Clase22oct.R

Usuario

2024-10-22

```r
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#CLASE 22 OCTUBRE PARTE 1

#USANDO CUARTETOS DE ANSCOMBE

#CUARTETO I
x1 <- c(10,8,13,9,11,14,6,4,12,7,5)
y1 <- c(8.04, 6.95, 7.58, 8.81,8.33, 9.96, 7.24, 4.26, 10.84, 4.82, 5.68)

mean(x1); mean(y1)

## [1] 9

## [1] 7.500909

var(x1); var(y1)

## [1] 11

## [1] 4.127269

sd(x1); sd(y1)

## [1] 3.316625

## [1] 2.031568

cor.test(x1,y1)

##
##  Pearson's product-moment correlation
##
## data:  x1 and y1
## t = 4.2415, df = 9, p-value = 0.00217
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  0.4243912 0.9506933
## sample estimates:
##       cor
## 0.8164205

# el coeficiente dió cor:0.8164205 y p-value: 0.002179 nos dice que es
altamente
```

```r
#significativo

#CUARTETO II
x2 <- c(10, 8, 13, 9, 11, 14, 6, 4, 12, 7, 5)
y2 <- c(9.14, 8.14, 8.74, 8.77, 9.26, 8.10, 6.13, 3.10, 9.13, 7.26, 4.74)

mean(x2); mean(y2)

## [1] 9

## [1] 7.500909

var(x2); var(y2)

## [1] 11

## [1] 4.127629

sd(x2); sd(y2)

## [1] 3.316625

## [1] 2.031657

cor.test(x2,y2)

##
##  Pearson's product-moment correlation
##
## data:  x2 and y2
## t = 4.2386, df = 9, p-value = 0.002179
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  0.4239389 0.9506402
## sample estimates:
##       cor
## 0.8162365

# el coeficiente dió cor:0.8162365 y p-value: 0.002179 nos dice que es
altamente
#significativo

#CUARTETO III
x3 <- c(10, 8, 13, 9, 11, 14, 6, 4, 12, 7, 5)
y3 <- c(7.46, 6.77, 12.74, 7.11, 7.81, 8.84, 6.08, 5.39, 8.15, 6.42,
5.73)

mean(x3); mean(y3)

## [1] 9

## [1] 7.5
```

```
var(x3); var(y3)
```

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

```
## [1] 4.12262
```

```
sd(x3); sd(y3)
```

```
## [1] 3.316625
```

```
## [1] 2.030424
```

```
cor.test(x3,y3)
```

```
##
##  Pearson's product-moment correlation
##
## data:  x3 and y3
## t = 4.2394, df = 9, p-value = 0.002176
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  0.4240623 0.9506547
## sample estimates:
##       cor
## 0.8162867
```

```
# el coeficiente dió cor:0.8162867 y p-value: 0.002176 nos dice que es
altamente
#significativo

#CUARTETO IV
x4 <- c(8, 8, 8, 8, 8, 8, 8, 19, 8, 8, 8)
y4 <- c(6.58, 5.76, 7.71, 8.84, 8.47, 7.04, 5.25, 12.50, 5.56, 7.91,
6.89)
```

```
mean(x4); mean(y4)
```

```
## [1] 9
```

```
## [1] 7.500909
```

```
var(x4); var(y4)
```

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

```
## [1] 4.123249
```

```
sd(x4); sd(y4)
```

```
## [1] 3.316625
```

```
## [1] 2.030579
```
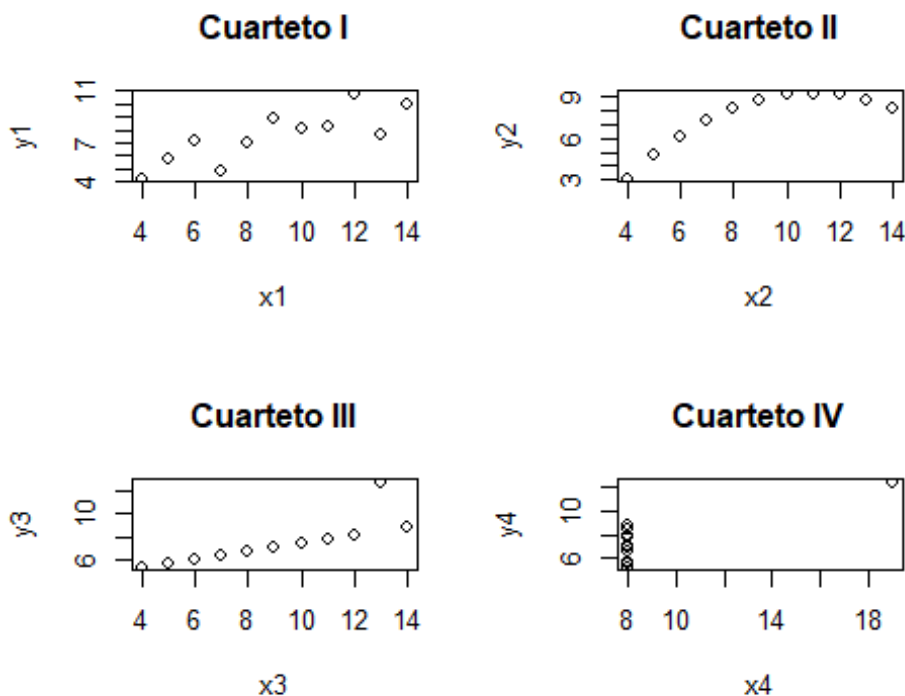
```
cor.test(x4,y4)
```

```
##
##   Pearson's product-moment correlation
##
## data:  x4 and y4
## t = 4.243, df = 9, p-value = 0.002165
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##   0.4246394 0.9507224
## sample estimates:
##        cor
## 0.8165214

# el coeficiente dió cor:0.8165214 y p-value: 0.002165 nos dice que es
altamente
#significativo

#una grafica que contenga 4 grafcias

par(mfrow=c(2,2))
plot(x1,y1,main="Cuarteto I")
plot(x2,y2,main="Cuarteto II")
plot(x3,y3,main="Cuarteto III")
plot(x4,y4,main="Cuarteto IV")
```
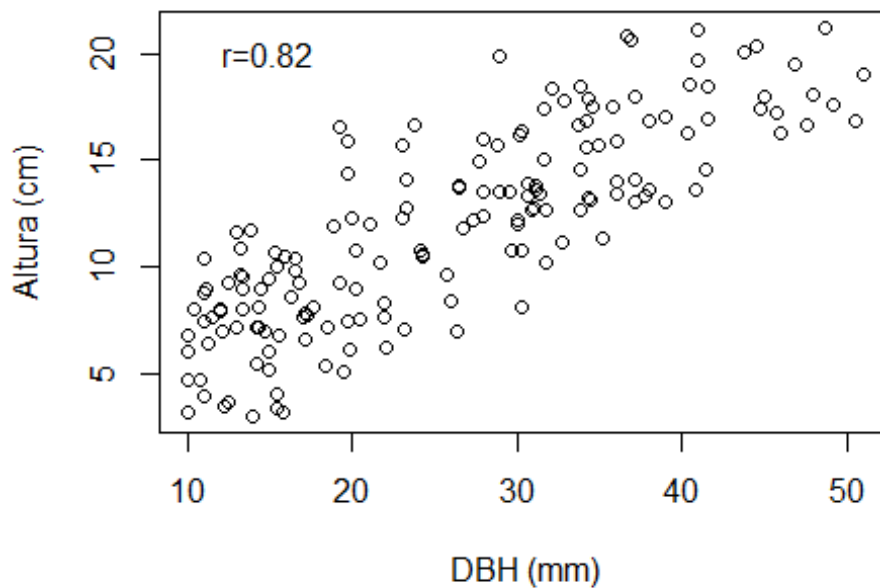


```
par(mfrow=c(1,1))

#en ninguna de las 4 graficas hay una asociación lineal
```

```
#Datos plántulas

eba <- read.csv ("C:/Repositorios/Met_Est_2024/Clase/ebanos.csv", header
= T)

plot(eba$diametro, eba$altura,
     xlab= "DBH (mm)",
     ylab= "Altura (cm)")
text (15,20, "r=0.82")
```



```
cor.test(eba$diametro, eba$altura)

##
##  Pearson's product-moment correlation
##
## data:  eba$diametro and eba$altura
## t = 18.354, df = 162, p-value < 2.2e-16
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  0.7648115 0.8659458
## sample estimates:
##       cor
## 0.8217467
```

```
#es positiva, con correlacion de 0.8217467 y altamente significativa p-
value=2.2e-16
```