Clase02.R

User

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```
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############

# Impoprtar datos CSV ------------------------------------------------------
# read.csv  funcion para importar datos

#comando setwd especifica la ruta en donde se encuentran las bases de datos almacenados
setwd("C:/estadistica/Analisis-estadisticos-2021")

diametros <- read.csv("DBH_1.csv", header = TRUE, encoding = "UTF-8")
##diam <- read.csv("DBH_1.csv", header = TRUE, encoding = "UTF-8")

#comando head() para verificar
head(diametros)
```

```
##   Tree  dbh parcela
## 1    1 16.5       1
## 2    2 25.3       1
## 3    3 22.1       1
## 4    4 17.2       1
## 5    5 16.1       1
## 6    6  8.1       1
```

```
tail(diametros)
```

```
##    Tree  dbh parcela
## 25   25 28.5       3
## 26   26 10.4       3
## 27   27 11.5       3
## 28   28 14.3       3
## 29   29 17.2       3
## 30   30 16.8       3
```

```
# medidas de tendencia central ---------------------------------------------


##mean(dbh)
mean(diametros$dbh)
```

```
## [1] 15.64333
```

```
median(diametros$dbh)
```

```
## [1] 15.75
```

```
fivenum(diametros$dbh)
```

```
## [1]  5.40  9.70 15.75 20.50 34.30
```

```
#{
#Función que encuentra la moda de un vector x
# m1 <- sort(table(x),decreasing=T)
# moda <- names(m1[m1==m1[1]])
# moda <- as.numeric(moda)
#  return(moda)
#}

# medidas de dispersion ----------------------------------------------------

sd(diametros$dbh)
```

```
## [1] 7.448892
```

```
var(diametros$dbh)
```

```
## [1] 55.48599
```

```
#coeficiente de variacion
sd(diametros$dbh)/mean(diametros$dbh) *100
```

```
## [1] 47.61704
```

```
# cuantiles ----------------------------------------------------------------

quantile(diametros$dbh, 0.5)
```

```
##   50%
## 15.75
```

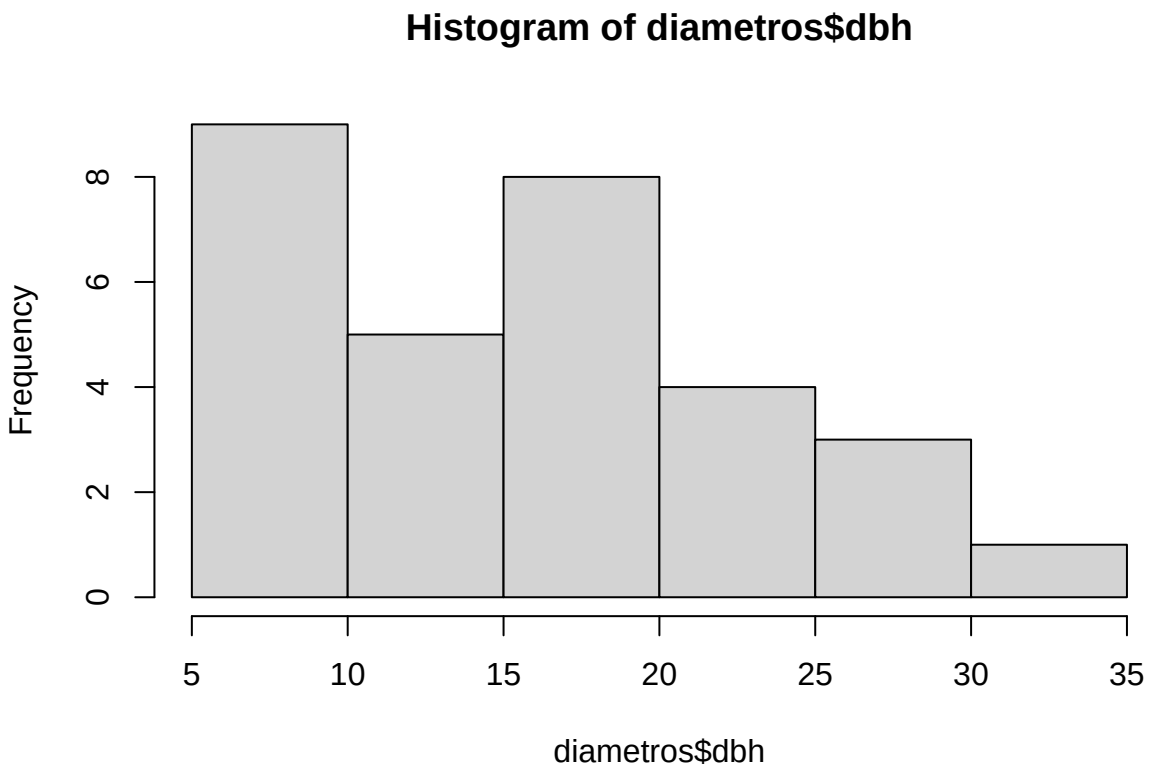
```
quantile(diametros$dbh, 0.15)
```

```
##   15%
## 7.905
```

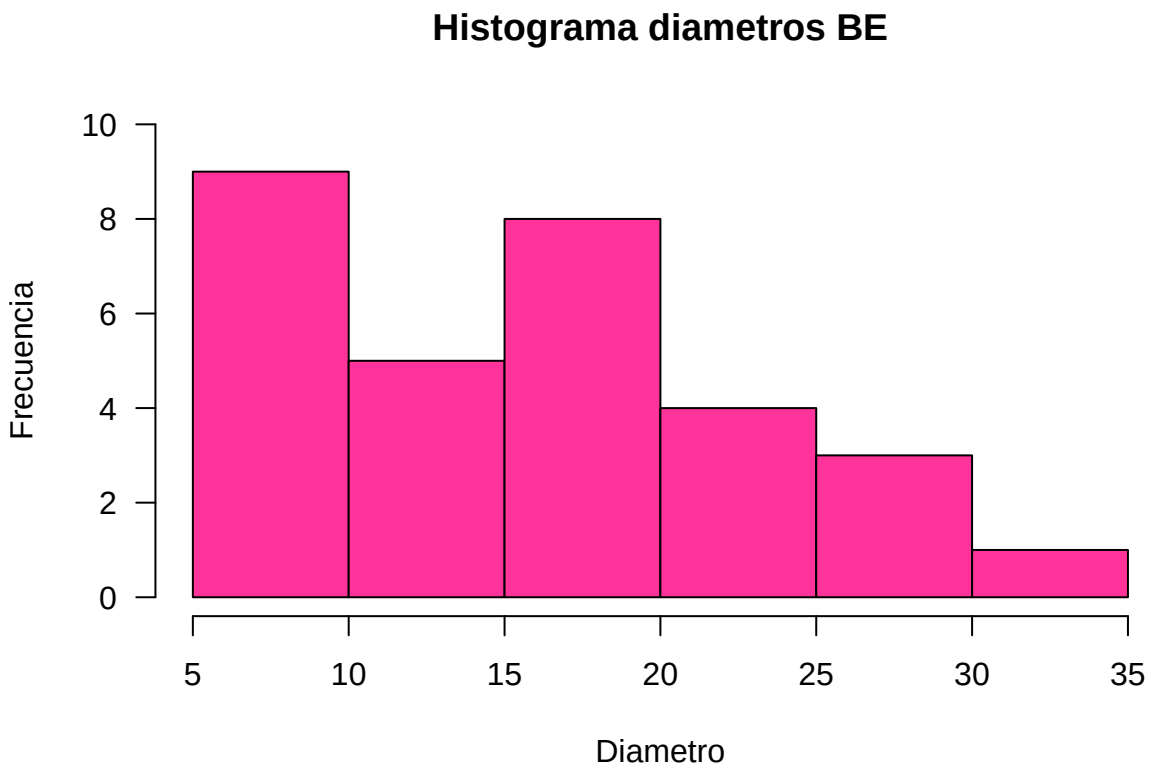
```
quantile(diametros$dbh, 0.25)
```

```
##   25%
## 9.775
```

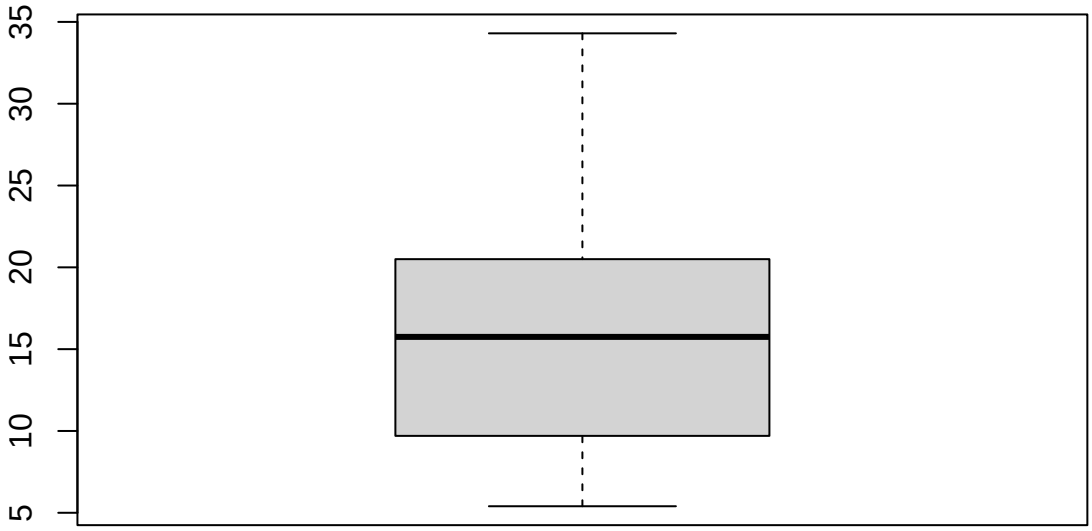
```
# graficas -----------------------------------------------------------------

#funcion histohramas (hist)

hist(diametros$dbh)
```



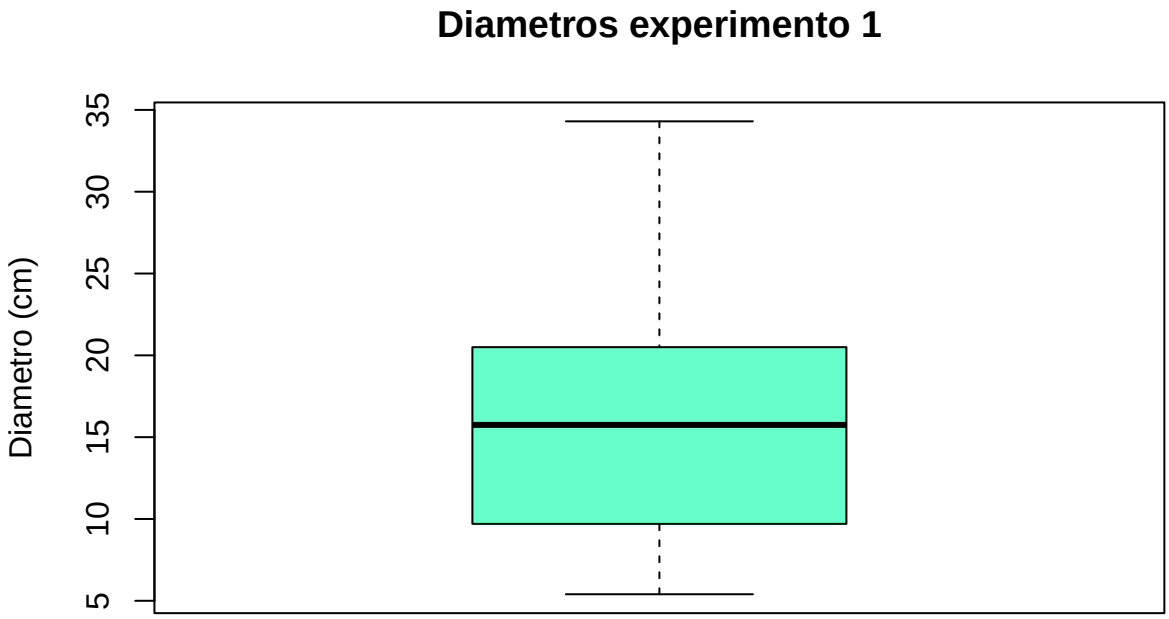

```
hist(diametros$dbh, main = "Histograma diametros BE",
     ylab = "Frecuencia", xlab = "Diametro",
     col = "#ff3399", ylim = c(0,10),
     las = 1)
```



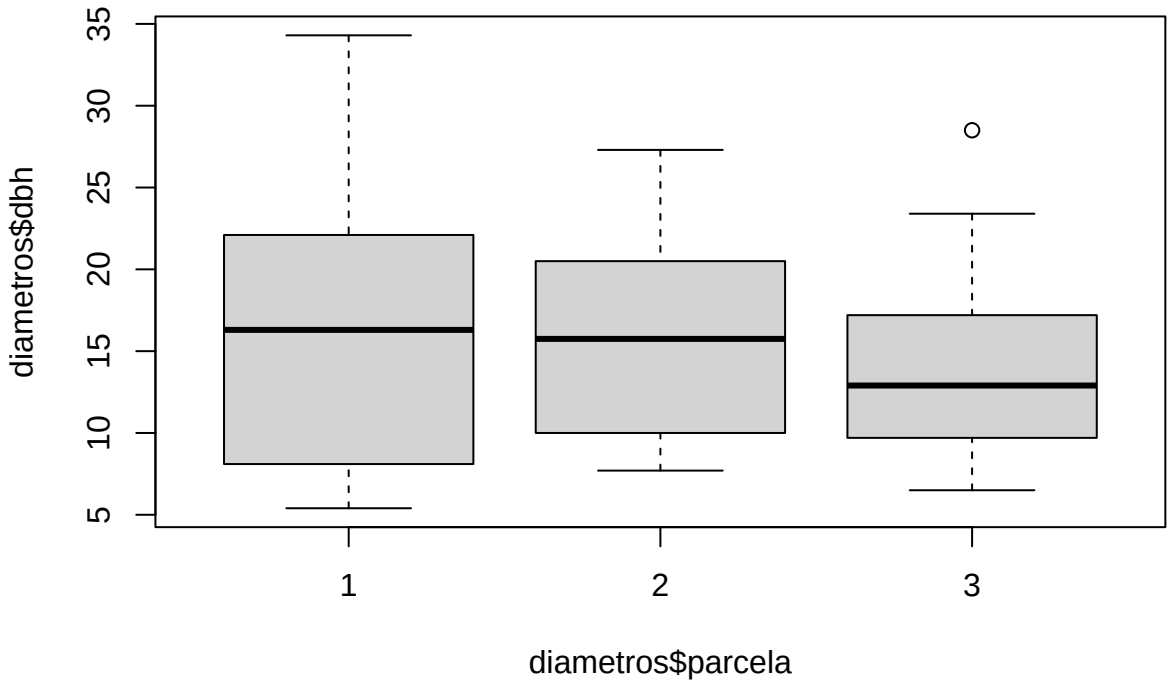

```
# boxplot ------------------------------------------------------------------

boxplot(diametros$dbh)
```



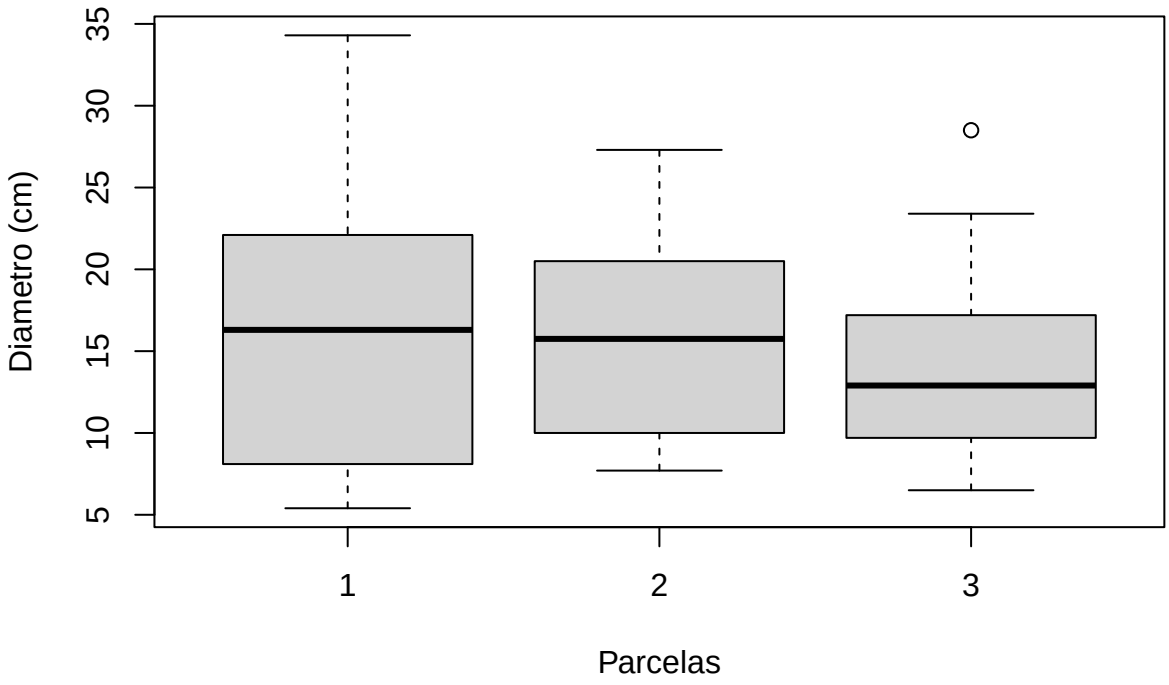

```
boxplot(diametros$dbh, ylab = "Diametro (cm)", main = "Diametros experimento 1",
        col = "#66ffcc")
```




```
boxplot(diametros$dbh ~ diametros$parcela)
```




```
boxplot(diametros$dbh ~ diametros$parcela, xlab = "Parcelas", ylab = "Diametro (cm)")
```




```
# stem ----------------------------------------------------------------------
```

```
stem(diametros$dbh)
```

```
##
##   The decimal point is 1 digit(s) to the right of the |
##
##   0 | 5678888
##   1 | 000124
##   1 | 566677778
##   2 | 1234
##   2 | 579
##   3 | 4
```

```
stem(diametros$dbh, scale = 2)
```

```
##
##   The decimal point is at the |
##
##    4 | 47
##    6 | 578
##    8 | 127
##   10 | 0425
##   12 |
##   14 | 3569
##   16 | 158225
##   18 |
```

```
##   20 | 5
##   22 | 14
##   24 | 13
##   26 | 3
##   28 | 5
##   30 |
##   32 |
##   34 | 3
```

```
# la funcion names.arg sirve para renombrar cada una de las columnas
# names.arg = c("Horsebean", "Meatmeal", "Sunflower", "Linseed", "Casein", "Soybean")
```