EJEMPLO ANÁLISIS CORRESPONDENCIAS DATOS COLORES DE OJOS Y CABELLO

```
> HairEyeColor[,,1]
       Eye
Hair    Brown Blue Hazel Green
  Black    32   11    10     3
  Brown    53   50    25    15
  Red      10   10     7     7
  Blond     3   30     5     8
> datos<-HairEyeColor[,,1]
> mosaicplot(HairEyeColor[,,1], shade = TRUE)
> mytable<-datos
>
> chisq.test(mytable,correct=F)

        Pearson's Chi-squared test

data:  mytable
X-squared = 41.28, df = 9, p-value = 4.447e-06

Warning message:
In chisq.test(mytable, correct = F) :
  Chi-squared approximation may be incorrect
> chisq.test(mytable,,correct=F)$statistic
X-squared
 41.28029
Warning message:
In chisq.test(mytable, , correct = F) :
  Chi-squared approximation may be incorrect
> chisq.test(mytable,correct=F)$expected
       Eye
Hair       Brown     Blue     Hazel     Green
  Black 19.67025 20.27240  9.433692  6.623656
  Brown 50.22939 51.76703 24.089606 16.913978
  Red   11.94265 12.30824  5.727599  4.021505
  Blond 16.15771 16.65233  7.749104  5.440860
Warning message:
In chisq.test(mytable, correct = F) :
  Chi-squared approximation may be incorrect
> #chisq.test(mytable,correct=F)$observed

> fit <- ca(mytable)
> print(fit) # basic results

 Principal inertias (eigenvalues):
           1        2        3
Value      0.134288 0.013275 0.000395
Percentage 90.76%   8.97%    0.27%


 Rows:
            Black     Brown       Red    Blond
Mass     0.200717  0.512545  0.121864 0.164875
ChiDist  0.499751  0.056971  0.308581 0.716157
Inertia  0.050129  0.001664  0.011604 0.084561
Dim. 1  -1.349610 -0.136165  0.168970 1.941408
Dim. 2   0.577789  0.173438 -2.622045 0.695471


 Columns:
            Brown     Blue     Hazel     Green
Mass     0.351254 0.362007  0.168459  0.118280
ChiDist  0.439296 0.390901  0.167989  0.412263
Inertia  0.067785 0.055316  0.004754  0.020103
Dim. 1  -1.194305 1.034212 -0.348969  0.878425
Dim. 2   0.314172 0.831079 -0.879575 -2.223875
> summary(fit) # extended results

Principal inertias (eigenvalues):

 dim    value      %   cum%   scree plot
```

```
 1       0.134288  90.8  90.8  **********************
 2       0.013275   9.0  99.7  **
 3       0.000395   0.3 100.0
         -------- -----
 Total: 0.147958 100.0


Rows:
     name   mass  qlt  inr    k=1 cor ctr    k=2 cor ctr
1 | Blck |  201  997  339 | -495 979 366 |   67  18  67 |
2 | Brwn |  513  890   11 |  -50 767  10 |   20 123  15 |
3 |  Red |  122  999   78 |   62  40   3 | -302 958 838 |
4 | Blnd |  165  999  572 |  711 987 621 |   80  13  80 |

Columns:
     name   mass  qlt  inr    k=1 cor ctr    k=2 cor ctr
1 | Brwn |  351  999  458 | -438 993 501 |   36   7  35 |
2 | Blue |  362 1000  374 |  379 940 387 |   96  60 250 |
3 | Hazl |  168  943   32 | -128 579  21 | -101 364 130 |
4 | Gren |  118  996  136 |  322 610  91 | -256 386 585 |
> plot(fit) # symmetric map
> #############calculo dela ji cuadrada

> ####relacion de ji cuadrada con inercia
> inercia<-sum(fit$sv^2)
> jicuadrada<-inercia*sum(mytable)
> jicuadrada
[1] 41.28029
```