Clase_S13_D2.R
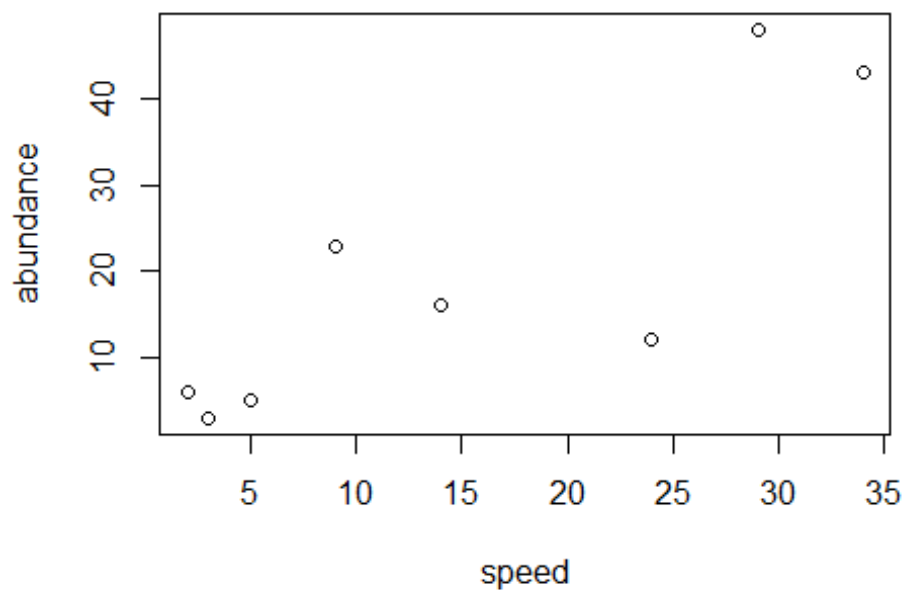
isa_r

2022-05-20

```r
# AMANDA
# 28/04/2022

# EJERCICO 1

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

plot(speed, abundance)
```



```r
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
```

el valor de correralción es de : 0.8441408, que esta cerca del +1.
y el valor de p: 0.008393, que es menor que 0.05.

H1: Existe una correlación positiva entre la velocidad de los arroyos y
la abundancia de efímeras.
H0: No existe una correlación entre la velocidad del arroyo y la
abundancia de efímeras.

Aquí se acepta entonces la H1 (Hipótesis alternativa)

EJERCICIO 2

```
suelo <- read.csv("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
```

r: 0.636654
p-value: 1.149e-06

```
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
```

```
# r: -0.5890264
# p-value: 1.062e-05

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

# r: 0.5910303
# p-value: 9.74e-06

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

# r: 0.8086293
# p-value: 3.614e-12

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
```

```
# r: -0.3957721
# p-value: 0.005361

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

# r: 0.5795727
# p-value: 1.585e-05

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

# r: -0.6932614
# p-value: 4.724e-08

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
```

```
# r: -0.7648104
# p-value: 2.484e-10
```