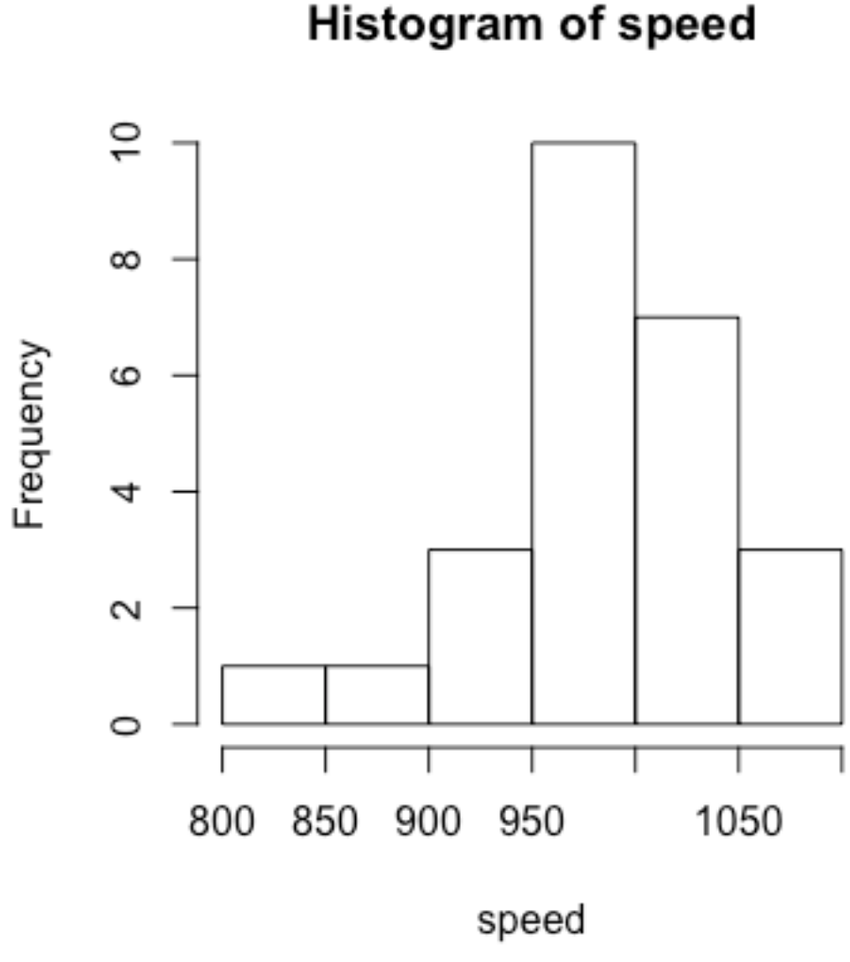
Example

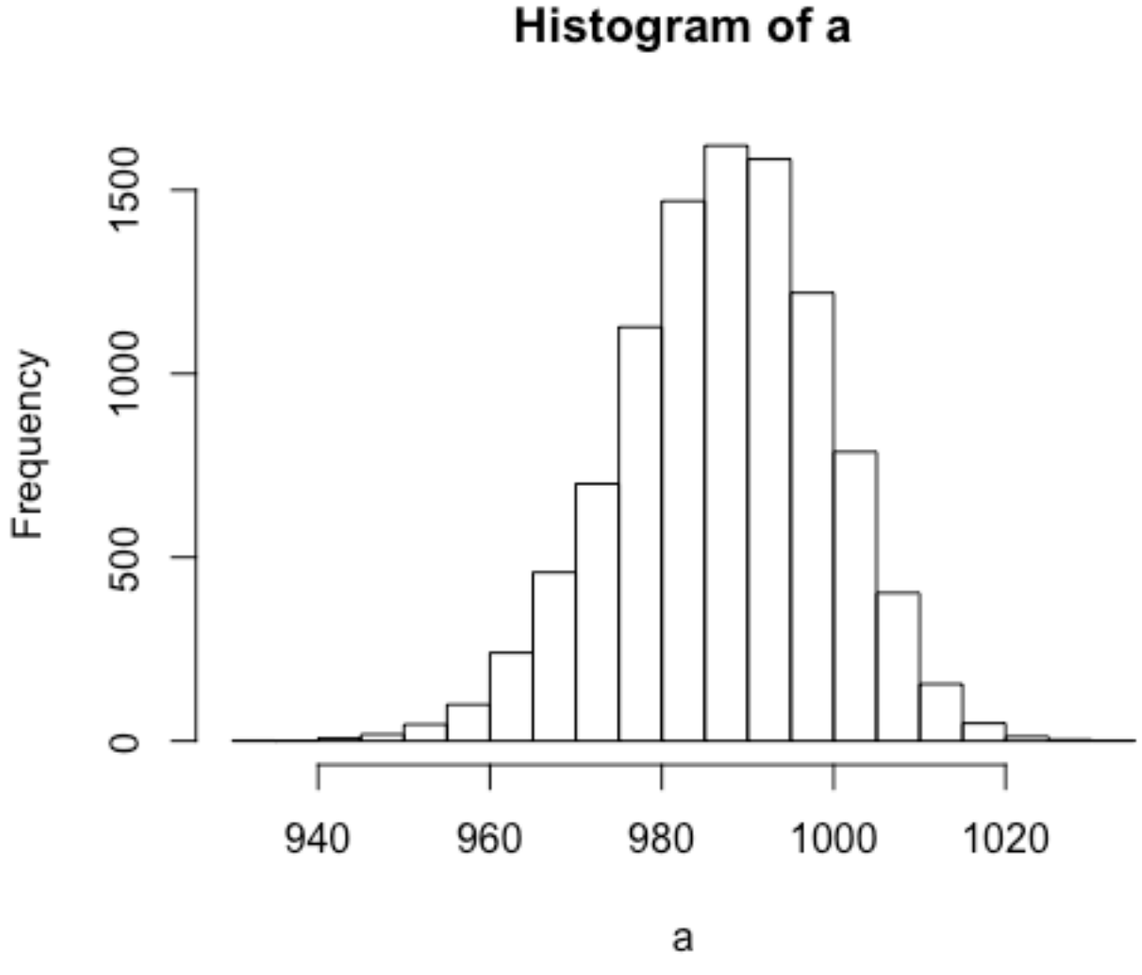
- Imagine we measure the speed of 25 military planes and plotted the data:



- What might the underlying population of military planes we are sampling from look like?

```
a <- numeric(10000)
for (i in 1:10000) {
  a[i] <- mean(sample(speed, replace = TRUE))
}
hist(a)
```

- This bit of code creates 10,000 samples based on our 25 observations and plots a histogram of these 10,000 sample means.



- We can use this to estimate population parameters such as mean and CI.

- If we measure a plane with speed of less 950, how likely is that given our estimated population? We can work out the total number of planes with a speed of 950 (which is 18)…

- The probably is therefore less than or equal to 18 in 10,000 (so $p <= .0018$)