Laboratorio_5.R

Usuario

2021-04-25

```
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# Laboratorio. Asignacion 5
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# Graficar en un cuadro 2x2 ------------------------------------------
--

op = par(mfrow = c(2, 2), mar = c(4.5, 4, 1, 1))
plot(anscombe$x1, anscombe$y1, pch = 20)
plot(anscombe$x2, anscombe$y2, pch = 20)
plot(anscombe$x3, anscombe$y3, pch = 20)
plot(anscombe$x4, anscombe$y4, pch = 20)
```

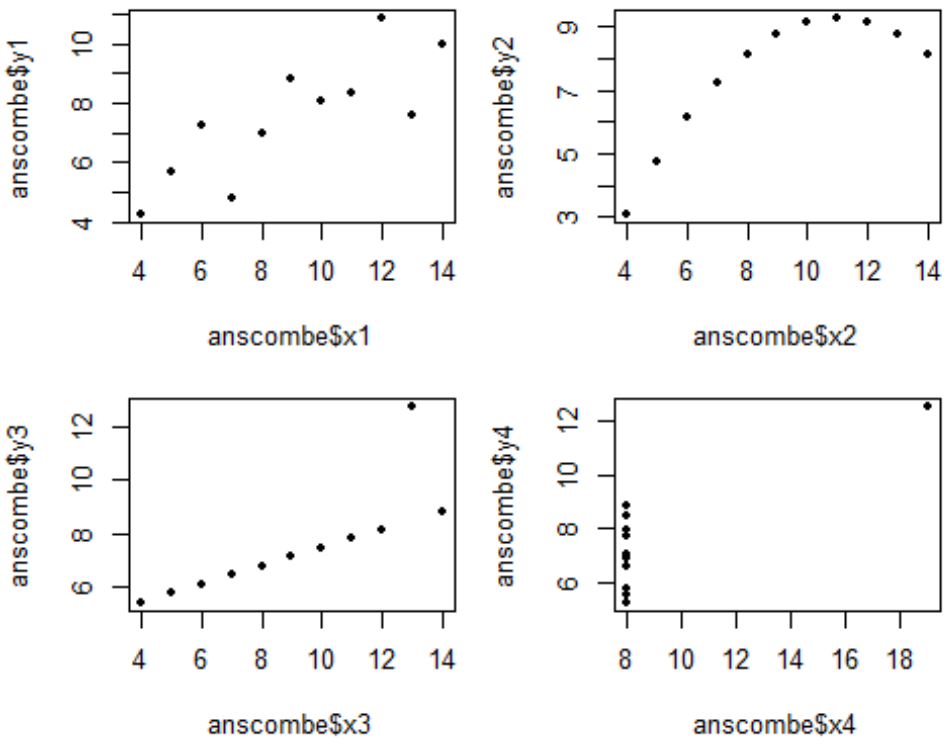


```
par(op)

# Ejercicio 1  -------------------------------------------------------
```

```
--


speed <- c(2, 3, 5, 9, 14, 24, 29, 34)
abundance <-c(6, 3, 5, 23, 16, 12, 48, 43)

cor.test(speed, abundance)

##
##  Pearson's product-moment correlation
##
## data:  speed and abundance
## t = 3.8568, df = 6, p-value = 0.008393
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  0.3442317 0.9711386
## sample estimates:
##       cor
## 0.8441408

# Valor de r
## 3.856

# Grados de libertad
## 6

# Valor de P
## 0.0083

# Hipotesis
## H1 - alternativa


# Ejercicio 2 ------------------------------------------------------------
--

suelo <-
read.csv("https://raw.githubusercontent.com/Marimari02/PrincipiosEstadist
ica2021/main/suelo.csv")

cor.test(suelo$pH, suelo$N)

##
##  Pearson's product-moment correlation
##
## data:  suelo$pH and suelo$N
## t = 5.5994, df = 46, p-value = 1.149e-06
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  0.4303716 0.7797377
```

```
## sample estimates:
##      cor
## 0.636654

cor.test(suelo$pH, suelo$Dens)

##
##  Pearson's product-moment correlation
##
## data:  suelo$pH and suelo$Dens
## t = -4.9436, df = 46, p-value = 1.062e-05
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  -0.7479775 -0.3661760
## sample estimates:
##       cor
## -0.5890264

cor.test(suelo$pH, suelo$P)

##
##  Pearson's product-moment correlation
##
## data:  suelo$pH and suelo$P
## t = 4.9694, df = 46, p-value = 9.74e-06
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  0.3688348 0.7493286
## sample estimates:
##       cor
## 0.5910303

cor.test(suelo$pH, suelo$Ca)

##
##  Pearson's product-moment correlation
##
## data:  suelo$pH and suelo$Ca
## t = 9.3221, df = 46, p-value = 3.614e-12
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  0.6809493 0.8885997
## sample estimates:
##       cor
## 0.8086293

cor.test(suelo$pH, suelo$Mg)

##
##  Pearson's product-moment correlation
##
## data:  suelo$pH and suelo$Mg
```

```
## t = -2.923, df = 46, p-value = 0.005361
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  -0.6111857 -0.1257936
## sample estimates:
##        cor
## -0.3957821
```

```
cor.test(suelo$pH, suelo$K)
```

```
##
##  Pearson's product-moment correlation
##
## data:  suelo$pH and suelo$K
## t = 4.8236, df = 46, p-value = 1.585e-05
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  0.3536810 0.7415855
## sample estimates:
##       cor
## 0.5795727
```

```
cor.test(suelo$pH, suelo$Na)
```

```
##
##  Pearson's product-moment correlation
##
## data:  suelo$pH and suelo$Na
## t = -6.5242, df = 46, p-value = 4.724e-08
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  -0.8165520 -0.5094849
## sample estimates:
##        cor
## -0.6932614
```

```
cor.test(suelo$pH, suelo$Conduc)
```

```
##
##  Pearson's product-moment correlation
##
## data:  suelo$pH and suelo$Conduc
## t = -8.0515, df = 46, p-value = 2.484e-10
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  -0.8616916 -0.6141322
## sample estimates:
##        cor
## -0.7648104
```