Examen_2.R

Usuario

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```
#Examen parcial 2
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#11/11/24

#Codigo pregunta 15 y 16
set.seed(42) #para productividad
n <- 30
altura <- rnorm(n, mean = 170, sd =10) #Altura en cm
peso <- 0.5 * altura + rnorm(n, mean = 0, sd = 5)#Peso en kg, con algo de
ruido

factor(altura)
```

```
##  [1] 183.709584471467 164.353018286039 173.631284113373
176.32862604961
##  [5] 174.04268323141  168.938754839085 185.115219974389
169.053409615869
##  [9] 190.18423713877  169.372859009476 183.048696542235
192.866453927011
## [13] 156.111392988877 167.212112331826 168.666786636063
176.359503980701
## [17] 167.157470785839 143.435445790952 145.595330714245
183.201133457302
## [21] 166.933614059215 152.1869156602   168.280826442404
182.146746991726
## [25] 188.95193461265  165.695308683938 167.427306172311
152.368369148052
## [29] 174.600973548313 163.600051240399
## 30 Levels: 143.435445790952 145.595330714245 ... 192.866453927011
```

```
factor(peso)
```

```
##  [1] 94.1320428519394 85.7006958291636 91.9911596665363
85.1196811477691
##  [5] 89.5461172321948 75.8843340241759 88.6353149452972
80.2721668370519
##  [9] 83.021080319652  84.8670425391992 92.5543412721187
94.6279404707622
## [13] 81.8465126729359 79.9725320305303 77.4919880959352
90.3438421197939
## [17] 79.5217695119863 78.9382292040824 70.6404343440557
```

```
94.878806145662
## [21] 85.0764333556274 72.1742631256981 92.0190508201618
94.2878700244496
## [25] 94.9247705393229 84.2304080784263 87.1100971664317
76.6333490069215
## [29] 72.3350363583917 83.2244403878527
## 30 Levels: 70.6404343440557 72.1742631256981 ... 94.9247705393229

t.test(altura,peso)

##
##  Welch Two Sample t-test
##
## data:  altura and peso
## t = 32.409, df = 46.663, p-value < 2.2e-16
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  80.61611 91.28884
## sample estimates:
## mean of x mean of y
## 170.68587  84.73339

cor.test(altura,peso)

##
##  Pearson's product-moment correlation
##
## data:  altura and peso
## t = 5.3576, df = 28, p-value = 1.044e-05
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  0.4722623 0.8530828
## sample estimates:
##       cor
## 0.7114793
```