SCRIPT_1.R

yesiv

2023-02-09

```
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# 09/02/2023
# Sesion 1: Estadísticas descriptivas

# SESION 1 ------------------------------------------------------------

dbh <- 15
h <- 8
#Multiplicacion
dbh * h
```

```
## [1] 120
```

```
log(dbh)
```

```
## [1] 2.70805
```

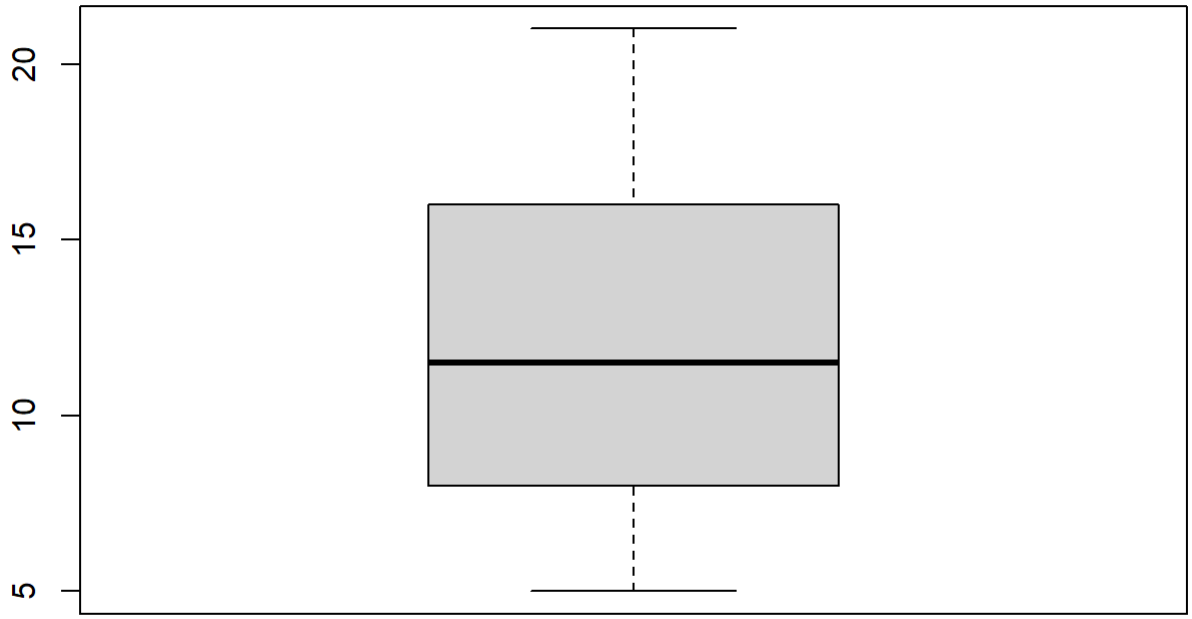
```
dbh <- c(12, 8, 7, 5, 11, 13, 16,21, 8, 16)

#Multiplicación
dbh*h
```

```
##  [1]  96  64  56  40  88 104 128 168  64 128
```

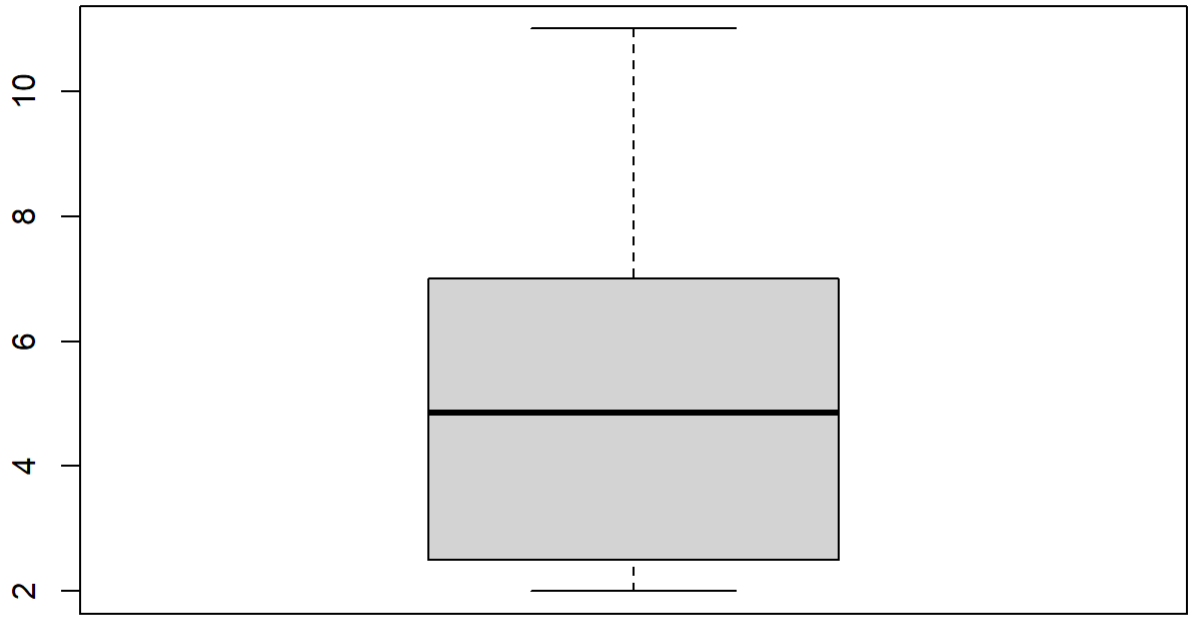
```
h <- c(5, 3, 2.5, 2, 4.7, 5.8, 7, 11, 2.4, 7.2)
#Multiplicación
dbh*h
```

```
##  [1]  60.0  24.0  17.5  10.0  51.7  75.4 112.0 231.0  19.2 115.2
```

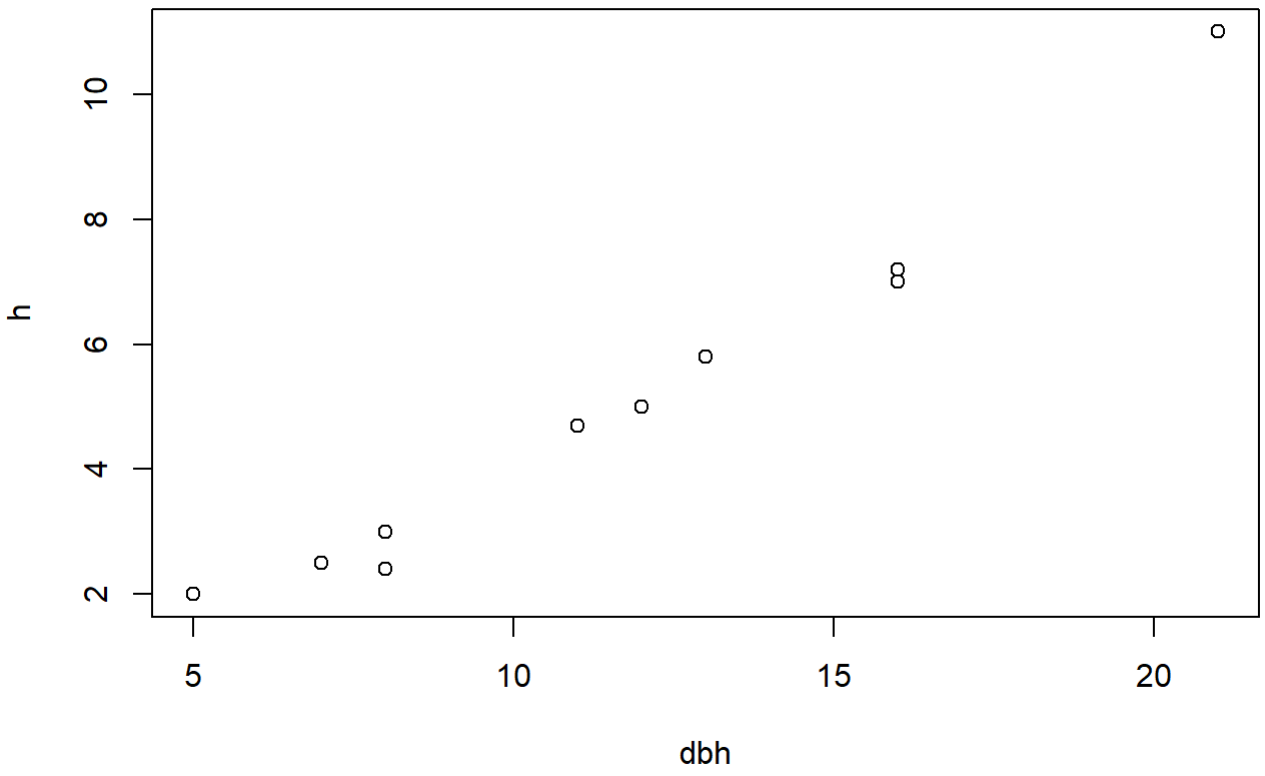
```
# Gráficas ------------------------------------------------------------


boxplot(dbh)
```



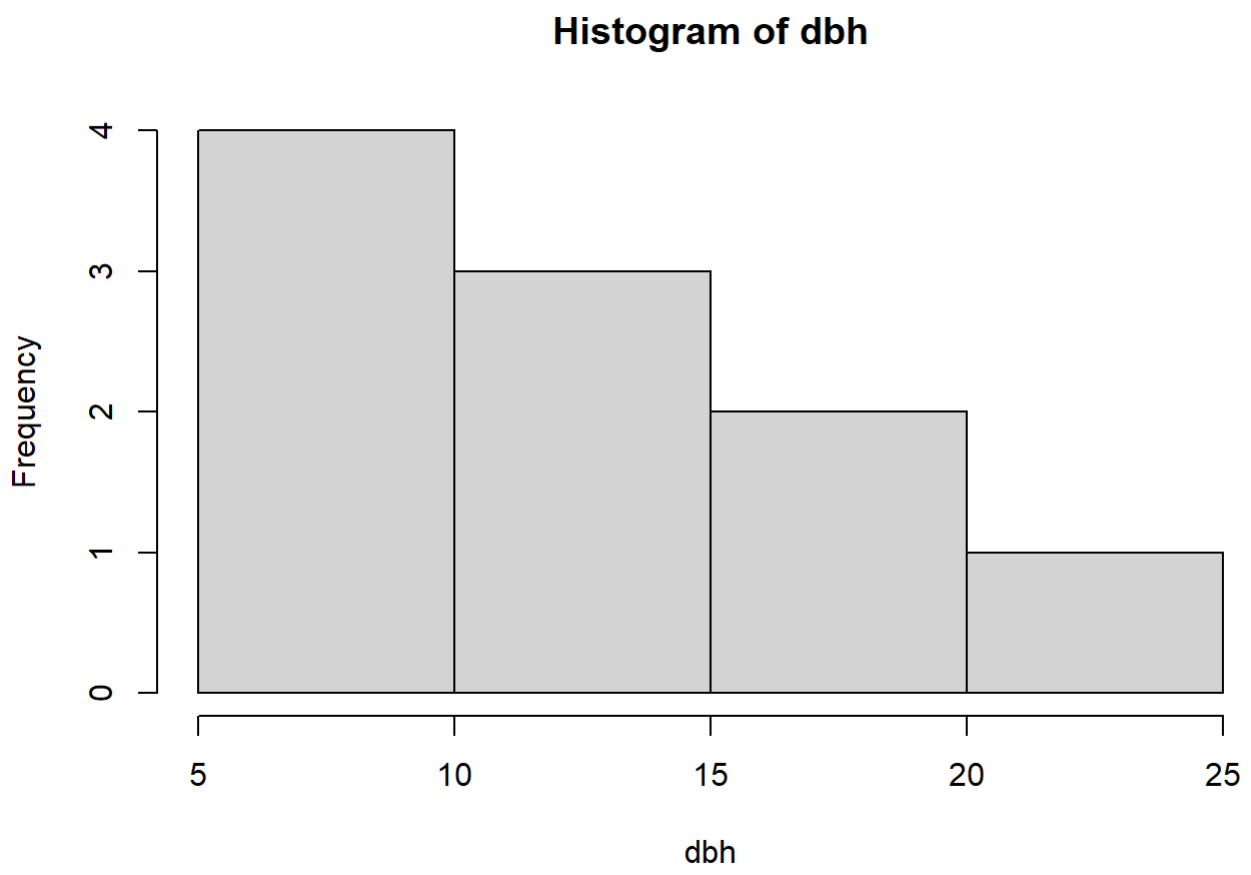

```
boxplot(h)
```




```
plot(dbh,h)
```



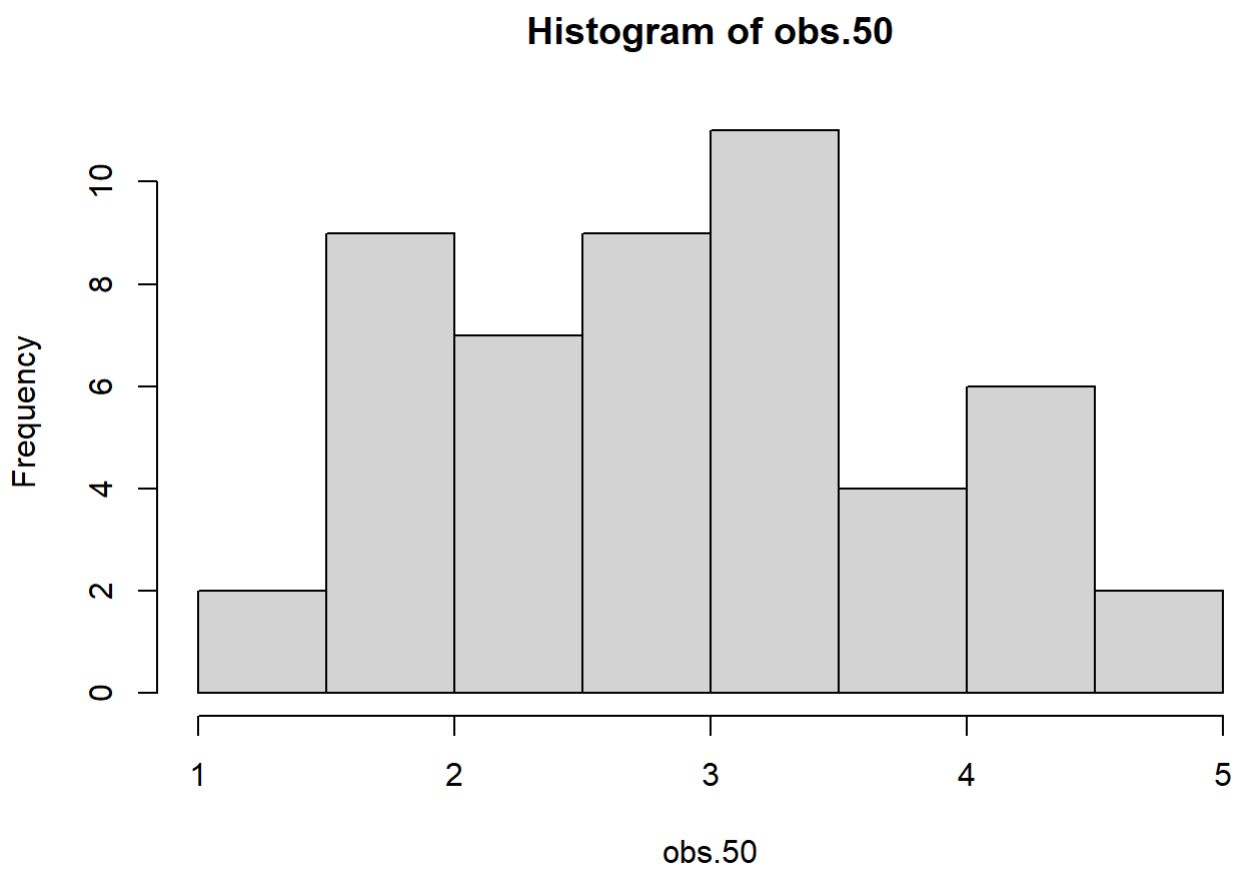

```
hist(dbh)
```



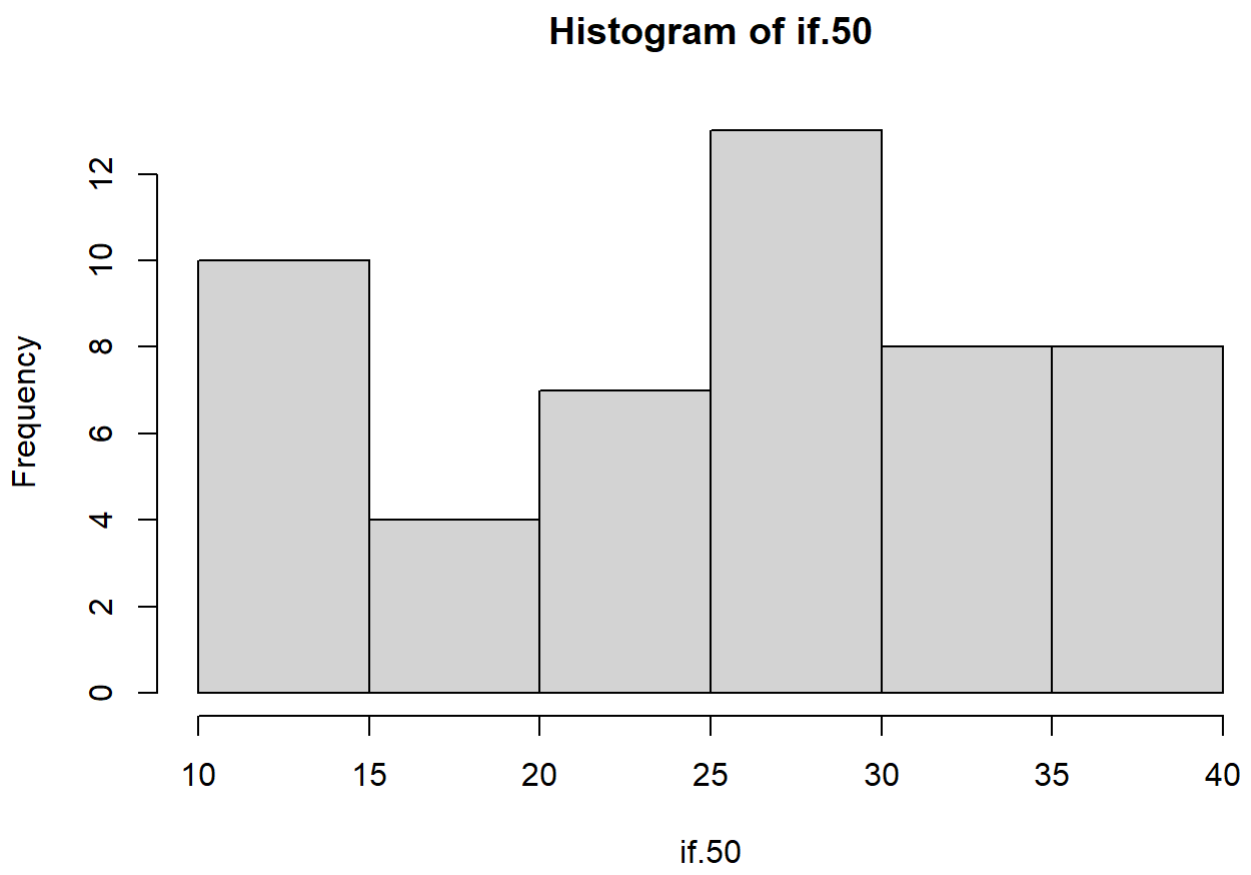

```
set.seed(13)
rnorm(50, mean =3)
```

```
##  [1] 3.5543269 2.7197281 4.7751634 3.1873201 4.1425261 3.4155261 4.2295066
##  [8] 3.2366797 2.6346172 4.1051443 1.9064060 3.4618709 1.6390155 1.1439728
## [15] 2.5601446 2.8060531 4.3964315 3.1006632 2.8855612 3.7022252 3.2625427
## [22] 4.8361633 3.3574024 1.9545899 3.6201841 3.1493545 1.5406831 0.9729562
## [29] 1.9430422 2.2718563 2.9917893 3.8477974 2.6165085 2.4734885 2.7267740
## [36] 2.3942584 2.6671327 2.7584625 2.1372246 2.1530292 3.1003403 4.5900335
## [43] 3.5664949 4.6144795 2.5313498 2.2738986 1.9766610 1.0621845 3.2771473
## [50] 4.4083537
```

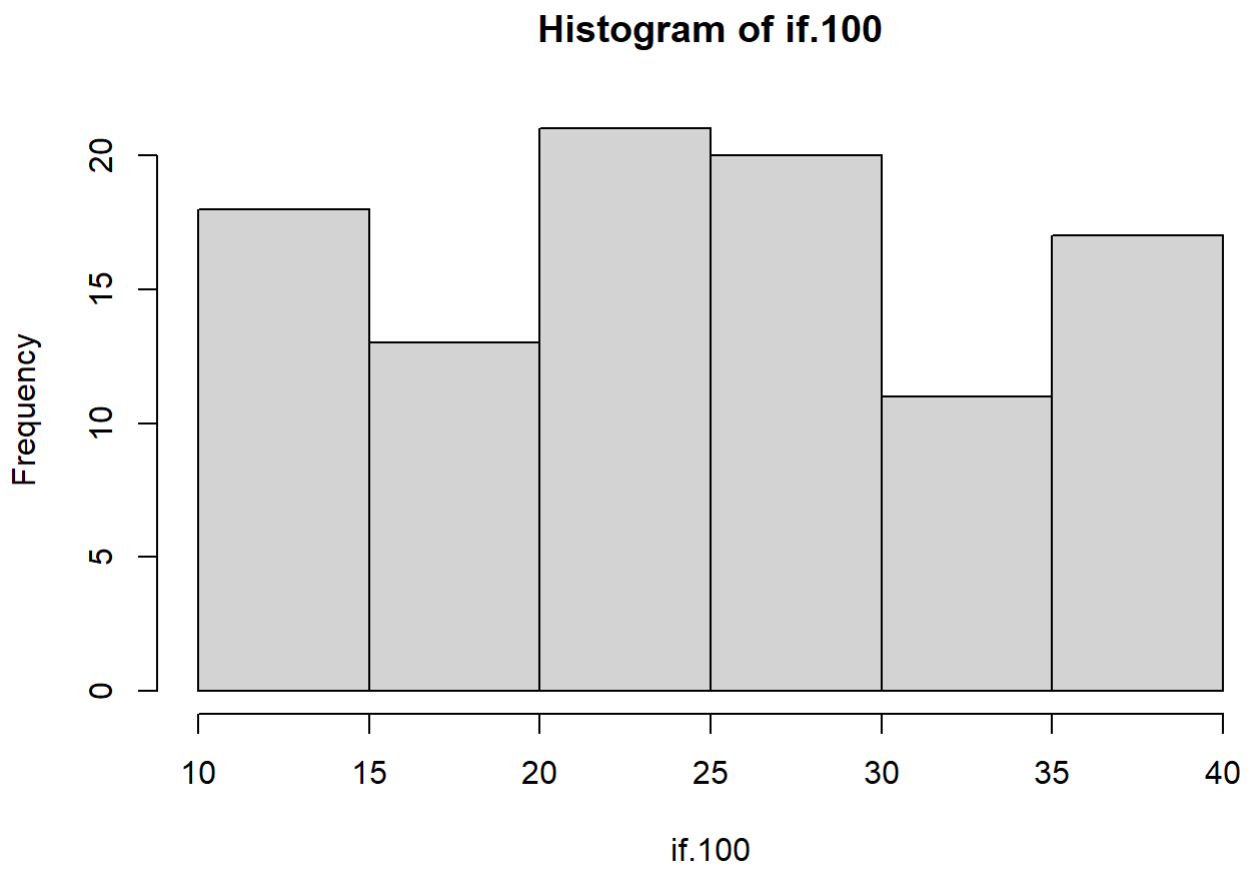
```
obs.50 <- rnorm(50, mean =3)
hist(obs.50)
```



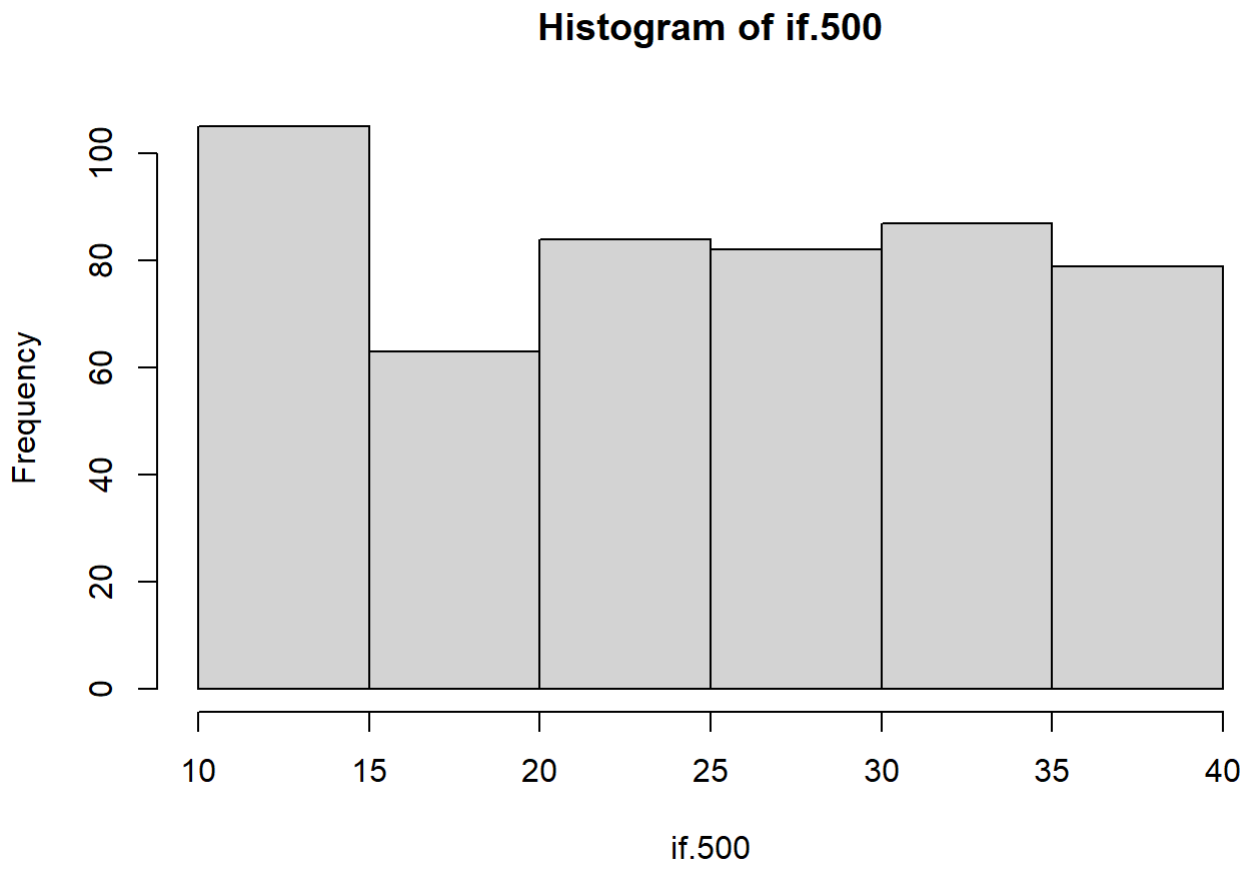

```
set.seed(13)
if.50 <- runif(50, min = 10, max = 40)
hist(if.50)
```



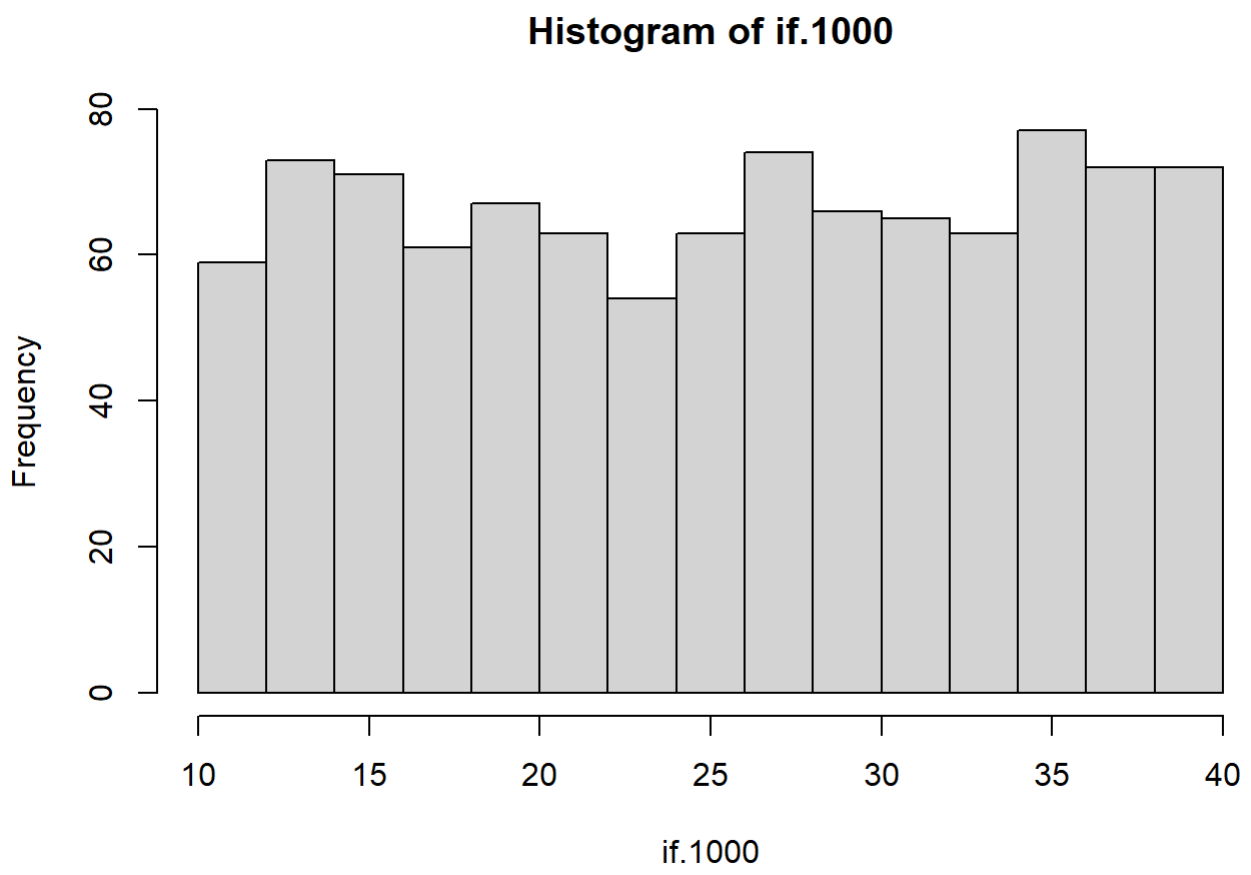

```
set.seed(13)
if.100 <- runif(100, min = 10, max = 40)
hist(if.100)
```




```
if.500 <- runif(500, min = 10, max = 40)
hist(if.500)
```



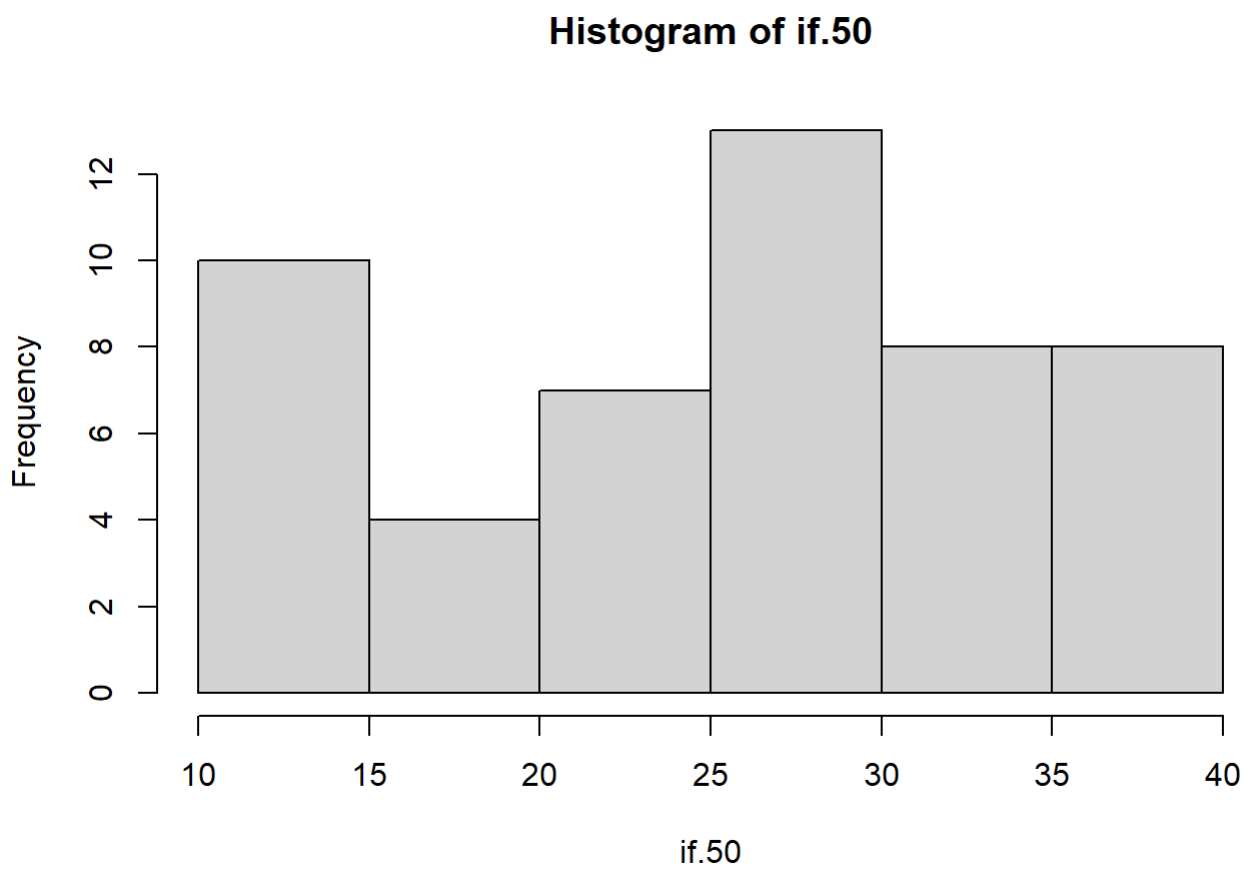

```
if.1000 <- runif(1000, min = 10, max = 40)
hist(if.1000)
```




```
#grafica de hoja y tallo
stem(if.50)
```

```
##
##   The decimal point is 1 digit(s) to the right of the |
##
##   1 | 0112333344
##   1 | 77
##   2 | 001122344
##   2 | 666778888999
##   3 | 000012334
##   3 | 66678899
```

```
hist(if.50)
```



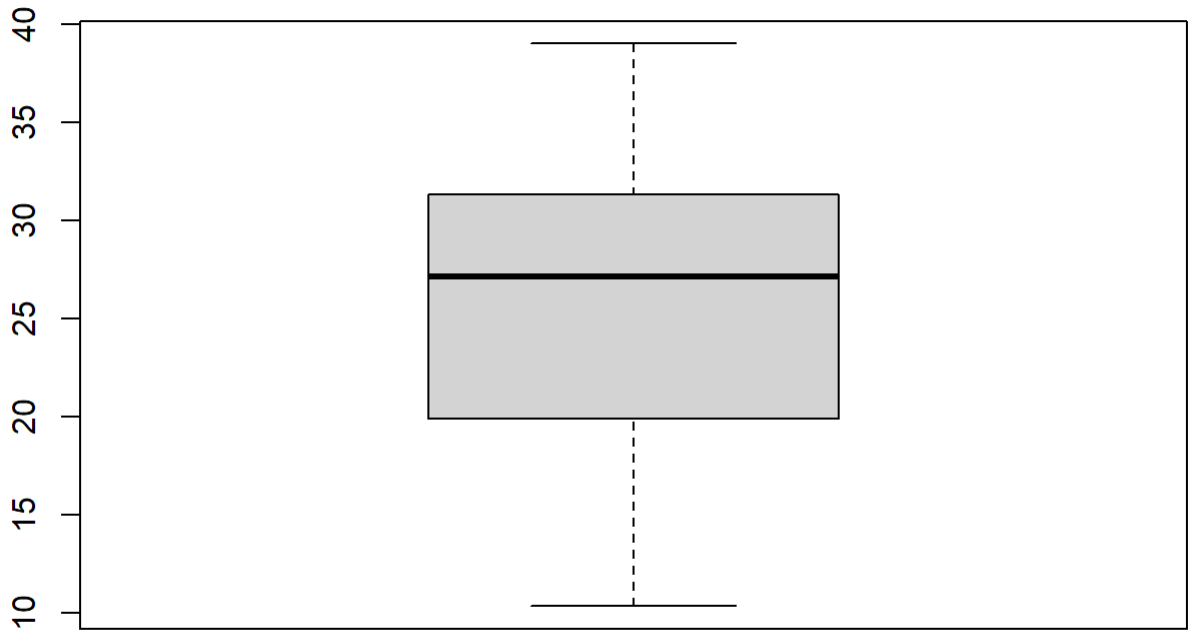

```
# Restricciones ------------------------------------------------------------

#Trabajar con datos del objeto if.50

#Estadística descriptiva

mean(if.50)
```

```
## [1] 25.3432
```

```
fivenum(if.50)
```

```
## [1] 10.32800 19.87381 27.10863 31.30967 39.00500
```

```
boxplot(if.50)
```




```
#igual a ==
#diferente a !=
#igual o mayor >=
#igual o menos <=
#mayor que >
#menor que <

#Quiero con el if.50 que me de los datos igual o menor a la mediana

if.50 <= median(if.50)
```

```
##  [1] FALSE  TRUE  TRUE  TRUE FALSE  TRUE FALSE FALSE FALSE  TRUE FALSE FALSE
## [13] FALSE  TRUE FALSE  TRUE  TRUE FALSE FALSE FALSE  TRUE  TRUE FALSE  TRUE
## [25]  TRUE FALSE  TRUE  TRUE  TRUE FALSE  TRUE  TRUE FALSE FALSE  TRUE  TRUE
## [37]  TRUE  TRUE FALSE  TRUE FALSE  TRUE FALSE FALSE FALSE FALSE  TRUE  TRUE
## [49] FALSE FALSE
```

```
subset(if.50, if.50 <= median(if.50))
```

```
##  [1] 17.38412 21.68903 12.74151 10.32800 11.23190 26.98841 20.93544 20.72239
##  [9] 14.11200 26.40847 25.84244 12.60278 10.95175 23.84238 19.90063 22.69326
## [17] 22.15630 26.20273 13.21857 23.63335 11.55899 12.51436 16.89851 14.43750
## [25] 19.87381
```

```
subset(if.50, if.50 >= median(if.50))
```

```
##  [1] 31.30967 38.86194 27.22886 32.93194 36.20147 29.83365 36.35113 36.71677
##  [9] 27.80642 27.74371 35.96354 30.41571 30.33739 28.59972 29.00562 37.56123
## [17] 34.26281 32.76192 28.10645 39.00500 28.13664 29.18814 37.56994 31.97295
## [25] 30.41875
```

```
dbh.50 <- subset(if.50, if.50 <= median(if.50))

dbh.up50 <- subset(if.50, if.50 >= median(if.50))

dbh.up30 <- subset(if.50, if.50>30)

dbh.up30
```

```
##  [1] 31.30967 38.86194 32.93194 36.20147 36.35113 36.71677 35.96354 30.41571
##  [9] 30.33739 37.56123 34.26281 32.76192 39.00500 37.56994 31.97295 30.41875
```

```
mean(dbh.up30)
```

```
## [1] 34.54013
```

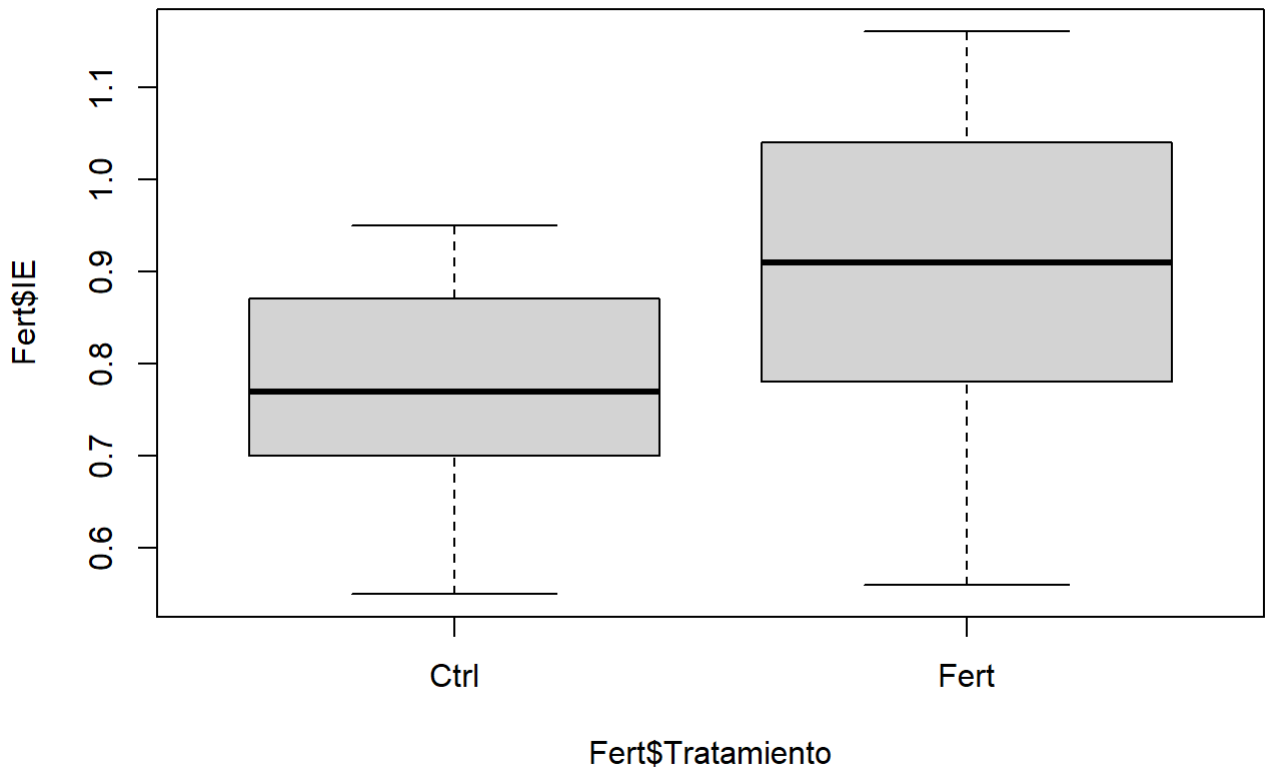
```
sd(dbh.up30)
```

```
## [1] 3.100909
```

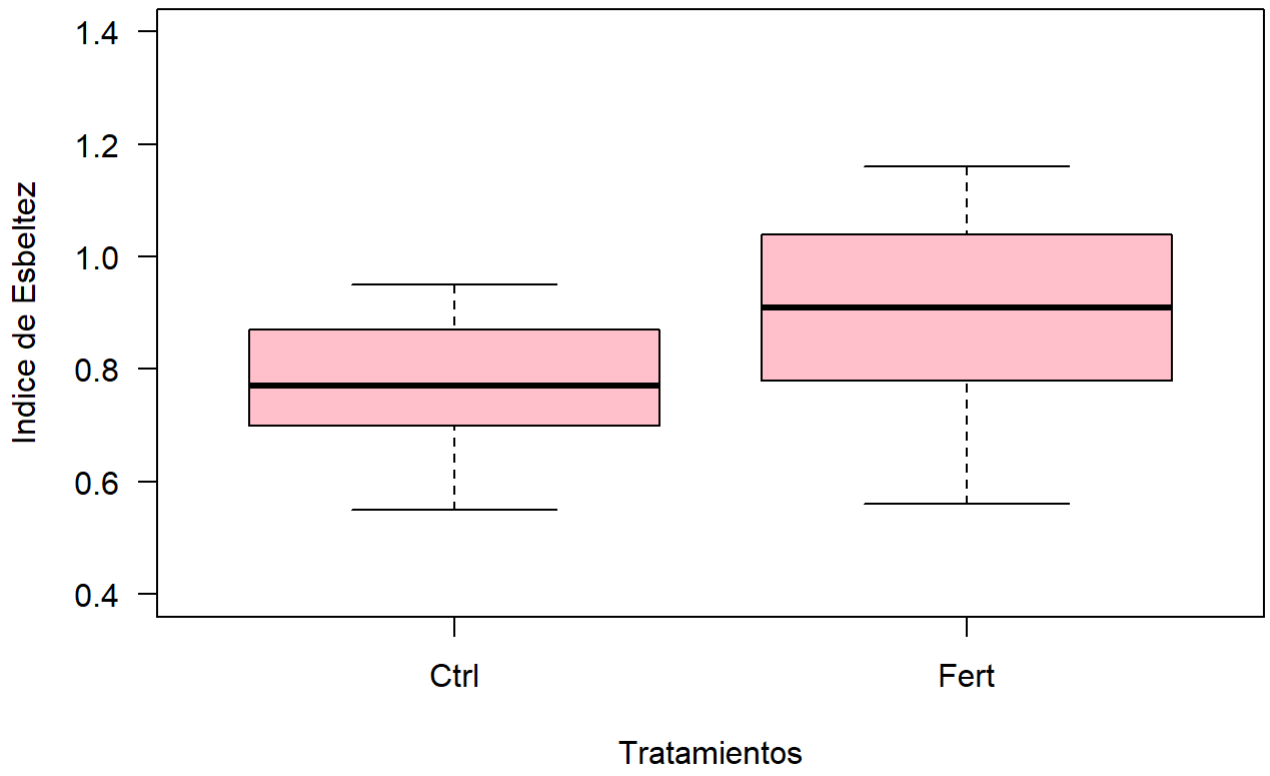
```
#IMPORTAR DATOS ------------------------------------------------------------

#función read.csv


Fert <- read.csv("vivero1.csv", header = TRUE)
Fert$Tratamiento
```

```
##  [1] "Ctrl" "Ctrl" "Ctrl" "Ctrl" "Ctrl" "Ctrl" "Ctrl" "Ctrl" "Ctrl" "Ctrl"
## [11] "Ctrl" "Ctrl" "Ctrl" "Ctrl" "Ctrl" "Ctrl" "Ctrl" "Ctrl" "Ctrl" "Ctrl"
## [21] "Ctrl" "Fert" "Fert" "Fert" "Fert" "Fert" "Fert" "Fert" "Fert" "Fert"
## [31] "Fert" "Fert" "Fert" "Fert" "Fert" "Fert" "Fert" "Fert" "Fert" "Fert"
## [41] "Fert" "Fert"
```

```
boxplot(Fert$IE ~ Fert$Tratamiento)
```




```
#Para personalizar en diferentes líneas es coma, o en isntrucción diferente, ok para personaliza
r el eje de las x y y

boxplot(Fert$IE ~ Fert$Tratamiento,
        xlab = "Tratamientos",
        ylab = "Indice de Esbeltez",
        col = "pink",
        mail = "Vivero Bosque Escuela",
        las = 1,
        ylim =c (0.4, 1.4))
```




```
#dirección de los subtítuos de los ejes de las y (horizontal o vertical)
```