question 2

Consider the following marks (out of 50) obtained in Mathematics by 60 students of Class VIII:

21, 10, 30, 22, 33, 5, 37, 12, 25, 42, 15, 39, 26, 32, 18, 27, 28, 19, 29, 35, 31, 24,36, 18, 20, 38, 22, 44, 16, 24, 10, 27, 39, 28, 49, 29, 32, 23, 31, 21, 34, 22, 23, 36, 24, 36, 33, 47, 48, 50, 39, 20, 7, 16, 36, 45, 47, 30, 22, 17. 1. Make a continuous frequency distribution and construct the columns of CF, RF. Also make suitable graph of this data. 2. Find mean, median and mode

```
stud_Class_viii <-c(21, 10, 30, 22, 33, 5, 37, 12, 25, 42, 15, 39, 26, 32, 18, 27, 28, 19, 29, 35, 31, 2
                    22, 44, 16, 24, 10, 27, 39, 28, 49, 29, 32, 23, 31, 21, 34, 22, 23, 36, 24, 36, 33,
                    7, 16, 36, 45, 47, 30, 22, 17)
stud_Class_viii
```

```
##  [1] 21 10 30 22 33  5 37 12 25 42 15 39 26 32 18 27 28 19 29 35 31 24 36 18 20
## [26] 38 22 44 16 24 10 27 39 28 49 29 32 23 31 21 34 22 23 36 24 36 33 47 48 50
## [51] 39 20  7 16 36 45 47 30 22 17
```

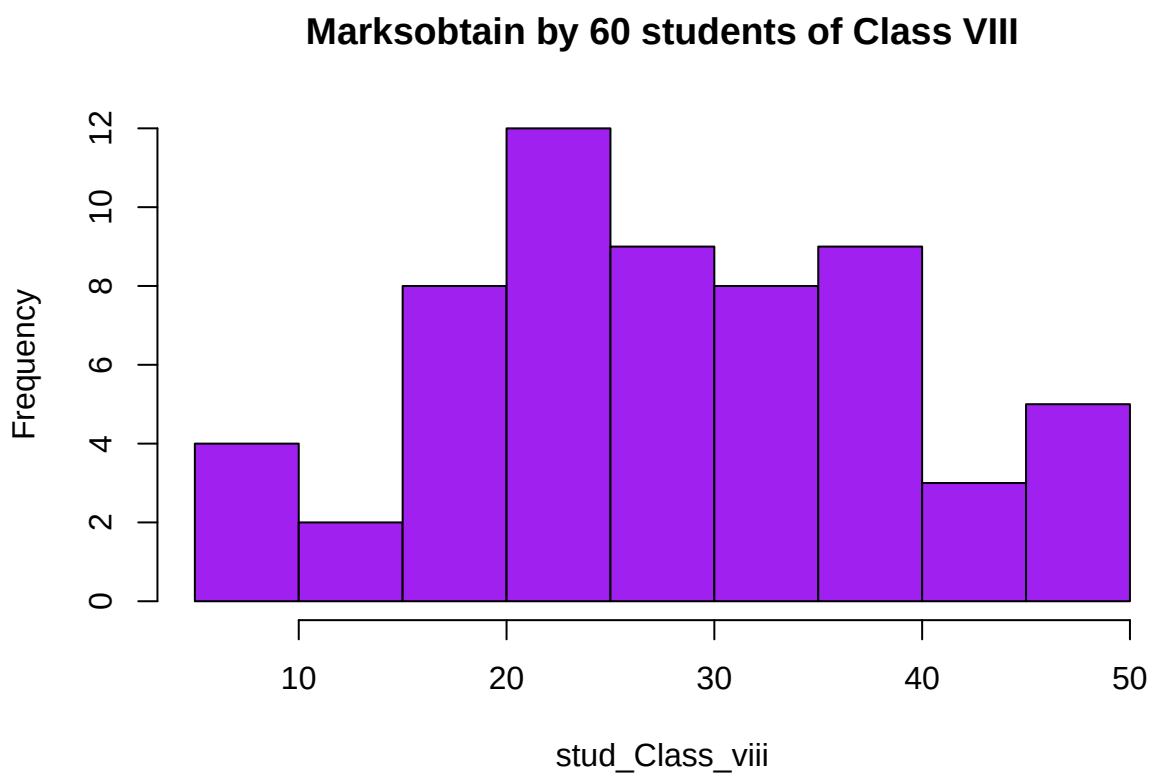
```
range<- (50-5)/8
range
```

```
## [1] 5.625
```

```
breaks = seq(4.5, 50.5, by=5)    # sequence of 5
duration.cut = cut(stud_Class_viii, breaks, right=FALSE)
duration.freq = table(duration.cut)
transform(duration.freq,rel_freq=prop.table(duration.freq),cum_freq=cumsum(duration.freq))
```

```
##             duration.cut Freq rel_freq.duration.cut rel_freq.Freq cum_freq
## [4.5,9.5)      [4.5,9.5)    2             [4.5,9.5)    0.03389831        2
## [9.5,14.5)    [9.5,14.5)    3            [9.5,14.5)    0.05084746        5
## [14.5,19.5)  [14.5,19.5)    7          [14.5,19.5)    0.11864407       12
## [19.5,24.5)  [19.5,24.5)   13          [19.5,24.5)    0.22033898       25
## [24.5,29.5)  [24.5,29.5)    8          [24.5,29.5)    0.13559322       33
## [29.5,34.5)  [29.5,34.5)    9          [29.5,34.5)    0.15254237       42
## [34.5,39.5)  [34.5,39.5)   10          [34.5,39.5)    0.16949153       52
## [39.5,44.5)  [39.5,44.5)    2          [39.5,44.5)    0.03389831       54
## [44.5,49.5)  [44.5,49.5)    5          [44.5,49.5)    0.08474576       59
```

```
hist(stud_Class_viii,main = "Marksobtain by 60 students of Class VIII",col = "purple")
```




```
mean(stud_Class_viii)
```

```
## [1] 28.31667
```

```
# Create the function.
getmode <- function(v) {
   uniqv <- unique(v)
   uniqv[which.max(tabulate(match(v, uniqv)))]
}
mode<- getmode(stud_Class_viii)
mode
```

```
## [1] 22
```

```
median(stud_Class_viii)
```

```
## [1] 28
```