

```

fichero = read.csv2("distancia_universitarios.csv")

len = function(list){
  count = 0
  for (element in list){
    count = count + 1
  }
  count
}

distancias = fichero$Distancia
len(distancias)

## [1] 73

bubble = function(list){
  n = len(list)
  for (i in 2:n){
    for (j in 1:(n-1)){
      if (list[j] > list[j+1]){
        temp = list[j]
        list[j] = list[j+1]
        list[j+1] = temp
      }
    }
  }
  list
}

distanciasordenadas = bubble(distancias)
distanciasordenadas

## [1] 1.0 2.1 2.7 3.1 3.2 3.4 3.7 3.7 4.0 4.0 4.4 4.4 4.5 4.5 5.0
## [16] 5.1 5.5 6.2 8.1 9.0 9.4 9.7 10.0 11.0 12.0 12.0 12.0 12.0 12.0 13.0
## [31] 15.0 16.0 16.5 17.2 19.0 19.0 20.0 20.7 21.0 21.6 22.0 24.0 24.0 24.0 24.0
## [46] 24.1 25.0 25.0 26.0 26.0 27.0 27.0 27.0 28.0 28.0 29.0 30.0 30.0 30.0 30.0
## [61] 30.0 30.0 30.0 30.0 31.4 32.0 33.0 33.0 34.0 34.0 34.8 38.0 46.0

rank = function(list){
  ordered_list = bubble(list)
  ordered_list[len(ordered_list)] - ordered_list[1]
}

rango = rank(distanciasordenadas)
rango

## [1] 45

```