

## 03 - people

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### Ejemplo de color de ojos y de pelo

```
HairEyeColor # No es un data frame, ya es una tabla
```

```
## , , Sex = Male
##
##      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
##
## , , Sex = Female
##
##      Eye
## Hair   Brown Blue Hazel Green
## Black   36    9    5    2
## Brown   66   34   29   14
## Red     16    7    7    7
## Blond    4   64    5    8
```

```
sum(HairEyeColor) -> total
```

El total de individuos de la tabla de datos es 592.

```
prop.table(HairEyeColor, margin = 3)
```

```
## , , Sex = Male
##
##      Eye
## Hair   Brown   Blue   Hazel   Green
## Black 0.114695341 0.039426523 0.035842294 0.010752688
## Brown 0.189964158 0.179211470 0.089605735 0.053763441
## Red   0.035842294 0.035842294 0.025089606 0.025089606
## Blond 0.010752688 0.107526882 0.017921147 0.028673835
##
## , , Sex = Female
```

```
##
##      Eye
## Hair      Brown      Blue      Hazel      Green
##   Black 0.115015974 0.028753994 0.015974441 0.006389776
##   Brown 0.210862620 0.108626198 0.092651757 0.044728435
##   Red   0.051118211 0.022364217 0.022364217 0.022364217
##   Blond 0.012779553 0.204472843 0.015974441 0.025559105
```

```
prop.table(HairEyeColor, margin = c(1,2))
```

```
## , , Sex = Male
##
##      Eye
## Hair      Brown      Blue      Hazel      Green
##   Black 0.4705882 0.5500000 0.6666667 0.6000000
##   Brown 0.4453782 0.5952381 0.4629630 0.5172414
##   Red   0.3846154 0.5882353 0.5000000 0.5000000
##   Blond 0.4285714 0.3191489 0.5000000 0.5000000
##
## , , Sex = Female
##
##      Eye
## Hair      Brown      Blue      Hazel      Green
##   Black 0.5294118 0.4500000 0.3333333 0.4000000
##   Brown 0.5546218 0.4047619 0.5370370 0.4827586
##   Red   0.6153846 0.4117647 0.5000000 0.5000000
##   Blond 0.5714286 0.6808511 0.5000000 0.5000000
```

```
aperm(HairEyeColor, perm = c("Sex", "Hair", "Eye"))
```

```
## , , Eye = Brown
##
##      Hair
## Sex      Black Brown Red Blond
##   Male      32    53  10    3
##   Female     36    66  16    4
##
## , , Eye = Blue
##
##      Hair
## Sex      Black Brown Red Blond
##   Male      11    50  10   30
##   Female      9    34   7   64
##
## , , Eye = Hazel
##
##      Hair
## Sex      Black Brown Red Blond
##   Male      10    25   7    5
##   Female      5    29   7    5
##
## , , Eye = Green
##
```

```
##           Hair
## Sex      Black Brown Red  Blond
##   Male         3   15   7    8
##   Female        2   14   7    8
```

```
# Para mostrar de manera más bonita
library(kableExtra)
kable(HairEyeColor)
```

Hair	Eye	Sex	Freq
Black	Brown	Male	32
Brown	Brown	Male	53
Red	Brown	Male	10
Blond	Brown	Male	3
Black	Blue	Male	11
Brown	Blue	Male	50
Red	Blue	Male	10
Blond	Blue	Male	30
Black	Hazel	Male	10
Brown	Hazel	Male	25
Red	Hazel	Male	7
Blond	Hazel	Male	5
Black	Green	Male	3
Brown	Green	Male	15
Red	Green	Male	7
Blond	Green	Male	8
Black	Brown	Female	36
Brown	Brown	Female	66
Red	Brown	Female	16
Blond	Brown	Female	4
Black	Blue	Female	9
Brown	Blue	Female	34
Red	Blue	Female	7
Blond	Blue	Female	64
Black	Hazel	Female	5
Brown	Hazel	Female	29
Red	Hazel	Female	7
Blond	Hazel	Female	5
Black	Green	Female	2
Brown	Green	Female	14
Red	Green	Female	7
Blond	Green	Female	8