

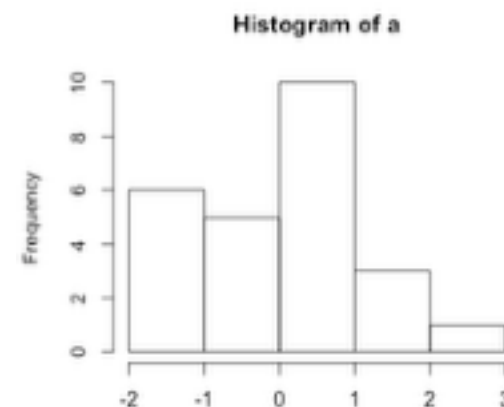
# Writing Functions in R

- As a general rule of thumb, if you ever want to run the same code more than once (but with different parameter values) you might want to consider turning the code into a function...
- Most of the commands you use in R are actually functions. A function takes a set of inputs, and produces an output.
- On the following slide I have taken the code I wrote to sample from the standard normal distribution and have turned it into a function which takes as its input the sample size you want to simulate.

```
just_simulate <- function(sample_size) {  
  a <- rnorm(sample_size, 0, 1)  
  hist(a)  
}
```

- I have created a function I've called `just_simulate()` which takes one parameter (which I've called `sample_size`), samples this number of times from the standard normal distribution, and then plots a histogram of the sample.
- I ask the function to simulate first 25 and then 1000000 samples simply by typing:

```
> just_simulate(25)
```



```
> just_simulate(1000000)
```

