TUGAS MODUL 4

DBRT

11/9/2020

Soal Nomor 1

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

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

Nilai populasi terkecil pada data populasi adalah *563626*

Soal Nomor 2

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

```
## [1] 51
```

Nilai index populasi terkecil pada data *51*

Soal Nomor 3

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

```
## [1] 51
```

Nilai index populasi terkecil pada data *51*

Soal Nomor 4

```
murders$state[which.min(pop)]
```

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

Negara yang memiliki populasi terkecil dari data adalah negara *Wyoming*

Soal Nomor 5

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

```
##                  negara 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
```

Soal Nomor 6

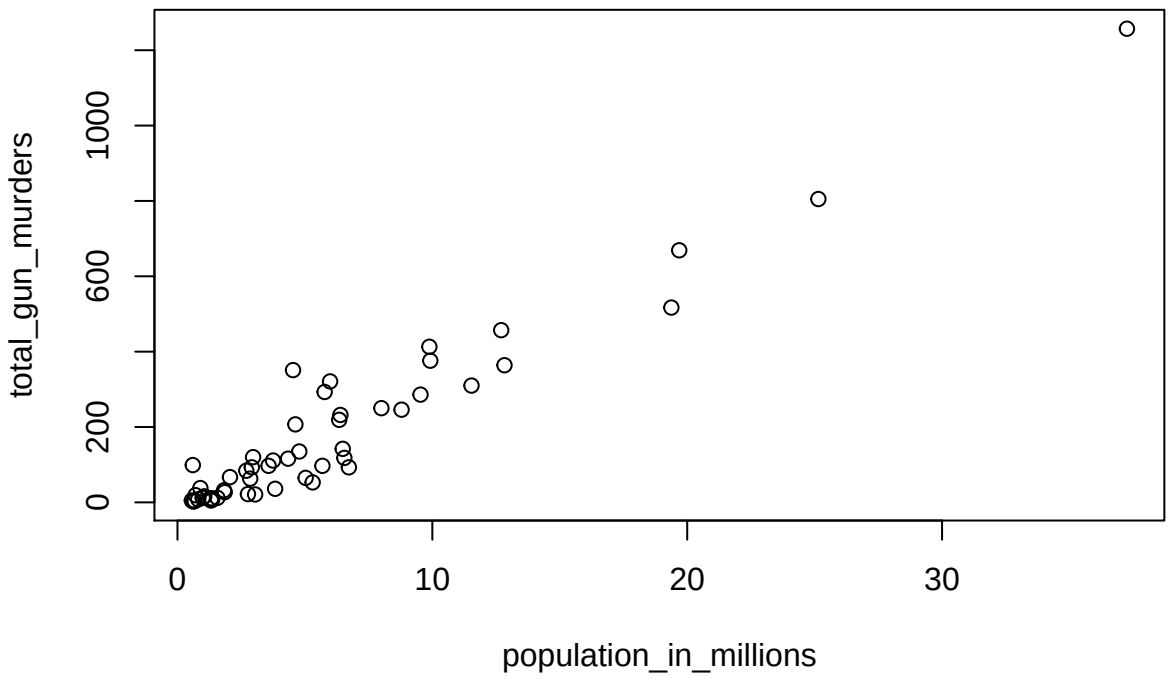
```
ind <- order(pop)
ranks <- rank(pop)
my_df <- data.frame(negara = murders$state[ind], peringkat = ranks[ind])
my_df
```

```
##                   negara 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
```

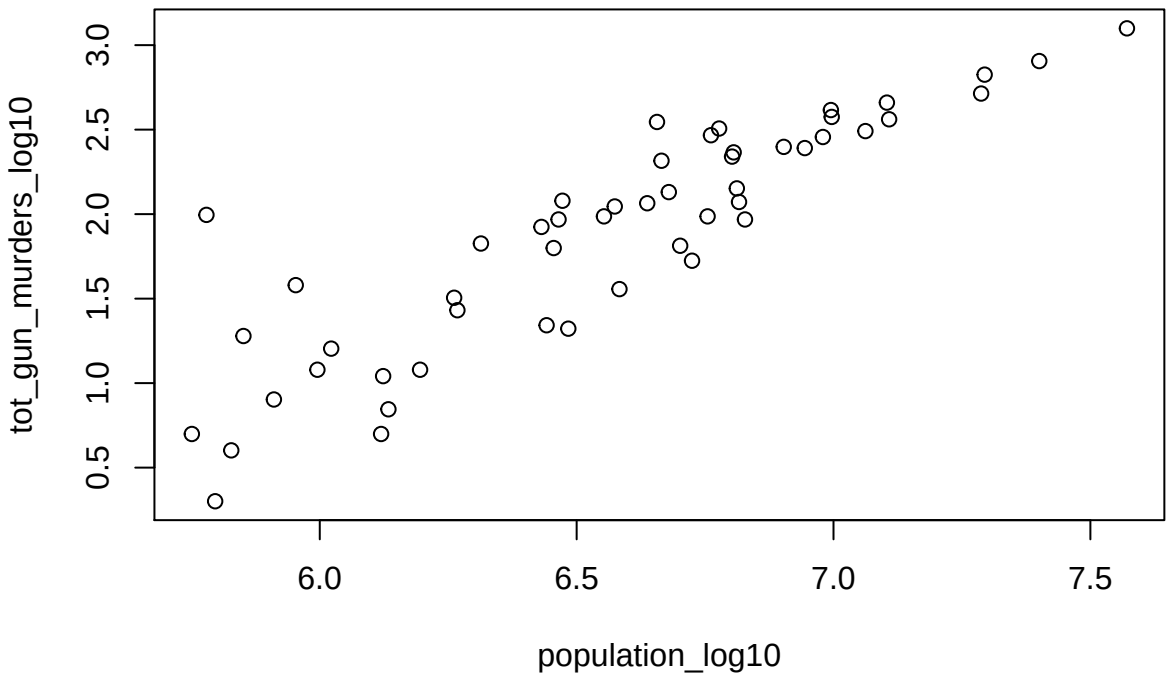
```
## 39           Washington        39
## 40             Virginia        40
## 41           New Jersey        41
## 42       North Carolina        42
## 43             Michigan        43
## 44              Georgia        44
## 45                 Ohio        45
## 46         Pennsylvania        46
## 47             Illinois        47
## 48             New York        48
## 49              Florida        49
## 50                Texas        50
## 51           California        51
```

Soal Nomor 7

```
population_in_millions <- murders$population/10^6
total_gun_murders <- murders$total
plot(population_in_millions, total_gun_murders)
```

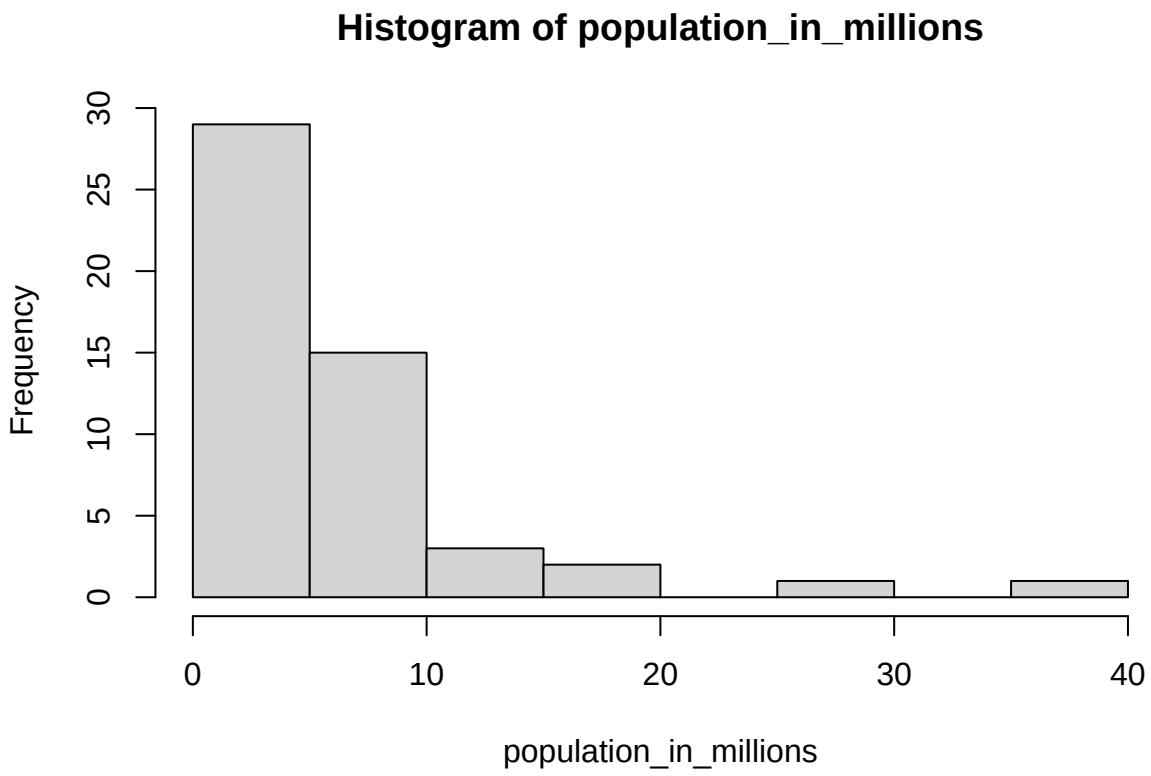



```
population_log10<- log10(murders$population)
tot_gun_murders_log10 <- log10(murders$total)
plot(population_log10, tot_gun_murders_log10)
```



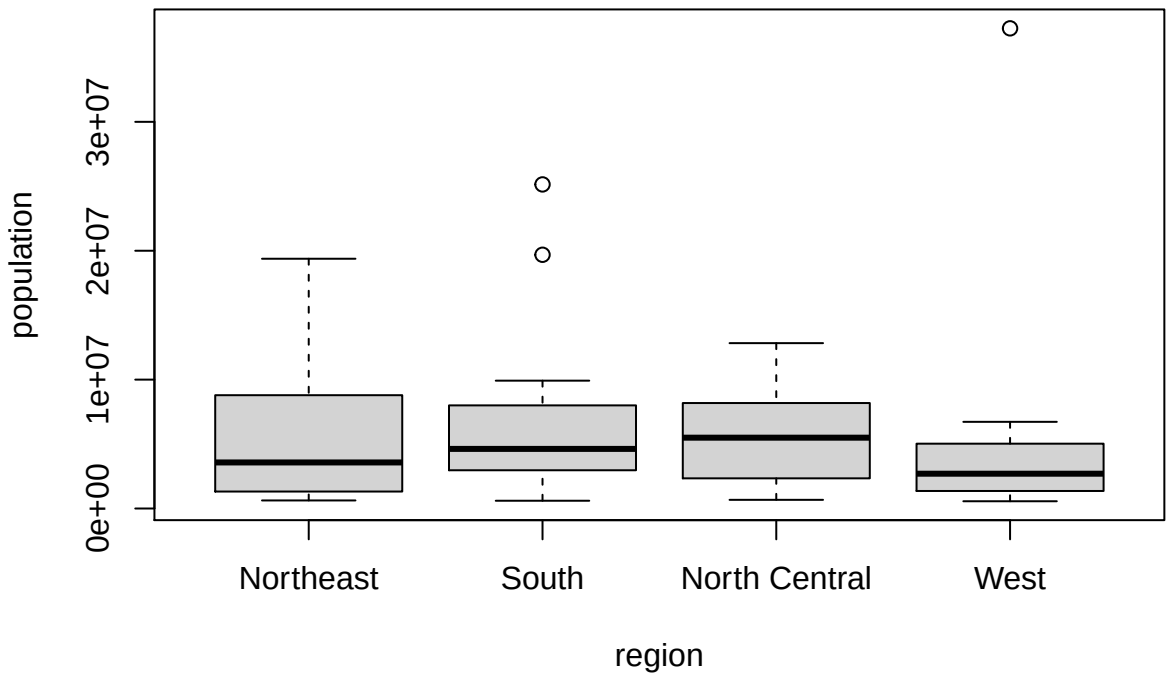
Soal Nomor 8

```
population_in_millions <- murders$population/10^6
hist(population_in_millions)
```



Soal Nomor 9

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


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