Practice

Chris Coussa

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```r
###### R Code Practice: Week 1 Monday ######

# Get working directory
getwd()
```

```
## [1] "/Users/ccoussa717/Desktop/College Classes/National University/CSC220_AppliedStats/R_Code"
```

```r
# Simple math operations
4 / 2
```

```
## [1] 2
```

```r
log(12)
```

```
## [1] 2.484907
```

```r
sqrt(121)
```

```
## [1] 11
```

```r
pi
```

```
## [1] 3.141593
```

```r
sin(pi/2)
```

```
## [1] 1
```

```r
log(1)
```

```
## [1] 0
```

```r
(3 * 9) / (2 * 4)
```

```
## [1] 3.375
```

```r
# assigning variables with "=" or "<-"
x <- 5 + 9 #you need to exicute this line to load the var into RAM, then you can use the var
chris = (5 + 9 + 10 - 56) / 32
x
```

```
## [1] 14
```

```r
y = 45
z = x + y
print(z)
```

```
## [1] 59
```

```r
myNumber = z
rm (myNumber)

# Putting a "?" in front of a function and run it, you will get a help menu
?print()
```

```r
# Removing variables from memory
rm(chris)
rm(n)
```

```
## Warning in rm(n): object 'n' not found
```

```r
# Generate a sequence of numbers from and to are the range and by is the width between the numbers, a v
chris = seq(from = 3, to = 20, by =4)
print(chris)
```
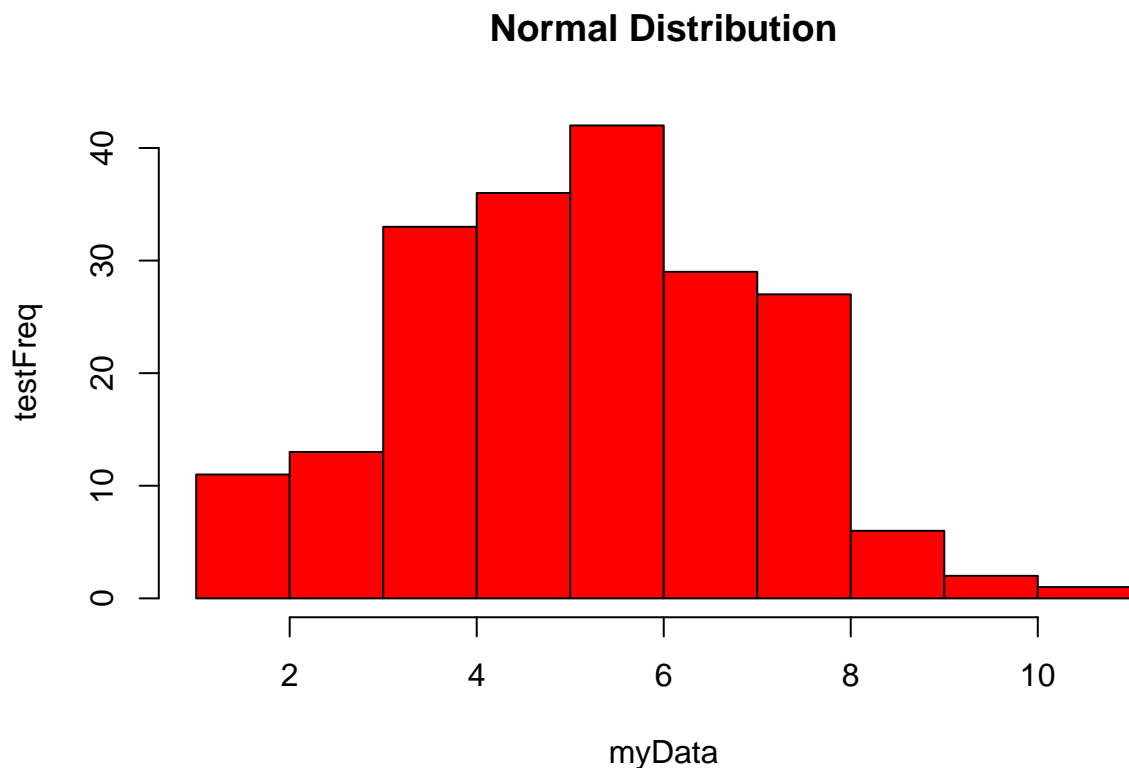
```
## [1]  3  7 11 15 19
```

```
###### Creating a Histogram: Week 1 Wednesday ######
```

```r
# Normal Distribution in R - generate some dummy variables
dummy_data = rnorm(200, 5, 2)
# Generate a Histogram
hist(dummy_data, main = "Normal Distribution", breaks = 10, col = "red", xlab  = "myData", ylab = "testl
```

Normal Distribution


```r
?rnorm
# Set the seed to generate the same numbers each time the code runs
set.seed(30)
rnorm(20, 5, 2)
```

```
##  [1] 2.422964 4.304621 3.956742 7.546946 8.649041 1.977384 5.221016
##  [8] 3.478408 3.660206 5.549039 2.953456 1.361204 3.664420 4.881404
## [15] 6.760332 5.537026 4.960841 3.950106 2.181337 1.332022
```

```r
?set.seed
```

```r
# Creating a vector from set data points, the c stands for "combine"
data = c(3, 5, 6, 20, 25, 34, 58, 65)
```
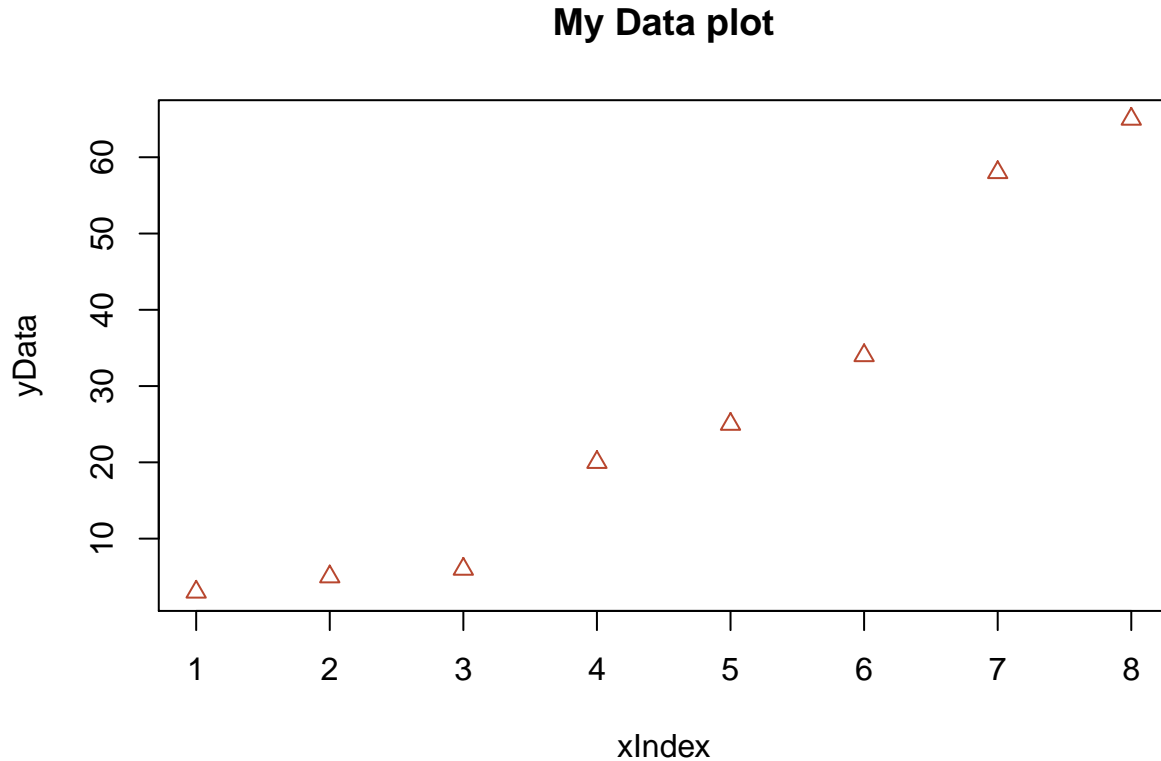
```r
print(data)
```

```
## [1]  3  5  6 20 25 34 58 65
```

```r
#Create a plot
plot(data, col = "#B8472F", main = "My Data plot", xlab = "xIndex", ylab = "yData", pch = 2)
```

My Data plot


```r
# Calculates the Standard Deviation of the data vector
mySd = sd(data)
myVarience = mySd^2
print(mySd)
```

```
## [1] 23.92846
```

```r
print(myVarience)
```

```
## [1] 572.5714
```

```r
?ada
```

```
## No documentation for 'ada' in specified packages and libraries:
## you could try '??ada'
```

```r
# install.packages("ada")
# library(ada)
# install.packages("neat")
# library(neat)
?`knitr-package`
```