Tugas1_123180145

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```
library(dslabs)
data(murders)

#1
pop <- murders$population
sort(pop)[1]
```

```
## [1] 563626
```

```
#2
pop[order(pop)[1]]
```

```
## [1] 563626
```

```
#3
pop[which.min(pop)]
```

```
## [1] 563626
```

```
#4
murders$state[which.min(murders$population)]
```

```
## [1] "Wyoming"
```

```
#5
ranks <- rank(murders$population)
my_df <- data.frame(state = murders$state, population = murders$population, ranks = ranks)
my_df
```

```
##                   state population ranks
## 1               Alabama    4779736    29
## 2                Alaska     710231     5
## 3               Arizona    6392017    36
## 4              Arkansas    2915918    20
## 5            California   37253956    51
## 6              Colorado    5029196    30
## 7           Connecticut    3574097    23
## 8              Delaware     897934     7
```

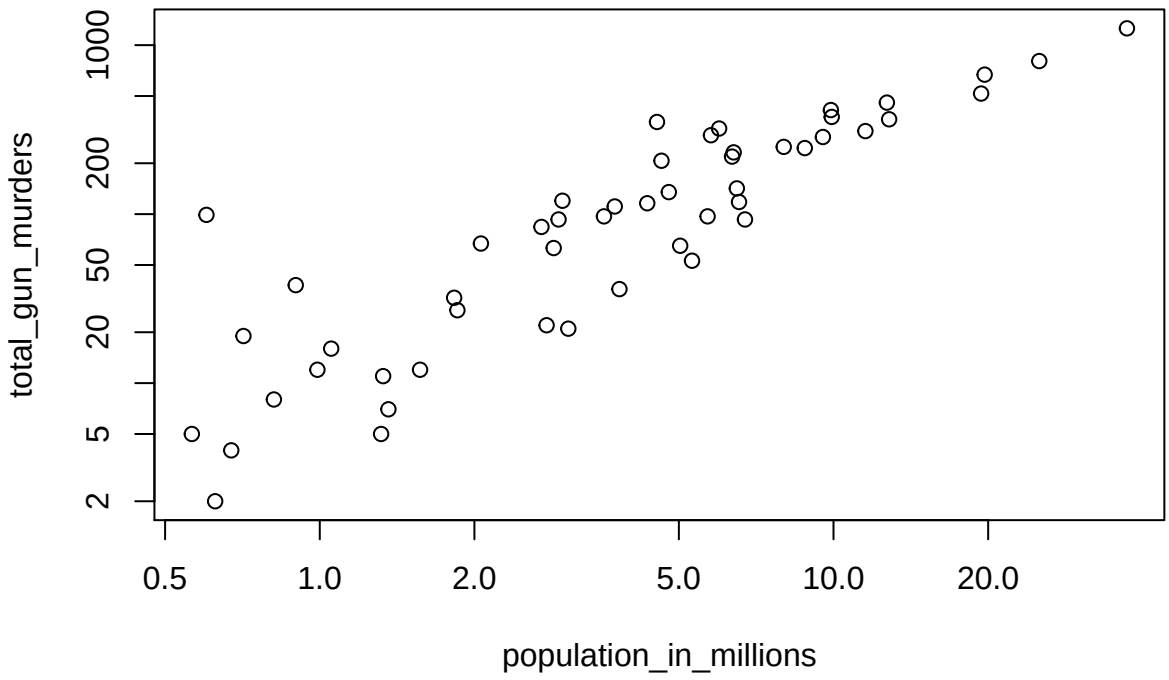
```
## 9  District of Columbia     601723     2
## 10              Florida   19687653    49
## 11              Georgia    9920000    44
## 12               Hawaii    1360301    12
## 13                Idaho    1567582    13
## 14             Illinois   12830632    47
## 15              Indiana    6483802    37
## 16                 Iowa    3046355    22
## 17               Kansas    2853118    19
## 18             Kentucky    4339367    26
## 19            Louisiana    4533372    27
## 20                Maine    1328361    11
## 21             Maryland    5773552    33
## 22        Massachusetts    6547629    38
## 23             Michigan    9883640    43
## 24            Minnesota    5303925    31
## 25          Mississippi    2967297    21
## 26             Missouri    5988927    34
## 27              Montana     989415     8
## 28             Nebraska    1826341    14
## 29               Nevada    2700551    17
## 30        New Hampshire    1316470    10
## 31           New Jersey    8791894    41
## 32           New Mexico    2059179    16
## 33             New York   19378102    48
## 34       North Carolina    9535483    42
## 35         North Dakota     672591     4
## 36                 Ohio   11536504    45
## 37             Oklahoma    3751351    24
## 38               Oregon    3831074    25
## 39         Pennsylvania   12702379    46
## 40         Rhode Island    1052567     9
## 41       South Carolina    4625364    28
## 42         South Dakota     814180     6
## 43            Tennessee    6346105    35
## 44                Texas   25145561    50
## 45                 Utah    2763885    18
## 46              Vermont     625741     3
## 47             Virginia    8001024    40
## 48           Washington    6724540    39
## 49        West Virginia    1852994    15
## 50            Wisconsin    5686986    32
## 51              Wyoming     563626     1
```

```
#6
ranks <- rank(murders$population)
my_df <- data.frame(state = murders$state[order(ranks)], population = murders$population[order(ranks)],
my_df
```

```
##                   state population ranks
## 1               Wyoming     563626     1
## 2  District of Columbia     601723     2
## 3               Vermont     625741     3
## 4          North Dakota     672591     4
```

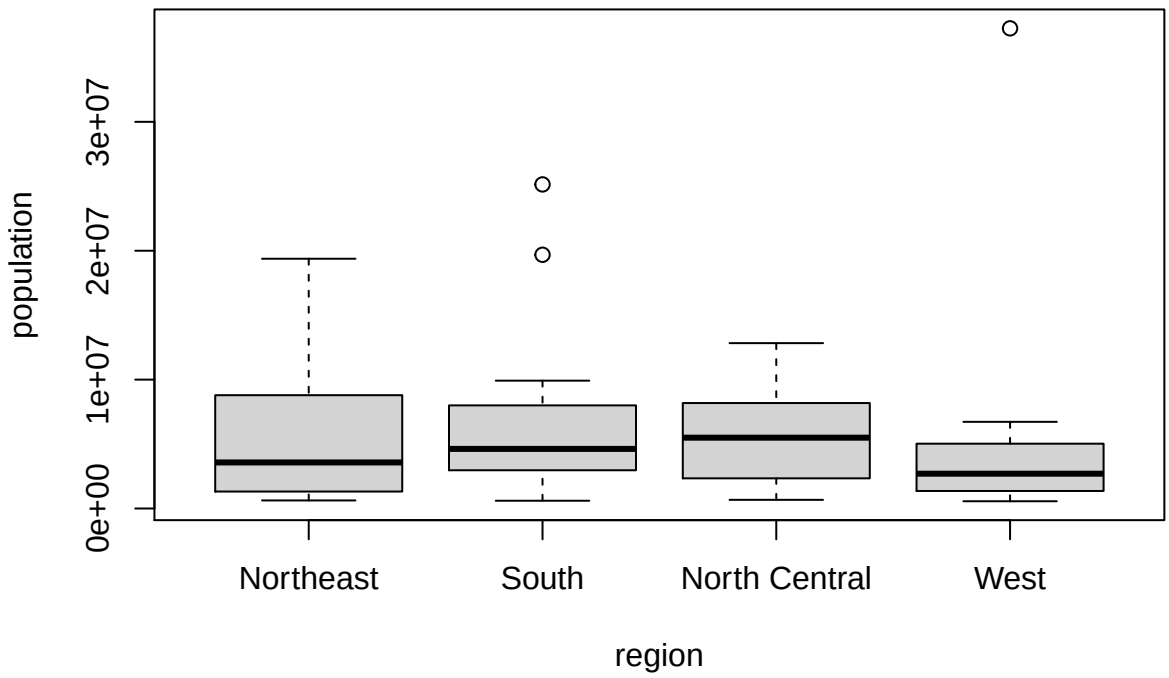
```
## 5                Alaska     710231     5
## 6          South Dakota     814180     6
## 7              Delaware     897934     7
## 8               Montana     989415     8
## 9          Rhode Island    1052567     9
## 10       New Hampshire    1316470    10
## 11               Maine    1328361    11
## 12              Hawaii    1360301    12
## 13               Idaho    1567582    13
## 14            Nebraska    1826341    14
## 15       West Virginia    1852994    15
## 16          New Mexico    2059179    16
## 17              Nevada    2700551    17
## 18                Utah    2763885    18
## 19              Kansas    2853118    19
## 20            Arkansas    2915918    20
## 21         Mississippi    2967297    21
## 22                Iowa    3046355    22
## 23         Connecticut    3574097    23
## 24            Oklahoma    3751351    24
## 25              Oregon    3831074    25
## 26            Kentucky    4339367    26
## 27           Louisiana    4533372    27
## 28      South Carolina    4625364    28
## 29             Alabama    4779736    29
## 30            Colorado    5029196    30
## 31           Minnesota    5303925    31
## 32           Wisconsin    5686986    32
## 33            Maryland    5773552    33
## 34            Missouri    5988927    34
## 35           Tennessee    6346105    35
## 36             Arizona    6392017    36
## 37             Indiana    6483802    37
## 38       Massachusetts    6547629    38
## 39          Washington    6724540    39
## 40            Virginia    8001024    40
## 41          New Jersey    8791894    41
## 42      North Carolina    9535483    42
## 43            Michigan    9883640    43
## 44             Georgia    9920000    44
## 45                Ohio   11536504    45
## 46        Pennsylvania   12702379    46
## 47            Illinois   12830632    47
## 48            New York   19378102    48
## 49             Florida   19687653    49
## 50               Texas   25145561    50
## 51          California   37253956    51
```

```r
#7
population_in_millions <- murders$population/10^6
total_gun_murders <- murders$total
plot(population_in_millions, total_gun_murders, log = "xy")
```




```
#8
hist(murders$population)
```


```
#9
boxplot(population~region, data = murders)
```


population
0e+00
1e+07
2e+07
3e+07
Northeast
South
North Central
West
region