scripttest2.R

maru

Mon Oct 23 09:21:45 2017

```
##############################
# concentracion
####################################
conc<-scan(text='
617.2 617.2 617.3 617.4 617.4 617.5 617.6 617.6 617.6 617.7 617.7 617.7 617.7 617.8 617.8 617.8
618.0 618.0 618.2 618.5 619.9 621.9 623.7 626.7 628.1 632.6 648.0 652.7')

#pdf("conc.pdf")
par(mfrow=c(2,2))  #divide la pantalla grafica en 4
boxplot(conc,main="Boxplot conc")
hist(conc,probability=T)
qqnorm(conc)
par(mfrow=c(1,1)) #vuelve la pantalla grafica a un solo grafico
#dev.off()
shapiro.test(conc)
```

```
##
##  Shapiro-Wilk normality test
##
## data:  conc
## W = 0.5467, p-value = 3.58e-08
```

```
(conc-620>0)
```

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

```
sum(conc-620>0)
```

```
## [1] 7
```

```
#pvalor
pbinom(7,length(conc),prob=0.5)
```

```
## [1] 0.006270476
```

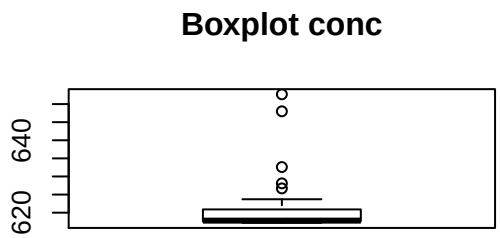
```
library(BSDA)
```

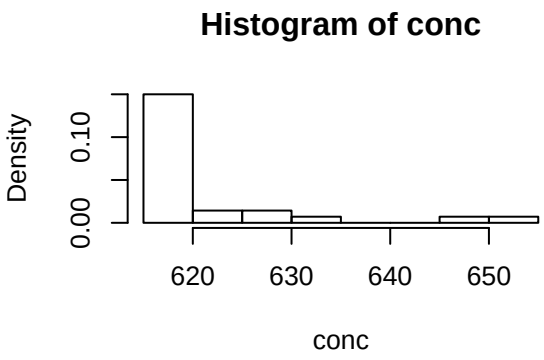
```
## Loading required package: e1071
```

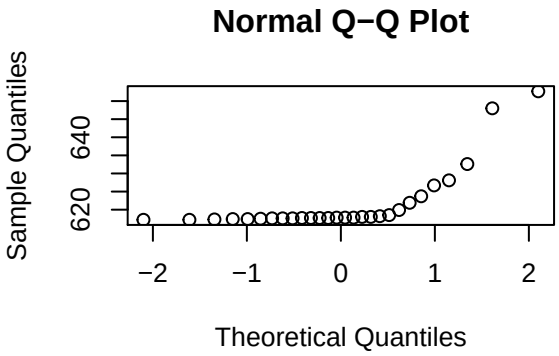
```
## Loading required package: lattice
```

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

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








```r
SIGN.test(conc, md = 620, alternative = "less", conf.level = 0.95)
```

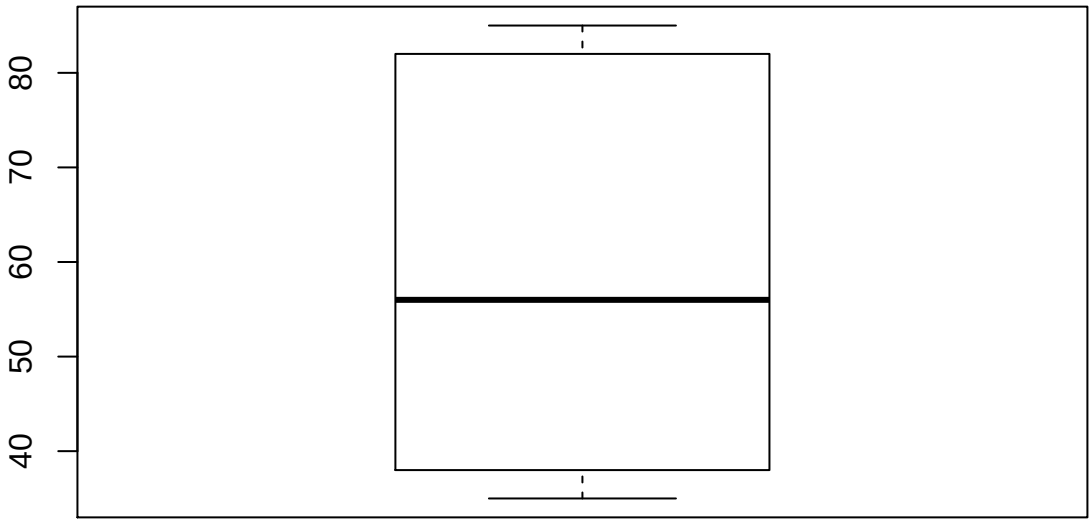
```
##
##  One-sample Sign-Test
##
## data:  conc
## s = 7, p-value = 0.00627
## alternative hypothesis: true median is less than 620
## 95 percent confidence interval:
##      -Inf 618.1737
## sample estimates:
## median of x
##       617.8

##                   Conf.Level L.E.pt   U.E.pt
## Lower Achieved CI     0.9075   -Inf 618.0000
## Interpolated CI       0.9500   -Inf 618.1737
## Upper Achieved CI     0.9564   -Inf 618.2000
```

```r
t.test(conc,mu = 620)    #podemos usar este test?
```

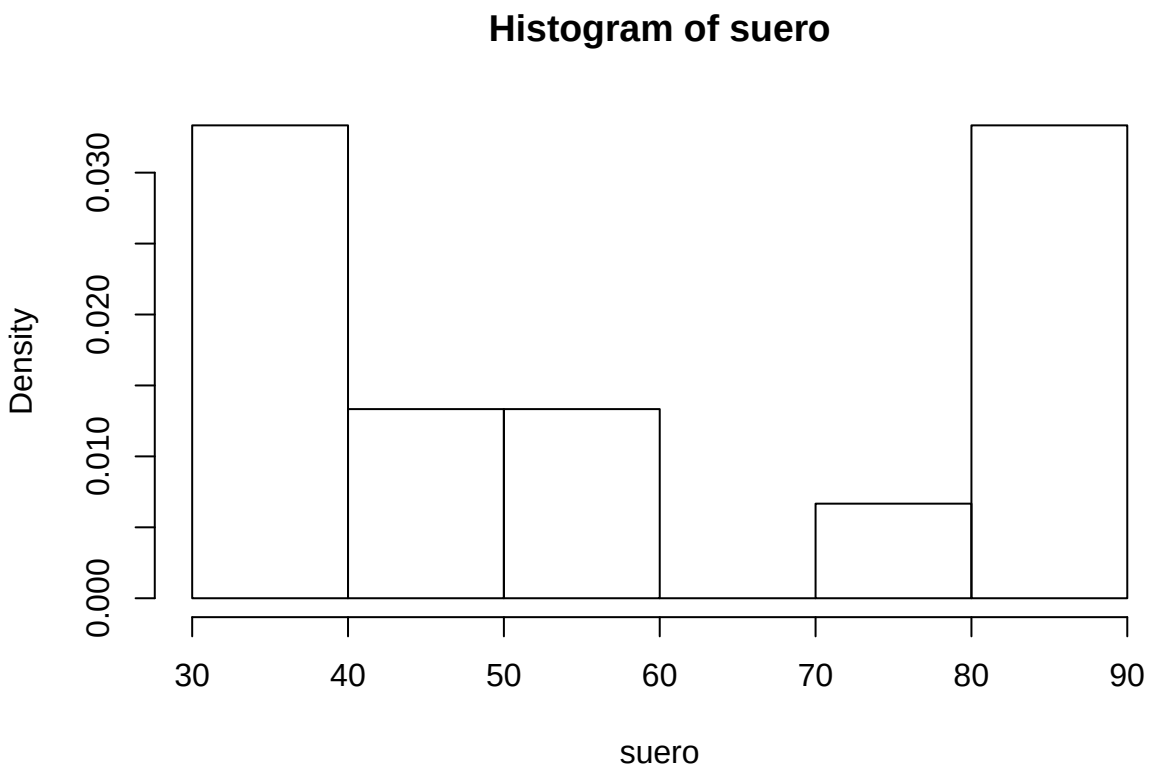
```
##
##  One Sample t-test
```

```
##
## data:  conc
## t = 0.99729, df = 27, p-value = 0.3275
## alternative hypothesis: true mean is not equal to 620
## 95 percent confidence interval:
##  618.2137 625.1648
## sample estimates:
## mean of x
##  621.6893
```

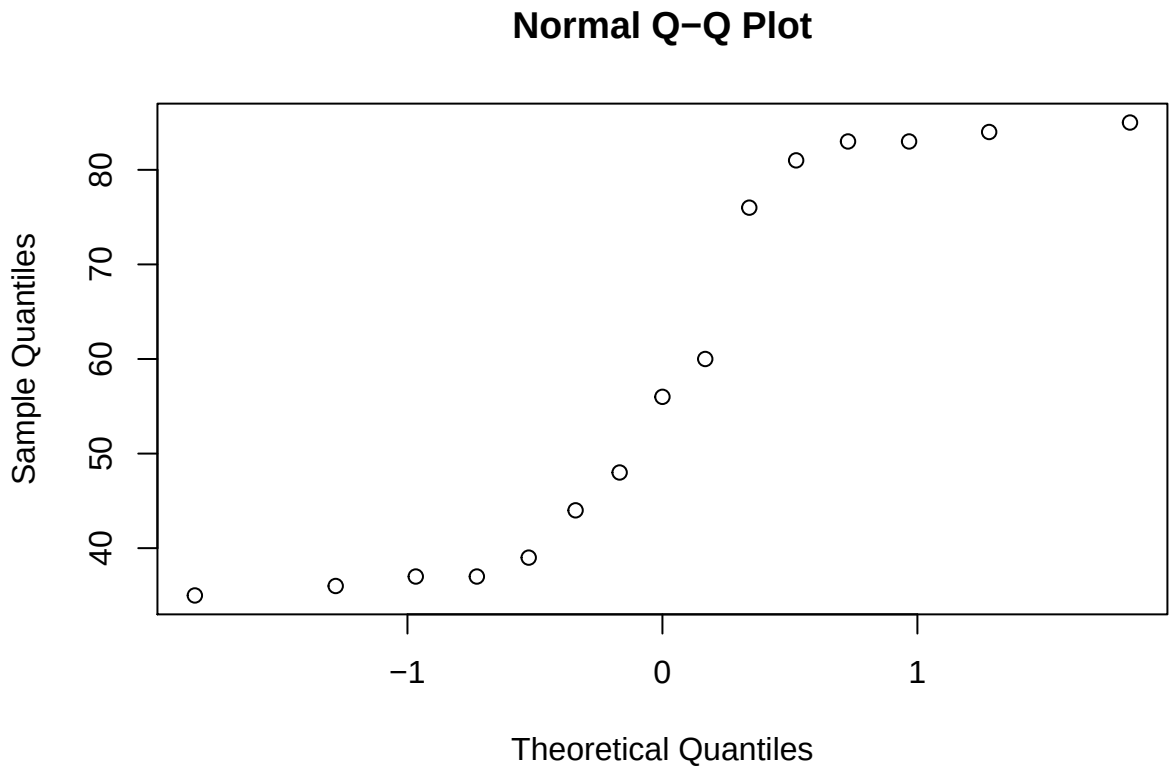
```
###################################
# suero
###################################
suero<-scan(text = '
35 36 37 37 39 44 48 56 60 76 81 83 83 84 85')

boxplot(suero)
```




```
hist(suero,probability=T)
```




```
qqnorm(suero)
```



```r
shapiro.test(suero)
```

```
##
##  Shapiro-Wilk normality test
##
## data:  suero
## W = 0.82695, p-value = 0.008329
```

```r
(suero-40)
```

```
##  [1] -5 -4 -3 -3 -1  4  8 16 20 36 41 43 43 44 45
```

```r
abs(suero-40)
```

```
##  [1]  5  4  3  3  1  4  8 16 20 36 41 43 43 44 45
```

```r
rangos<-rank(abs(suero-40))
(suero-40)>0
```

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

```r
positivas<-((suero-40)>0)
positivas
```

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

```r
estadistico<-sum(rangos[positivas])  #sumamos los rangos de las observaciones mayores a 40
estadistico
```

```
## [1] 103.5
```

```r
wilcox.test(suero ,alternative ="two.sided", mu=40,exact=FALSE)
```

```
##
##  Wilcoxon signed rank test with continuity correction
##
## data:  suero
## V = 103.5, p-value = 0.01454
## alternative hypothesis: true location is not equal to 40
```

```r
SIGN.test(suero ,alternative ="two.sided", md=40)  #que conclusion obtiene?
```

```
##
##  One-sample Sign-Test
##
## data:  suero
```

```
## s = 10, p-value = 0.3018
## alternative hypothesis: true median is not equal to 40
## 95 percent confidence interval:
##  37.35634 82.64366
## sample estimates:
## median of x
##          56

##                   Conf.Level  L.E.pt  U.E.pt
## Lower Achieved CI     0.8815 39.0000 81.0000
## Interpolated CI       0.9500 37.3563 82.6437
## Upper Achieved CI     0.9648 37.0000 83.0000
```

```
t.test(suero ,alternative ="two.sided", mu=40)  #es correcto usarlo?
```

```
##
##  One Sample t-test
##
## data:  suero
## t = 3.526, df = 14, p-value = 0.003357
## alternative hypothesis: true mean is not equal to 40
## 95 percent confidence interval:
##  47.41660 70.45006
## sample estimates:
## mean of x
##  58.93333
```

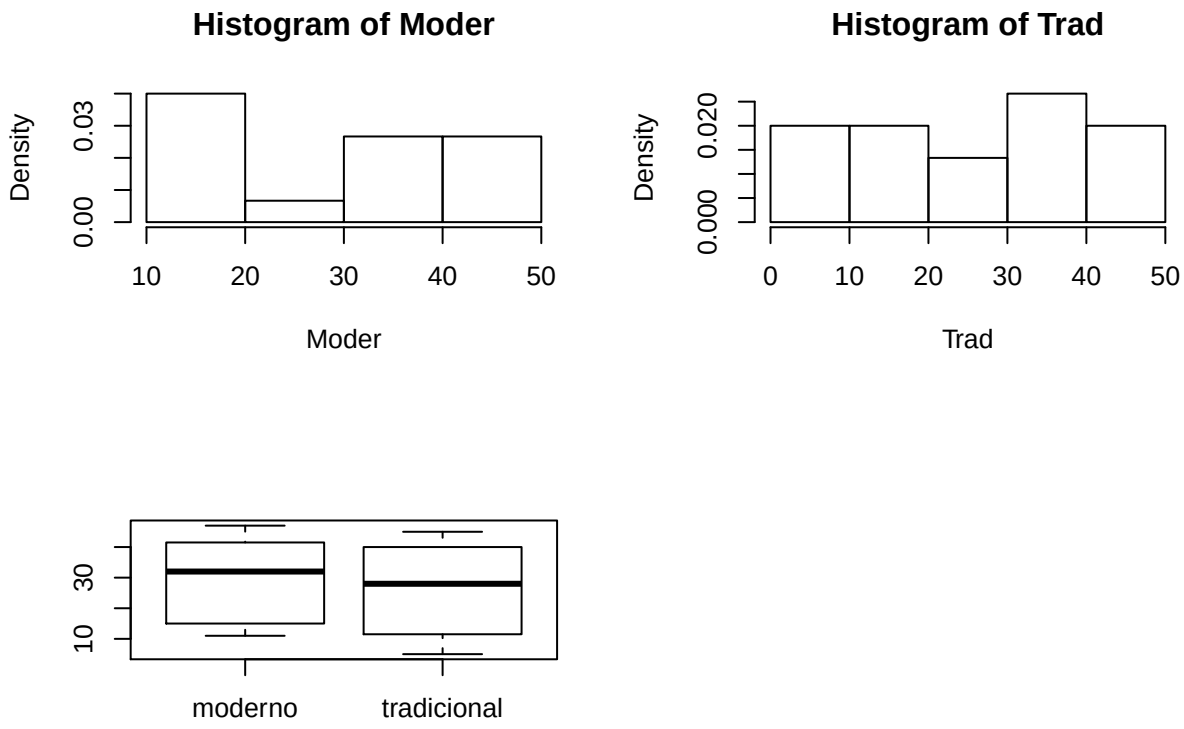
```
####################################
# perfumes
####################################

Moder<-scan(text = '
 20 25 40 44 43 13 32 34 35 11 12 46 13 17 47')

Trad<-scan(text = '
 5  7 10 11 12 17 21 28 33 35 40 40 41 44 45')

shapiro.test(Moder)
```

```
##
##  Shapiro-Wilk normality test
##
## data:  Moder
## W = 0.88849, p-value = 0.06362
```

```
shapiro.test(Trad)
```

```
##
##  Shapiro-Wilk normality test
##
## data:  Trad
## W = 0.89205, p-value = 0.07203
```

```r
par(mfrow=c(2,2))
hist(Moder,probability=T)
hist(Trad,probability=T)
boxplot(Moder,Trad,names=c("moderno","tradicional"))
par(mfrow=c(1,1))
```




```r
wilcox.test(Moder, Trad, paires=FALSE,alternative = "two.sided")
```

```
## Warning in wilcox.test.default(Moder, Trad, paires = FALSE, alternative =
## "two.sided"): cannot compute exact p-value with ties
```

```
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  Moder and Trad
## W = 130.5, p-value = 0.4674
## alternative hypothesis: true location shift is not equal to 0
```

```r
wilcox.test(Moder, Trad, paires=FALSE,alternative = "two.sided",exact=FALSE)
```

```
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  Moder and Trad
## W = 130.5, p-value = 0.4674
## alternative hypothesis: true location shift is not equal to 0
```

```r
t.test(Moder,Trad, paired=FALSE,alternative = "two.sided")
```

```
##
##  Welch Two Sample t-test
##
## data:  Moder and Trad
## t = 0.55457, df = 27.836, p-value = 0.5836
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -7.72477 13.45810
## sample estimates:
## mean of x mean of y
##  28.80000  25.93333
```

```r
#se puede usar el test t? Coincide la conclusion con el anterior?
```