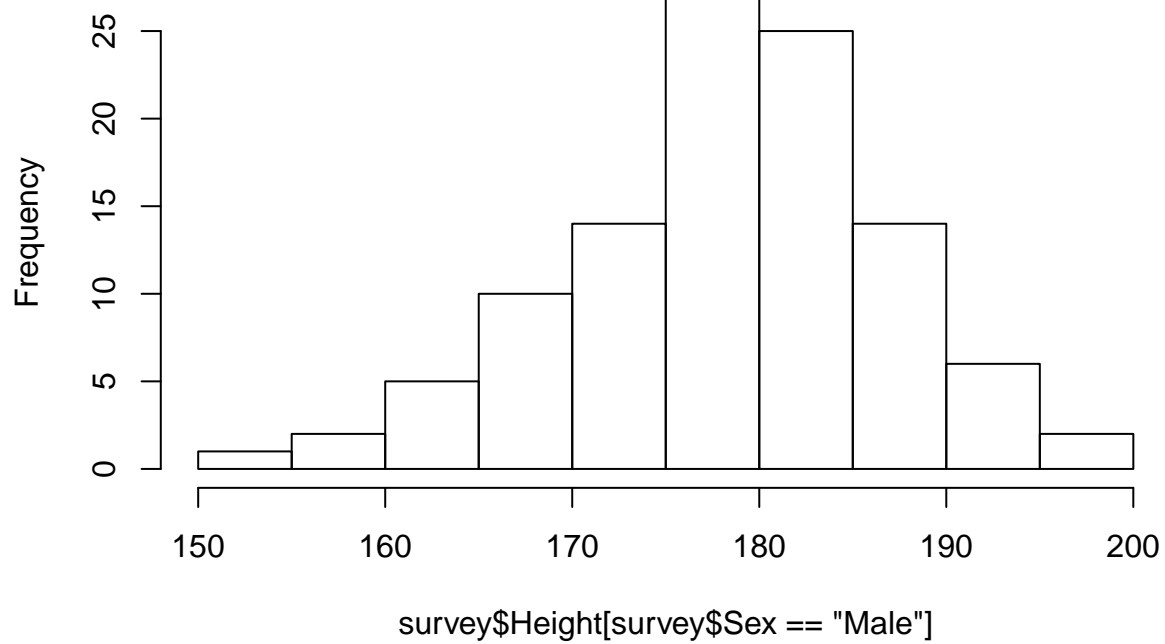
```
barplot(table(rpois(100000, 1)))
```



Heights of male students at University of Adelaide

```
hist(survey$Height[survey$Sex == "Male"])
```

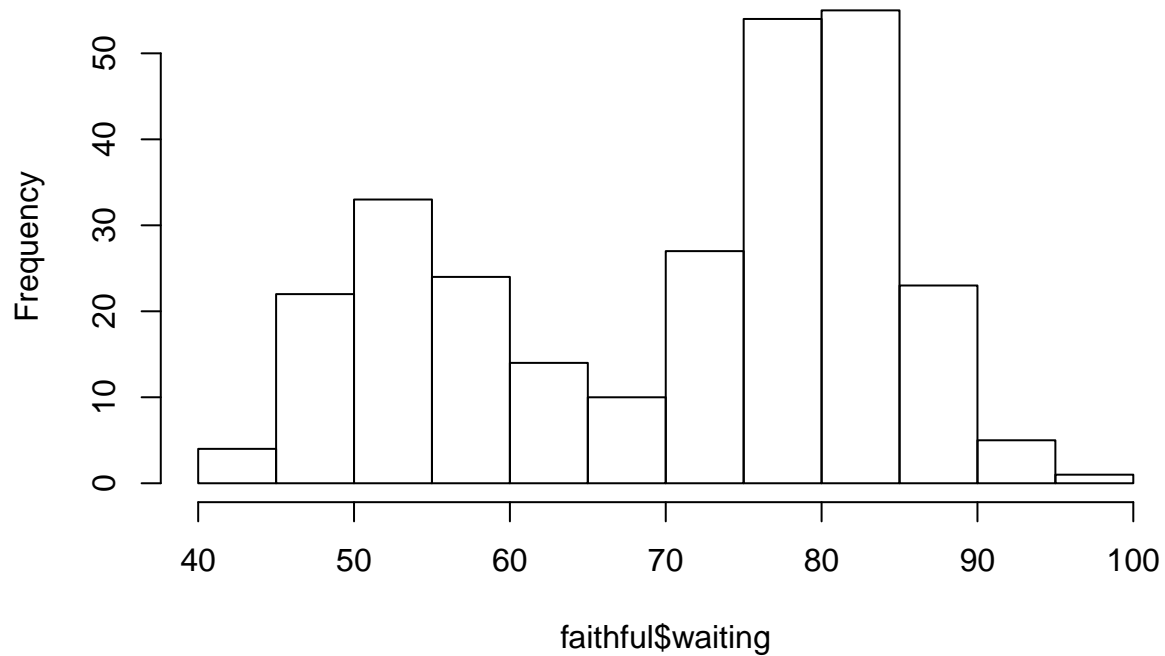
Histogram of survey\$Height[survey\$Sex == "Male"]



Waiting time for eruptions of Old Faithful geyser

```
hist(faithful$waiting)
```

Histogram of faithful\$waiting



What's this distribution?

```
hist(Orange$circumference)
```

Histogram of Orange\$circumference

