

Week_1_Intuition_and_probability

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LO:

1. Draw random numbers in R.
2. Write loops in R.
3. Visualise data in R.
4. Estimate a number or probability.

Functions:

```
head()
table()
sample(x, size, replace = FALSE, prob = NULL)
test <- rnorm(x, mean = 0, sd = 1)
boxplot()
min(),max(),mean(),sd(),sum()
length()
unique()
round(): si she wu ru
hist(x, col, main, xlab, ylab)
plot()
choose()
```

Notes:

How to randomly choose numbers?

```
index <- sample(85,10,replace=FALSE)
random10 <- chicago[index,]
```

How to generate for loop?

```
df <- data.frame()
for (n in 1:50) {
  m <- c()
  for (i in 1:10000) {
    birth <- sample(365,n,replace = TRUE)
```

```
    if (length(unique(birth))!=n) {  
      m <- c(m,1)  
    } else {  
      m <- c(m,0)  
    }  
  }  
  sum <- sum(m)  
  prob <- sum/10000  
  df <- rbind(df,c(n,prob))  
}
```

How to use “or” operator?

A | B