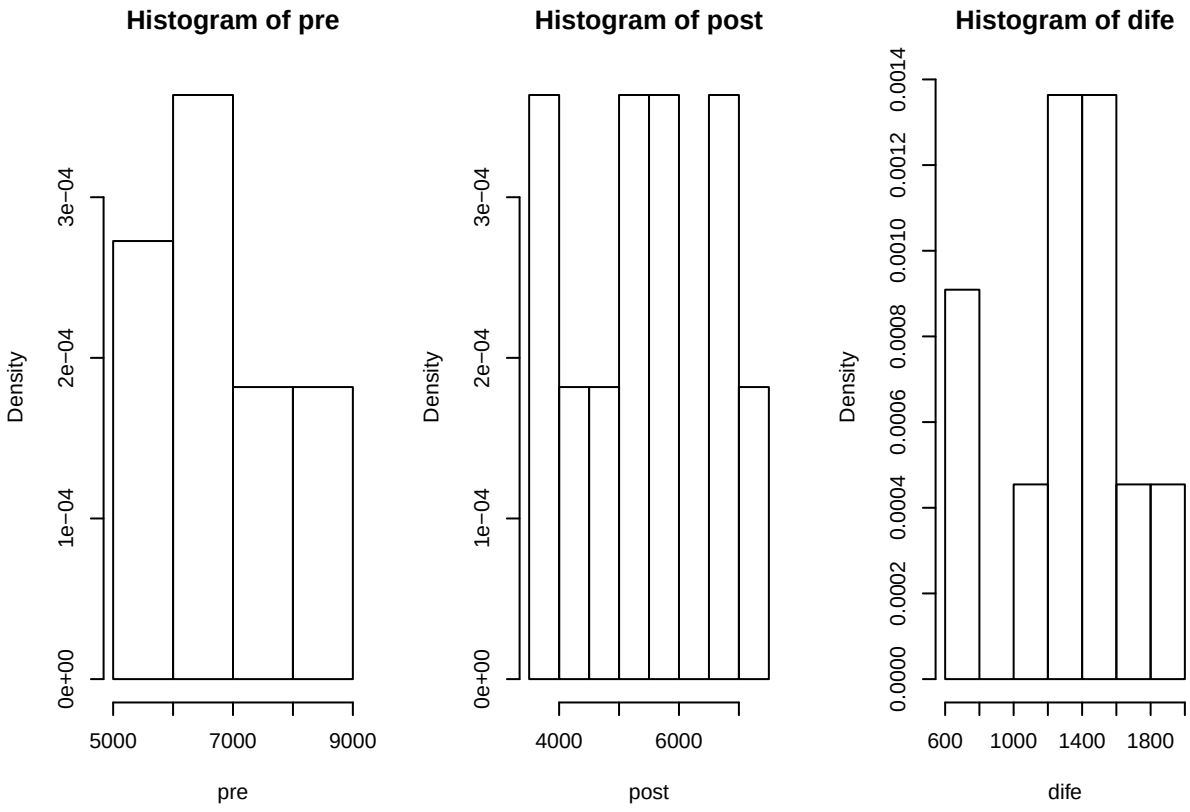
scripttest3.R

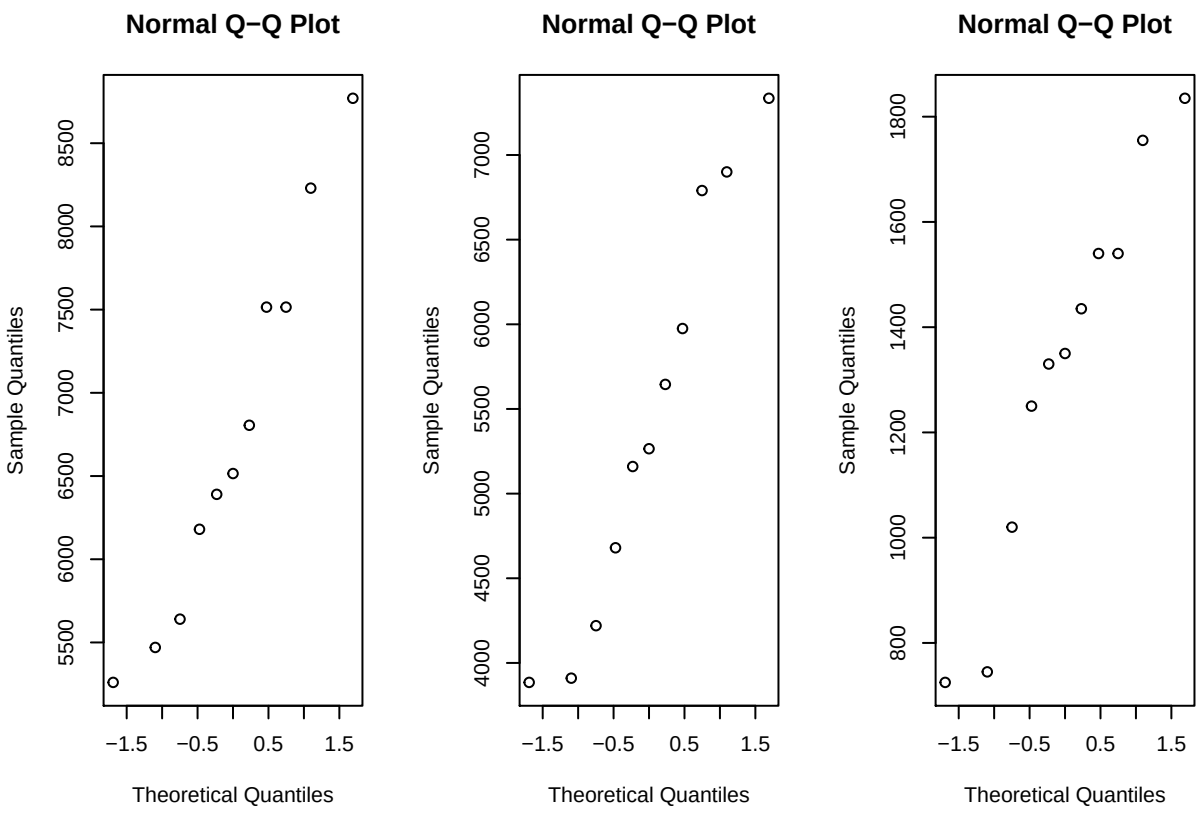
maru

Mon Oct 23 09:38:42 2017

```
##############################################
# ingesta pre y post menstruacion
##############################################
pre<-scan(text = '
5260 5470 5640 6180 6390 6515 6805 7515 7515 8230 8770')

post<-scan(text = '
3910 4220 3885 5160 5645 4680 5265 5975 6790 6900 7335')

dife<-pre-post
par(mfrow=c(1,3))
hist(pre,probability=T)
hist(post,probability=T)
hist(dife,probability=T) #cual o cuales de los graficos hay que mirar?
```




```
qqnorm(pre)
qqnorm(post)
qqnorm(dife)
```




```
shapiro.test(pre)
```

```
##
##  Shapiro-Wilk normality test
##
## data:  pre
## W = 0.95237, p-value = 0.6743
```

```
shapiro.test(post)
```

```
##
##  Shapiro-Wilk normality test
##
## data:  post
## W = 0.93636, p-value = 0.4787
```

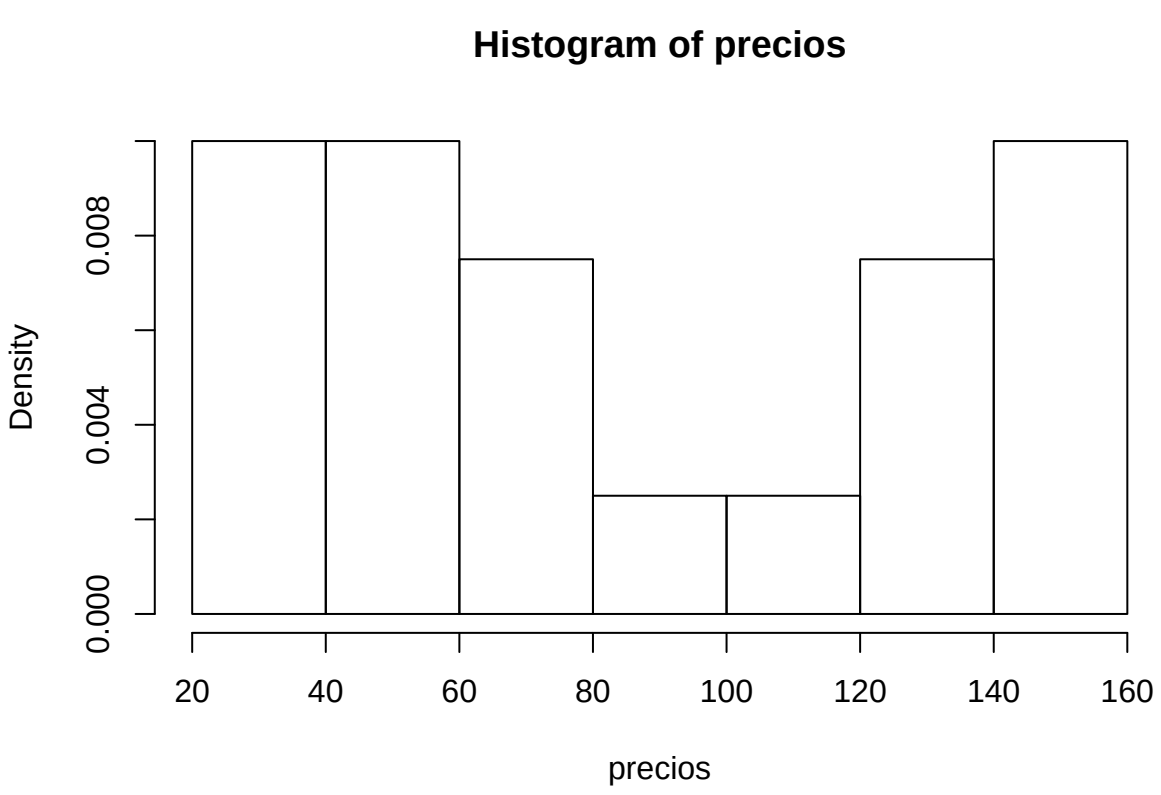
```
shapiro.test(dife) #cual de estos pvalores importa?
```

```
##
##  Shapiro-Wilk normality test
##
## data:  dife
## W = 0.93737, p-value = 0.4901
```

```r
t.test(pre,post,alternative="two.sided",paired=T) #o habria que hacer un test no parametrico?
```

```
##
##  Paired t-test
##
## data:  pre and post
## t = 11.941, df = 10, p-value = 3.059e-07
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  1074.072 1566.838
## sample estimates:
## mean of the differences
##                1320.455
```

```r
par(mfrow=c(1,1))

################################################
# precios en ciudad gotica
################################################
precios<-scan(text = '
21.92  25.75  28.41  33.00  45.00  49.79  51.47  53.55  62.91  63.90  75.01  96.99
              102.52 124.33 129.44 135.76 143.42 144.93 156.99 159.99')

hist(precios,probability = T)
```




```r
qqnorm(precios)
shapiro.test(precios)
```

```
##
##  Shapiro-Wilk normality test
##
## data:  precios
## W = 0.90356, p-value = 0.04812
```

```
wilcox.test(precios,mu=120,alternative ="two.sided")
```

```
##
##  Wilcoxon signed rank test
##
## data:  precios
## V = 36, p-value = 0.008308
## alternative hypothesis: true location is not equal to 120
```

```
#calculemos a mano el estad?stico
precios-120
```

```
##  [1] -98.08 -94.25 -91.59 -87.00 -75.00 -70.21 -68.53 -66.45 -57.09 -56.10
## [11] -44.99 -23.01 -17.48   4.33   9.44  15.76  23.42  24.93  36.99  39.99
```

```
precios-120>0
```

```
##  [1] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
## [12] FALSE FALSE  TRUE  TRUE  TRUE  TRUE  TRUE  TRUE  TRUE
```

```
abs(precios-120)
```

```
##  [1] 98.08 94.25 91.59 87.00 75.00 70.21 68.53 66.45 57.09 56.10 44.99
## [12] 23.01 17.48  4.33  9.44 15.76 23.42 24.93 36.99 39.99
```

```
rank(abs(precios-120)) #rangos del valor absoluto de los D_i
```

```
##  [1] 20 19 18 17 16 15 14 13 12 11 10  5  4  1  2  3  6  7  8  9
```

```
# el valor del estadistico del test  de mann whitney wilcoxon para una muestra
sum(rank(abs(precios-120))[ precios-120>0])
```

```
## [1] 36
```

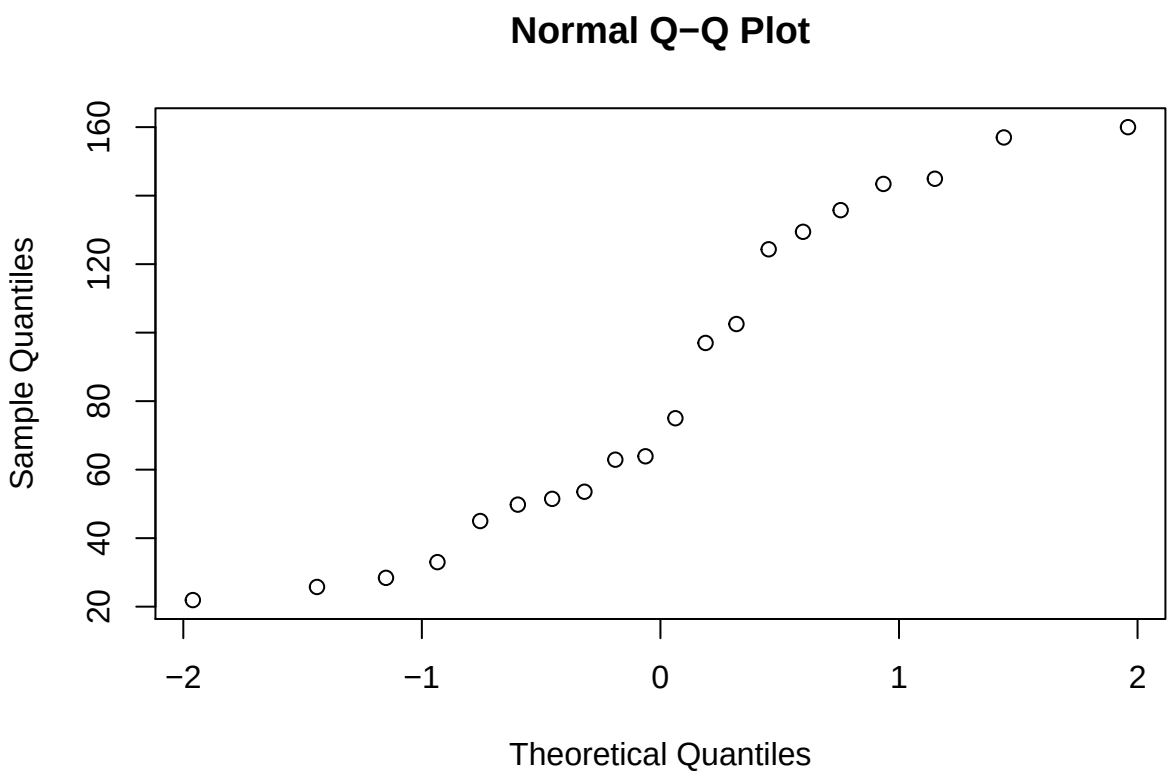
```
library(BSDA)
```

```
## Loading required package: e1071
```

```
## Loading required package: lattice
```

```
##
## Attaching package: 'BSDA'
```

```
## The following object is masked from 'package:datasets':
##
##     Orange
```




```
SIGN.test(precios,md = 120)
```

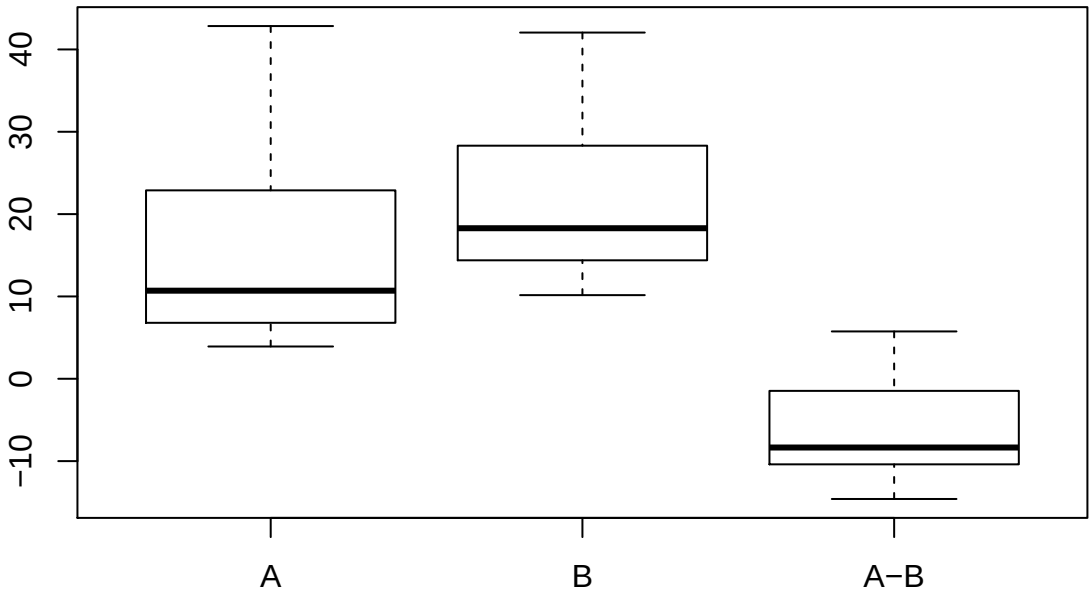
```
##
##  One-sample Sign-Test
##
## data:  precios
## s = 7, p-value = 0.2632
## alternative hypothesis: true median is not equal to 120
## 95 percent confidence interval:
##   49.98567 128.84484
## sample estimates:
## median of x
##      69.455

##                   Conf.Level  L.E.pt   U.E.pt
## Lower Achieved CI     0.8847 51.4700 124.3300
## Interpolated CI       0.9500 49.9857 128.8448
## Upper Achieved CI     0.9586 49.7900 129.4400
```

```
t.test(precios,mu=120)  #puede usar este test?
```

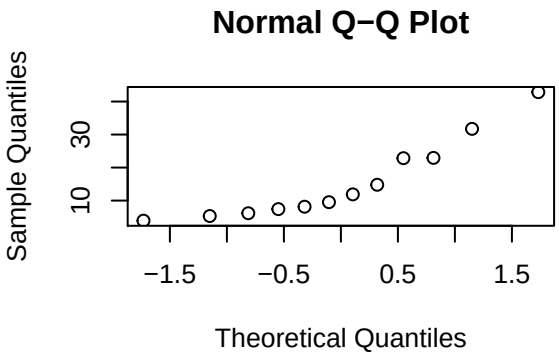
```
##
##  One Sample t-test
```

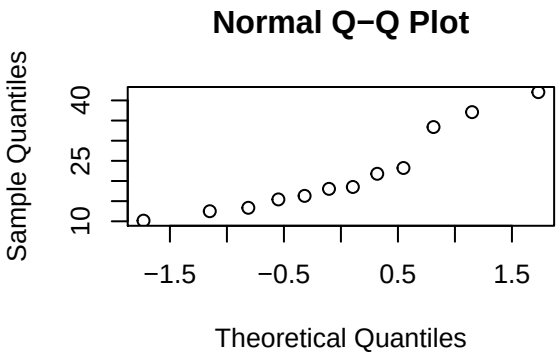
```
##
## data:  precios
## t = -3.2386, df = 19, p-value = 0.004323
## alternative hypothesis: true mean is not equal to 120
## 95 percent confidence interval:
##   62.79842 107.70958
## sample estimates:
## mean of x
##    85.254
```

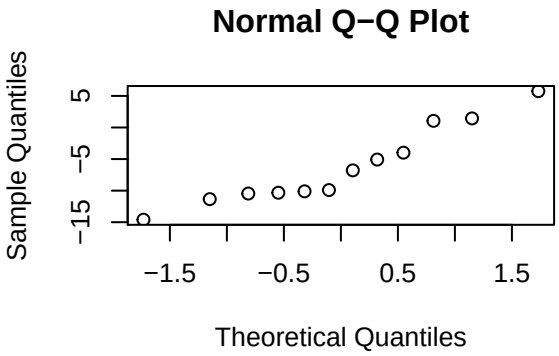
```
#########################################################
# zapatos
#########################################################

A<-scan(text = '
8.14 22.84  6.17 11.88 22.93 14.79 42.84 31.72  7.42  9.52  5.32  3.92')

B<-scan(text = '
18.05 21.79 10.16 23.23 33.39 13.35 37.09 42.05 12.50 16.31 15.43 18.52')

boxplot(A,B,A-B,names=c("A","B","A-B"))
```




```
par(mfrow=c(2,2))
qqnorm(A)
qqnorm(B)
qqnorm(A-B)
par(mfrow=c(1,1))
```








```
shapiro.test(A-B)
```

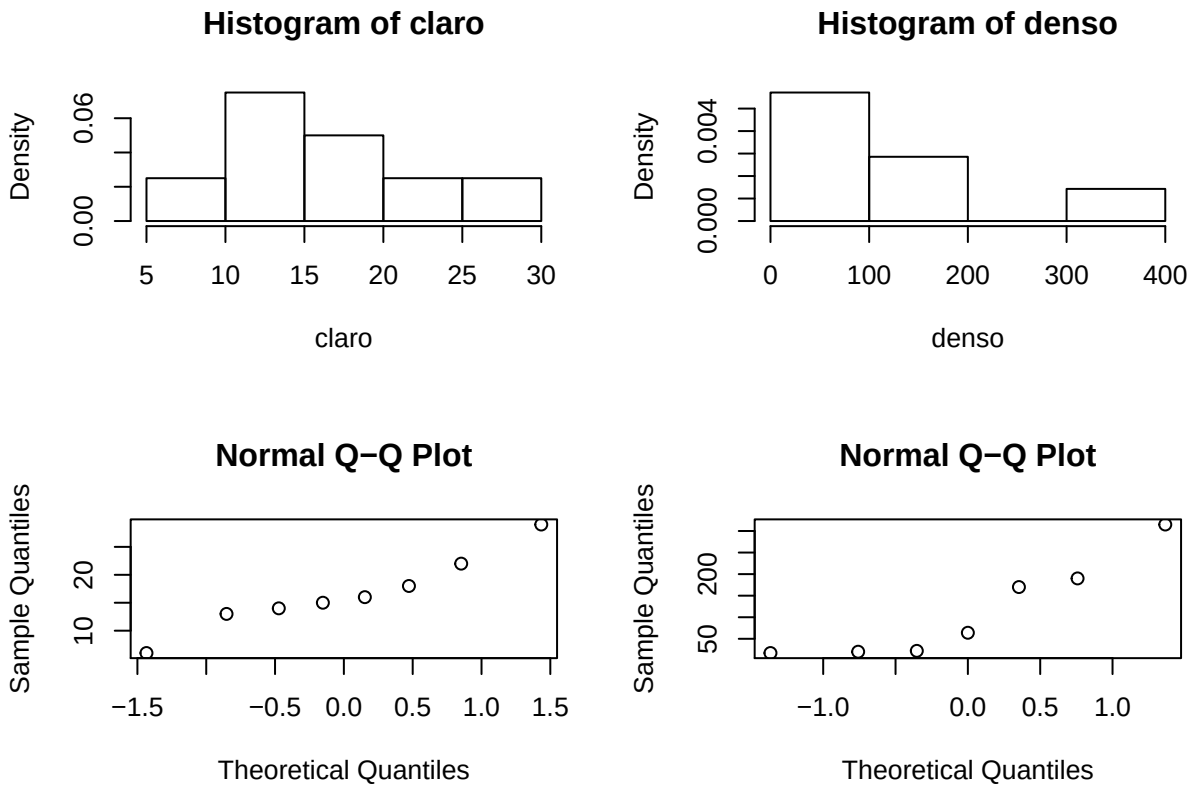
```
##
##  Shapiro-Wilk normality test
##
## data:  A - B
## W = 0.91689, p-value = 0.2612
```

```
t.test(A-B)
```

```
##
##  One Sample t-test
##
## data:  A - B
## t = -3.4684, df = 11, p-value = 0.005255
## alternative hypothesis: true mean is not equal to 0
## 95 percent confidence interval:
##  -10.131660  -2.265006
## sample estimates:
## mean of x
## -6.198333
```

```
#######################################################
# respiracion del suelo
#######################################################
claro<-scan(text = '
22   29   13   16   15   18   14   6')
```

```
denso<-scan(text = '
17   20   170   315   22   190   64')

par(mfrow=c(2,2))  #dividimos la pantalla gr?fica en dos
hist(claro,probability=T)
hist(denso,probability=T)

qqnorm(claro)
qqnorm(denso)
```




```
par(mfrow=c(1,1)) #restauramos la pantalla grafica a su forma habitual
shapiro.test(claro)
```

```
##
##  Shapiro-Wilk normality test
##
## data:  claro
## W = 0.9596, p-value = 0.8063
```

```
shapiro.test(denso)
```

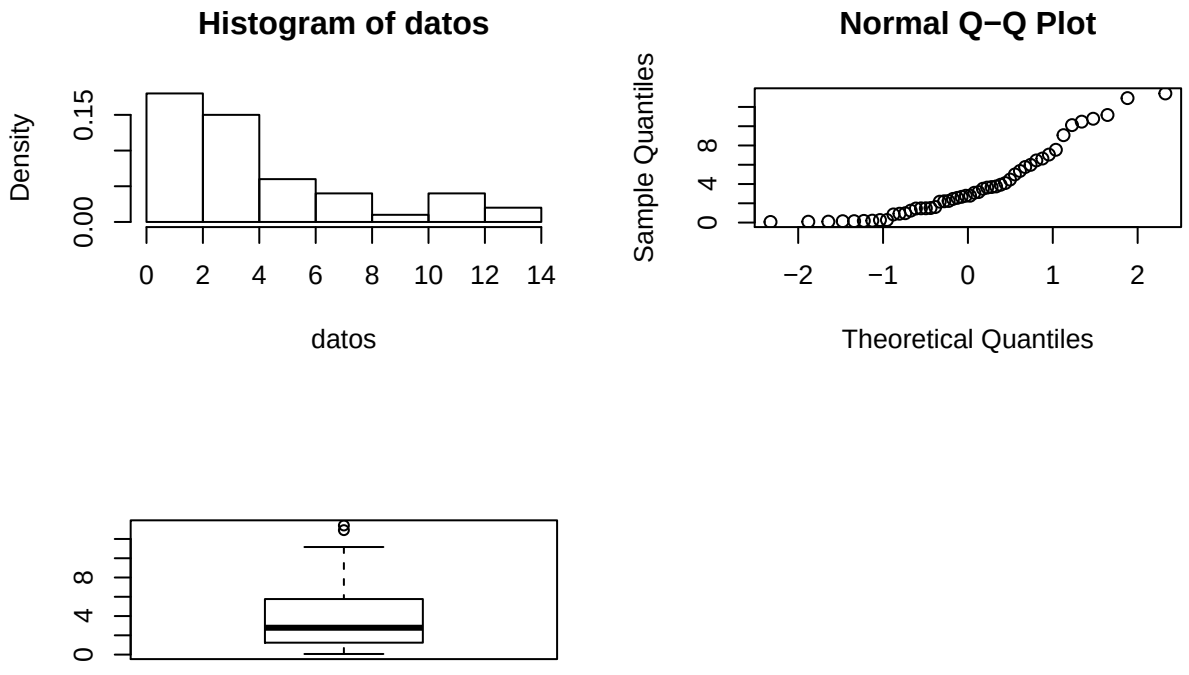
```
##
##  Shapiro-Wilk normality test
##
## data:  denso
## W = 0.84828, p-value = 0.1185
```

```r
wilcox.test(denso, claro)
```

```
## Warning in wilcox.test.default(denso, claro): cannot compute exact p-value
## with ties
```

```
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  denso and claro
## W = 49.5, p-value = 0.015
## alternative hypothesis: true location shift is not equal to 0
```

```r
#########################################################
# datos generados
#########################################################
datos<-rexp(50,rate=1/4)
par(mfrow=c(2,2))
hist(datos,probability=T)
qqnorm(datos)
boxplot(datos)
par(mfrow=c(1,1))
```




```r
shapiro.test(datos)
```

```
##
##  Shapiro-Wilk normality test
##
## data:  datos
## W = 0.87231, p-value = 6.59e-05
```

```r
#cual test se puede usar? Dan conclusiones parecidas?
t.test(datos,mu=4)
```

```
##
##  One Sample t-test
##
## data:  datos
## t = -0.24101, df = 49, p-value = 0.8106
## alternative hypothesis: true mean is not equal to 4
## 95 percent confidence interval:
##  2.853752 4.900751
## sample estimates:
## mean of x
##  3.877251
```

```r
SIGN.test(datos,md=4)
```

```
##
##  One-sample Sign-Test
##
## data:  datos
## s = 17, p-value = 0.03284
## alternative hypothesis: true median is not equal to 4
## 95 percent confidence interval:
##  1.907597 3.831641
## sample estimates:
## median of x
##    2.785253

##                   Conf.Level L.E.pt U.E.pt
## Lower Achieved CI     0.9351 2.1674 3.7501
## Interpolated CI       0.9500 1.9076 3.8316
## Upper Achieved CI     0.9672 1.6085 3.9255
```

```r
wilcox.test(datos,mu=4)
```

```
##
##  Wilcoxon signed rank test with continuity correction
##
## data:  datos
## V = 516, p-value = 0.2428
## alternative hypothesis: true location is not equal to 4
```

```r
#########################################################
# ingesta
#########################################################
ingesta<-scan(text = '
5260    5470        5640        6180        6390        6515        6805        7515        7515

mean(ingesta)
```

```
## [1] 6753.636
```

```
sd(ingesta)
```

```
## [1] 1142.123
```

```
t.test(ingesta,mu=7752)
```

```
##
##  One Sample t-test
##
## data:  ingesta
## t = -2.8992, df = 10, p-value = 0.01586
## alternative hypothesis: true mean is not equal to 7752
## 95 percent confidence interval:
##  5986.348 7520.925
## sample estimates:
## mean of x
##  6753.636
```

```
t.test(ingesta,mu=7752,conf.level = 0.90)
```

```
##
##  One Sample t-test
##
## data:  ingesta
## t = -2.8992, df = 10, p-value = 0.01586
## alternative hypothesis: true mean is not equal to 7752
## 90 percent confidence interval:
##  6129.492 7377.781
## sample estimates:
## mean of x
##  6753.636
```

```
t.test(ingesta,mu=7752,conf.level = 0.99)
```

```
##
##  One Sample t-test
##
## data:  ingesta
## t = -2.8992, df = 10, p-value = 0.01586
## alternative hypothesis: true mean is not equal to 7752
## 99 percent confidence interval:
##  5662.256 7845.017
## sample estimates:
## mean of x
##  6753.636
```