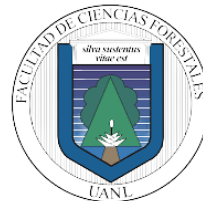**UNIVERSIDAD AUTÓNOMA DE NUEVO LEÓN**

FACULTAD DE CIENCIAS FORESTALES

LABORATORIO CINCO

CORRELACIÓN

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SEPTIEMBRE, 2022

Laboratio05_EmanuelMolina.R

Emanuel

2022-09-21

```r
ans <- read.csv("anscomb.csv", header =T)
ans
```

```
##      I    I.1 II II.1 III III.1 IV IV.1
## 1   x      y  x    y   x     y  x    y
## 2  10  8.04 10 9.14  10  7.46  8 6.58
## 3   8  6.95  8 8.14   8  6.77  8 5.76
## 4  13  7.58 13 8.74  13 12.74  8 7.71
## 5   9  8.81  9 8.77   9  7.11  8 8.84
## 6  11  8.33 11 9.26  11  7.81  8 8.47
## 7  14  9.96 14  8.1  14  8.84  8 7.04
## 8   6  7.24  6 6.13   6  6.08  8 5.25
## 9   4  4.26  4  3.1   4  5.39 19 12.5
## 10 12 10.84 12 9.13  12  8.15  8 5.56
## 11  7  4.82  7 7.26   7  6.42  8 7.91
## 12  5  5.68  5 4.74   5  5.73  8  6.8
```

```r
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)
```

anscombe$y1

anscombe$x1

anscombe$y2

anscombe$x2

anscombe$y3

anscombe$x3

anscombe$y4
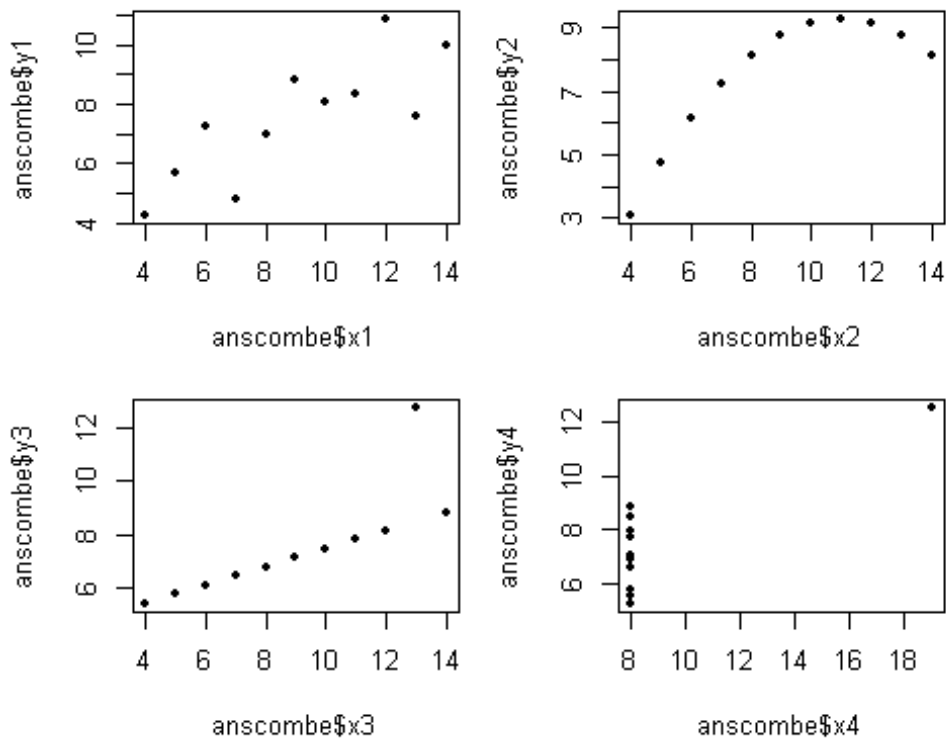
anscombe$x4

```
par(op)


cor.ar <- cor.test(anscombe$x1, anscombe$y1)
cor.ar

##
##  Pearson's product-moment correlation
##
## data:  anscombe$x1 and anscombe$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

cor.ar <- cor.test(anscombe$x2, anscombe$y2)
cor.ar

##
##  Pearson's product-moment correlation
##
## data:  anscombe$x2 and anscombe$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

cor.ar <- cor.test(anscombe$x3, anscombe$y3)
cor.ar

##
##  Pearson's product-moment correlation
##
## data:  anscombe$x3 and anscombe$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

cor.ar <- cor.test(anscombe$x4, anscombe$y4)
cor.ar

##
##  Pearson's product-moment correlation
##
## data:  anscombe$x4 and anscombe$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

mean(anscombe$x1)

## [1] 9

mean(anscombe$y1)

## [1] 7.500909

var(anscombe$x1)

## [1] 11

var(anscombe$y1)

## [1] 4.127269

0.8165214**2
```

```
## [1] 0.6667072
```

```
# R**2 = 0.6667072
```