Pruebas-dependientes.R

Usuario

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```
# Maria Fernanda Viveros Segovia
# 1917915
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# Tarea 8 pruebas dependientes

# Ejercicio 1
prod <-
read.csv("https://raw.githubusercontent.com/Marimari02/PrincipiosEstadistica2021/main/Carbono.csv")

# Datos

boxplot(prod$Contenido.de.carbono ~ prod$Tiempo, col= "blue")
```

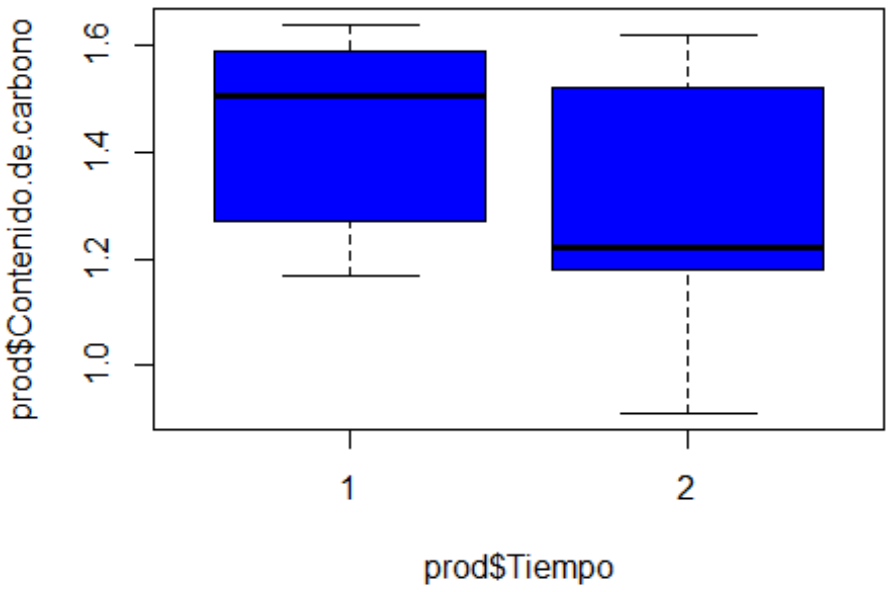


```
head(prod)

##   Tiempo Contenido.de.carbono
## 1      1                 1.59
## 2      1                 1.39
```

```
## 3      1                 1.64
## 4      1                 1.17
## 5      1                 1.27
## 6      1                 1.58
```

```
summary(prod)
```

```
##      Tiempo    Contenido.de.carbono
##  Min.   :1.0   Min.   :0.910
##  1st Qu.:1.0   1st Qu.:1.210
##  Median :1.5   Median :1.350
##  Mean   :1.5   Mean   :1.359
##  3rd Qu.:2.0   3rd Qu.:1.580
##  Max.   :2.0   Max.   :1.640
```

```
is.factor(prod$Tiempo)
```

```
## [1] FALSE
```

```
shapiro.test(prod$Contenido.de.carbono)
```

```
##
##  Shapiro-Wilk normality test
##
## data:  prod$Contenido.de.carbono
## W = 0.90437, p-value = 0.04983
```

```
var.test(prod$Contenido.de.carbono ~ prod$Tiempo)
```

```
##
##  F test to compare two variances
##
## data:  prod$Contenido.de.carbono by prod$Tiempo
## F = 0.52203, num df = 9, denom df = 9, p-value = 0.347
## alternative hypothesis: true ratio of variances is not equal to 1
## 95 percent confidence interval:
##  0.1296654 2.1016990
## sample estimates:
## ratio of variances
##          0.5220323
```

```
# Hipotesis nula H0: No existe diferencia en la media de los tiempos
# Hipótesis alternativa H1: Existe diferencia en la media de los tiempos


t.test(prod$Contenido.de.carbono ~ prod$Tiempo, paired= T)
```

```
##
##  Paired t-test
##
## data:  prod$Contenido.de.carbono by prod$Tiempo
## t = 1.4845, df = 9, p-value = 0.1718
```

```
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.09481109  0.45681109
## sample estimates:
## mean of the differences
##                   0.181
```