Latihan3_123190050

Niken

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1. nilai populasi terkecil

```
library(dslabs)
data(murders)
pop = murders$population
i = sort(pop)
i[1]
```

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

2. indeks data dengan populasi terkecil

```
index = order(pop)
index
```

```
##  [1] 51  9 46 35  2 42  8 27 40 30 20 12 13 28 49 32 29 45 17  4 25 16  7 37 38
## [26] 18 19 41  1  6 24 50 21 26 43  3 15 22 48 47 31 34 23 11 36 39 14 33 10 44
## [51]  5
```

3. penggunaan which min

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

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

4. Negara dengan populasi terkecil

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

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

5. data frame baru

```
ranks = rank(pop)
city = murders$state
my_df = data.frame(name = city, rank = ranks)
my_df
```

```
##                    name rank
## 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
```

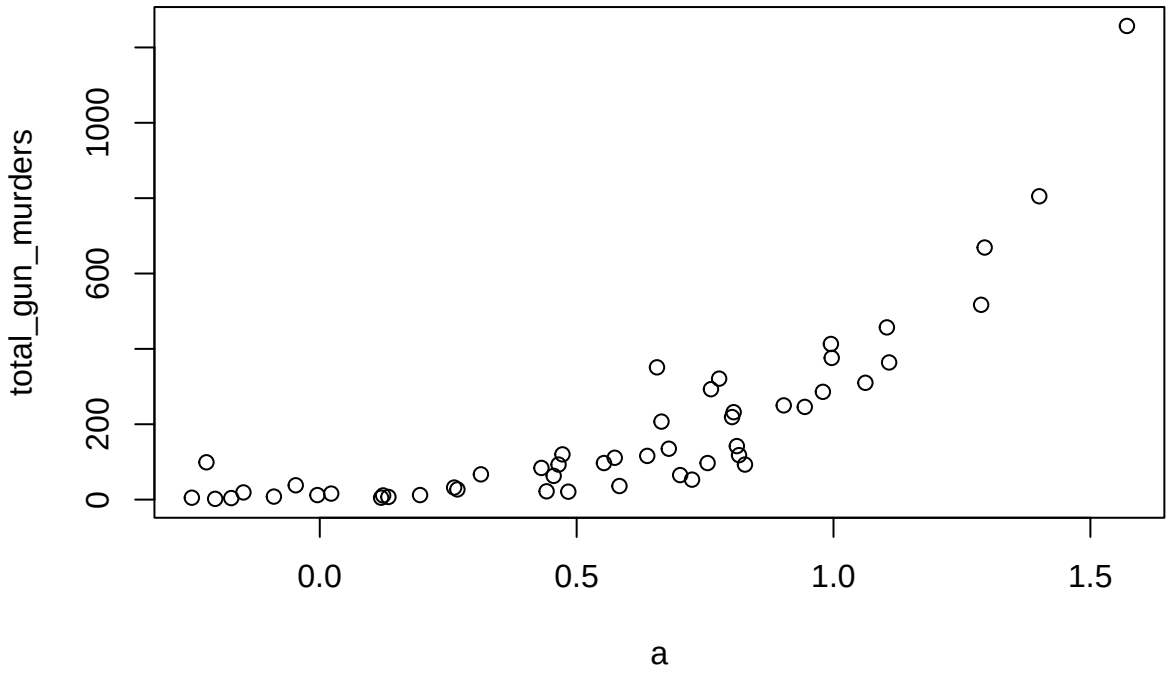
6. urutan my_df

```
value = my_df$rank
ind = order(value)
ind
```

```
##  [1] 51  9 46 35  2 42  8 27 40 30 20 12 13 28 49 32 29 45 17  4 25 16  7 37 38
## [26] 18 19 41  1  6 24 50 21 26 43  3 15 22 48 47 31 34 23 11 36 39 14 33 10 44
## [51]  5
```

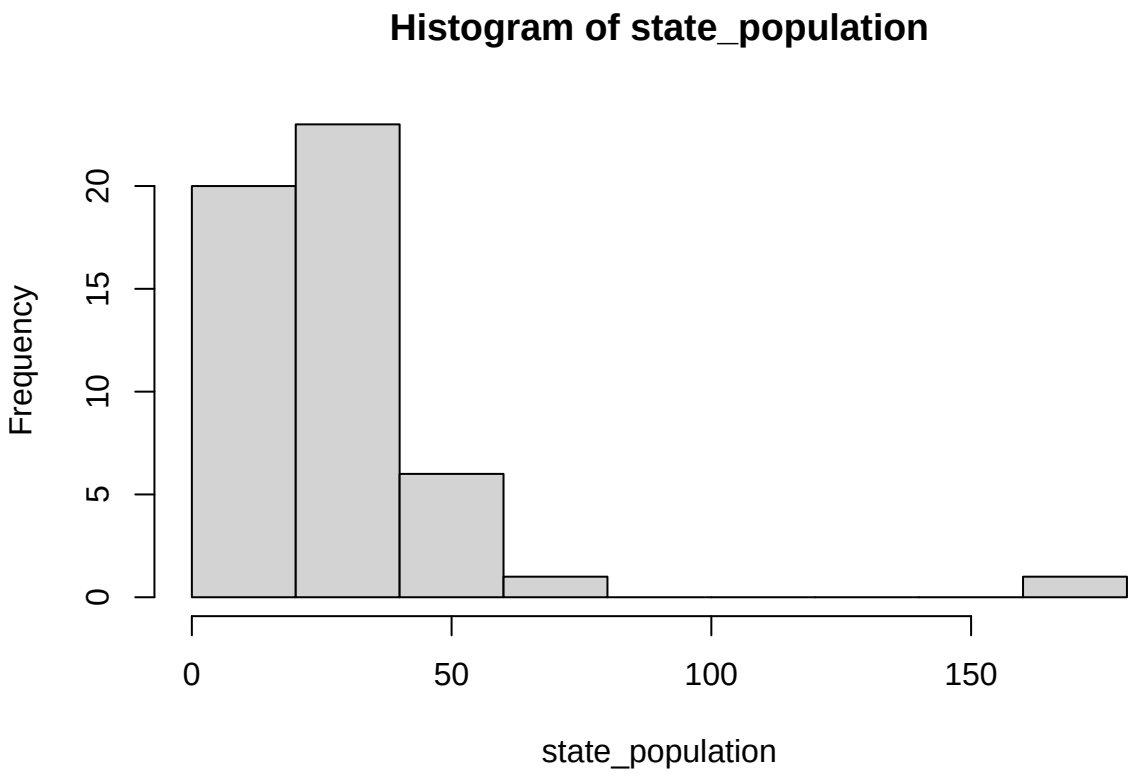
7. visualisasi plot dalam skala log

```
population_in_millions = murders$population/10^6
a = log10(population_in_millions)
total_gun_murders = murders$total
plot(a, total_gun_murders)
```



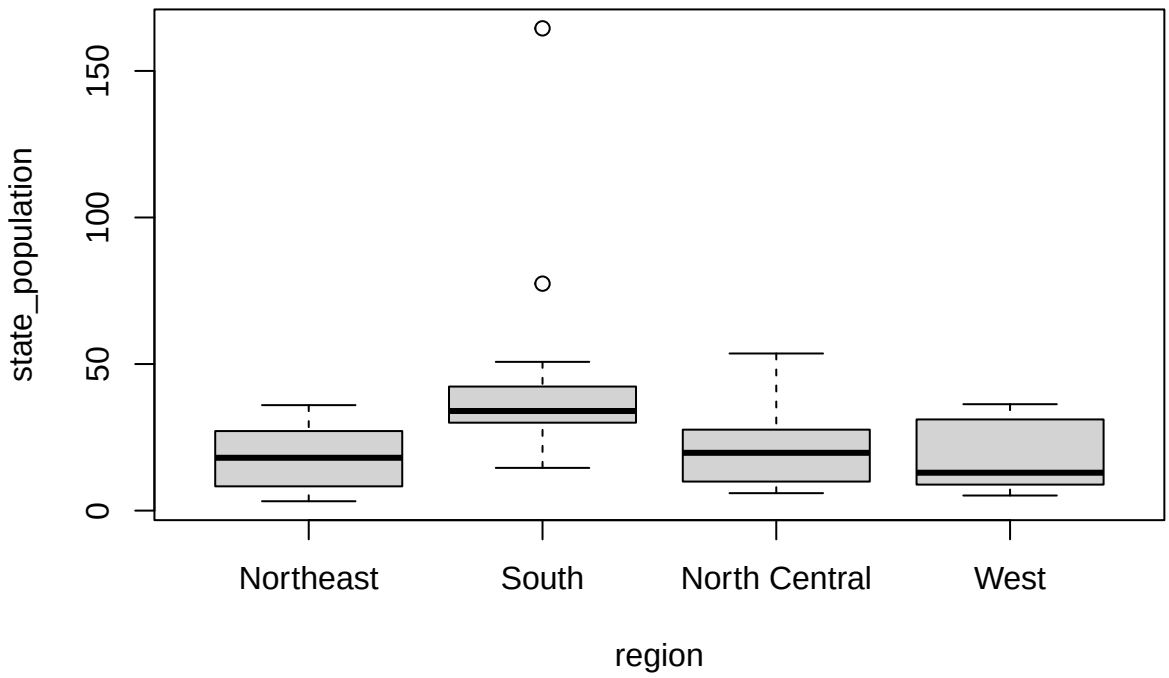
8.histogram populasi

```
state_population = with(murders, total_gun_murders/population_in_millions)
hist(state_population)
```



9. boxplot populasi negara bagian berdasar wilayah

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


state_population
0
50
100
150
Northeast
South
North Central
West
region