Latihan 4

Azam

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Load dataset murders

```
library(dslabs)
data(murders)
```

Nomor 1

```
pop <- murders$population
sort(pop)
```

```
##  [1]   563626   601723   625741   672591   710231   814180   897934   989415
##  [9]  1052567  1316470  1328361  1360301  1567582  1826341  1852994  2059179
## [17]  2700551  2763885  2853118  2915918  2967297  3046355  3574097  3751351
## [25]  3831074  4339367  4533372  4625364  4779736  5029196  5303925  5686986
## [33]  5773552  5988927  6346105  6392017  6483802  6547629  6724540  8001024
## [41]  8791894  9535483  9883640  9920000 11536504 12702379 12830632 19378102
## [49] 19687653 25145561 37253956
```

```
sort(min(pop))
```

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

Nomor 2

```
min(order(pop))
```

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

Nomor 3

```
order(which.min(pop))
```

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

Nomor 4

```
min<- which.min(murders$population)
murders$state[min]
```

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

Nomor 5

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

```
##                   nama peringkat
## 1              Alabama        29
## 2               Alaska         5
## 3              Arizona        36
## 4             Arkansas        20
## 5           California        51
## 6             Colorado        30
## 7          Connecticut        23
## 8             Delaware         7
## 9  District of Columbia         2
## 10             Florida        49
## 11             Georgia        44
## 12              Hawaii        12
## 13               Idaho        13
## 14            Illinois        47
## 15             Indiana        37
## 16                Iowa        22
## 17              Kansas        19
## 18            Kentucky        26
## 19           Louisiana        27
## 20               Maine        11
## 21            Maryland        33
## 22       Massachusetts        38
## 23            Michigan        43
## 24           Minnesota        31
## 25         Mississippi        21
## 26            Missouri        34
## 27             Montana         8
## 28            Nebraska        14
## 29              Nevada        17
## 30       New Hampshire        10
## 31          New Jersey        41
## 32          New Mexico        16
## 33            New York        48
## 34      North Carolina        42
## 35        North Dakota         4
## 36                Ohio        45
## 37            Oklahoma        24
## 38              Oregon        25
## 39        Pennsylvania        46
## 40        Rhode Island         9
## 41      South Carolina        28
## 42        South Dakota         6
## 43           Tennessee        35
## 44               Texas        50
## 45                Utah        18
## 46             Vermont         3
## 47            Virginia        40
## 48          Washington        39
## 49       West Virginia        15
```

```
## 50            Wisconsin        32
## 51              Wyoming         1
```

Nomor 6

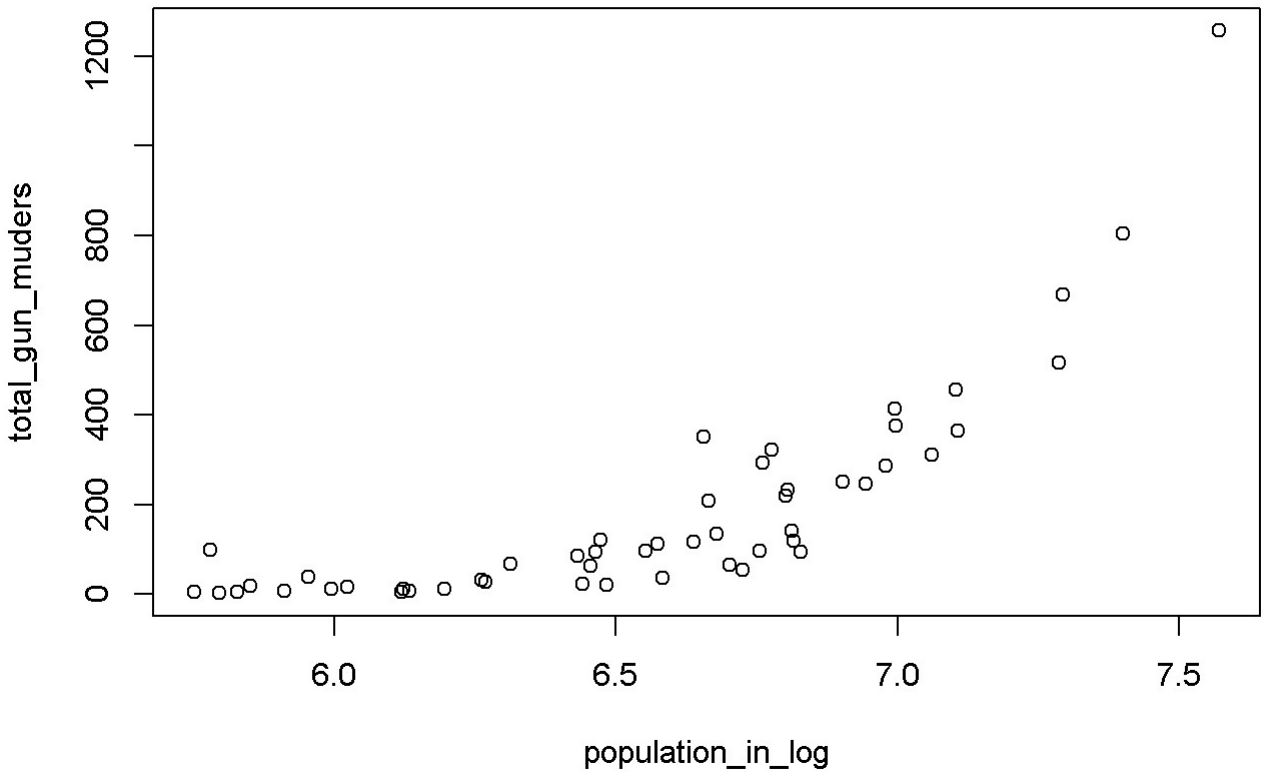
```
ind <- order(ranks)
my_df <- data.frame(nama = murders$state[ind], peringkat = ranks[ind])
my_df
```

```
##                   nama peringkat
## 1              Wyoming         1
## 2  District of Columbia         2
## 3              Vermont         3
## 4         North Dakota         4
## 5               Alaska         5
## 6         South Dakota         6
## 7             Delaware         7
## 8              Montana         8
## 9         Rhode Island         9
## 10       New Hampshire        10
## 11               Maine        11
## 12              Hawaii        12
## 13               Idaho        13
## 14            Nebraska        14
## 15       West Virginia        15
## 16          New Mexico        16
## 17              Nevada        17
## 18                Utah        18
## 19              Kansas        19
## 20            Arkansas        20
## 21         Mississippi        21
## 22                Iowa        22
## 23         Connecticut        23
## 24            Oklahoma        24
## 25              Oregon        25
## 26            Kentucky        26
## 27           Louisiana        27
## 28      South Carolina        28
## 29             Alabama        29
## 30            Colorado        30
## 31           Minnesota        31
## 32           Wisconsin        32
## 33            Maryland        33
## 34            Missouri        34
## 35           Tennessee        35
## 36             Arizona        36
## 37             Indiana        37
## 38       Massachusetts        38
## 39          Washington        39
## 40            Virginia        40
## 41          New Jersey        41
## 42      North Carolina        42
## 43            Michigan        43
## 44             Georgia        44
## 45                Ohio        45
## 46        Pennsylvania        46
## 47            Illinois        47
## 48            New York        48
## 49             Florida        49
```

```
## 50                Texas         50
## 51           California         51
```

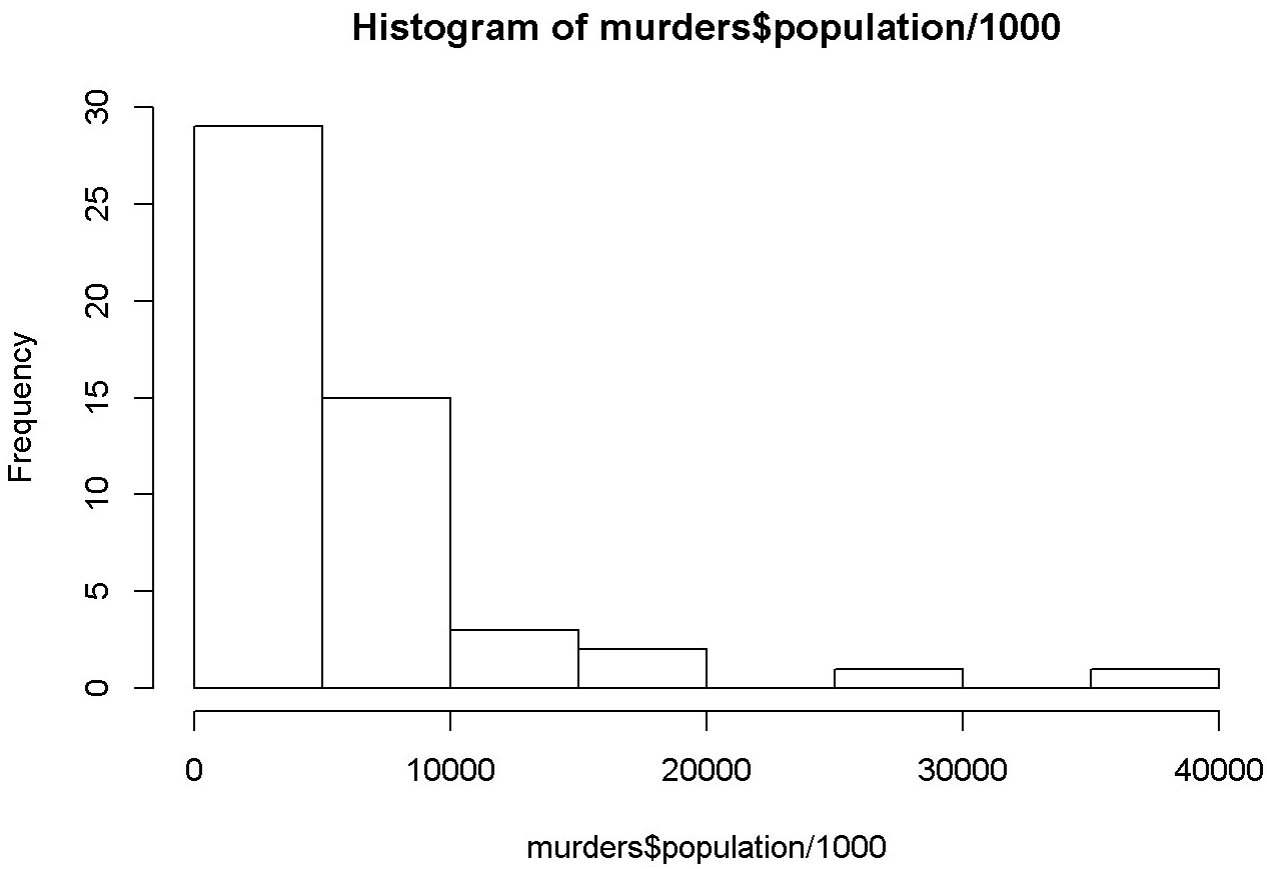
Nomor 7

```
population_in_log <- log10(murders$population)
total_gun_muders <- murders$total
plot(population_in_log, total_gun_muders)
```



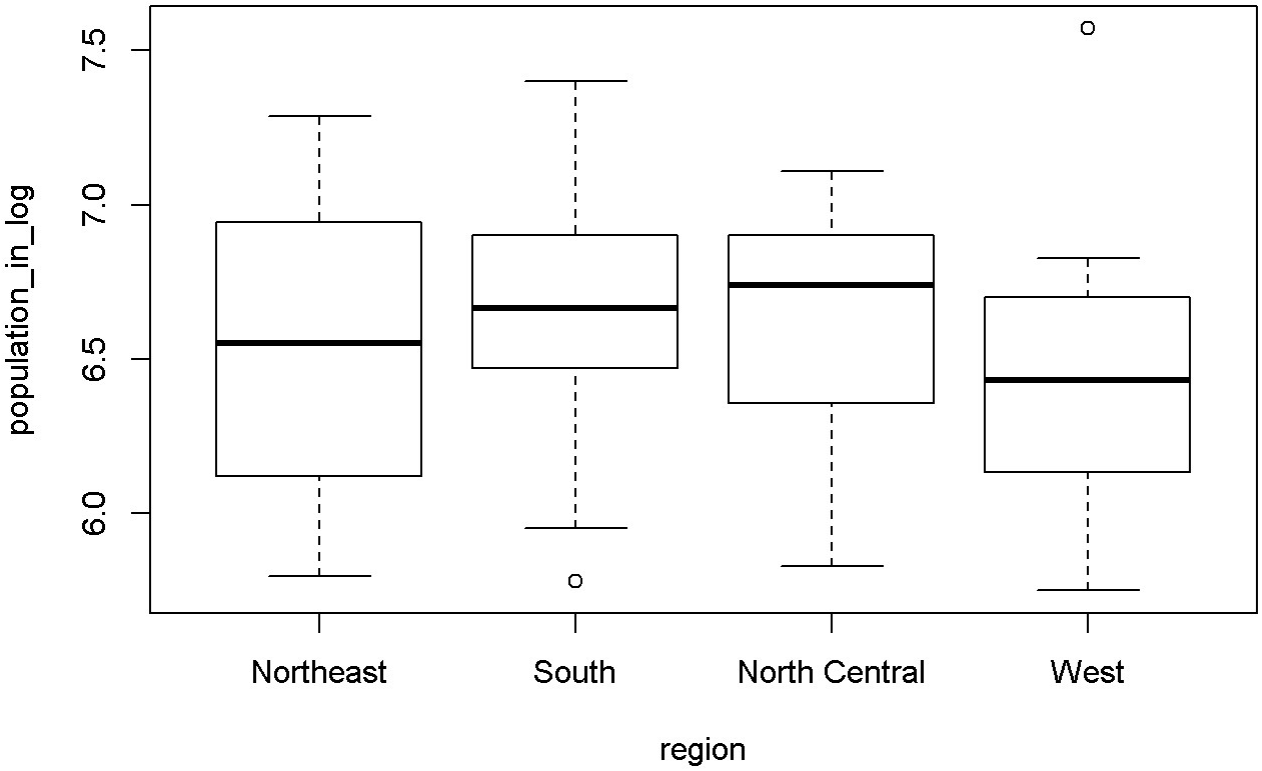
Nomor 8

```
hist(murders$population/1000)
```



Nomor 9

```
boxplot(population_in_log~region, data = murders)
```


population_in_log
6.0
6.5
7.0
7.5
Northeast
South
North Central
West
region