

## PRACTICAL 4

### FOR DISCRETE DISTRIBUTION:

**Q 1)**  $x=(37,42,38,25,31,37,43,37,43,44,28,36,37,51)$

**COMMAND:**

```
x=c(37,42,38,25,31,37,43,37,43,44,28,36,37,51)
```

```
m=mean(x)
```

```
cat("The mean is:",m,"\n")
```

```
me=median(x)
```

```
cat("The median is:",me,"\n")
```

```
mode<-function(x){
```

```
  uniqx<-unique(x)
```

```
  uniqx[which.max(tabulate(match(x, uniqx)))]
```

```
}
```

```
mo=mode(x)
```

```
cat("The mode is:",mo,"\n")
```

**OUTPUT:**

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```
R Console
> x=c(37,42,38,25,31,37,43,37,43,44,28,36,37,51)
> m=mean(x)
> cat("The mean is:",m,"\n")
The mean is: 37.78571
> me=median(x)
> cat("The median is:",me,"\n")
The median is: 37
> mode<-function(x){
+   uniqx<-unique(x)
+   uniqx[which.max(tabulate(match(x, uniqx)))]
+ }
> mo=mode(x)
> cat("The mode is:",mo,"\n")
The mode is: 37
> |
```

**Q 2)  $y=(23,42,34,25,26,25,18,23,25,41,25,31)$**

**COMMAND:**

```
y=c(23,42,34,25,26,25,18,23,25,41,25,31)
```

```
m=mean(y)
```

```
cat("The mean is:",m,"\n")
```

```
me=median(y)
```

```
cat("The median is:",me,"\n")
```

```
mode<-function(y){
```

```
  uniqx<-unique(y)
```

```
  uniqx[which.max(tabulate(match(y, uniqx)))]
```

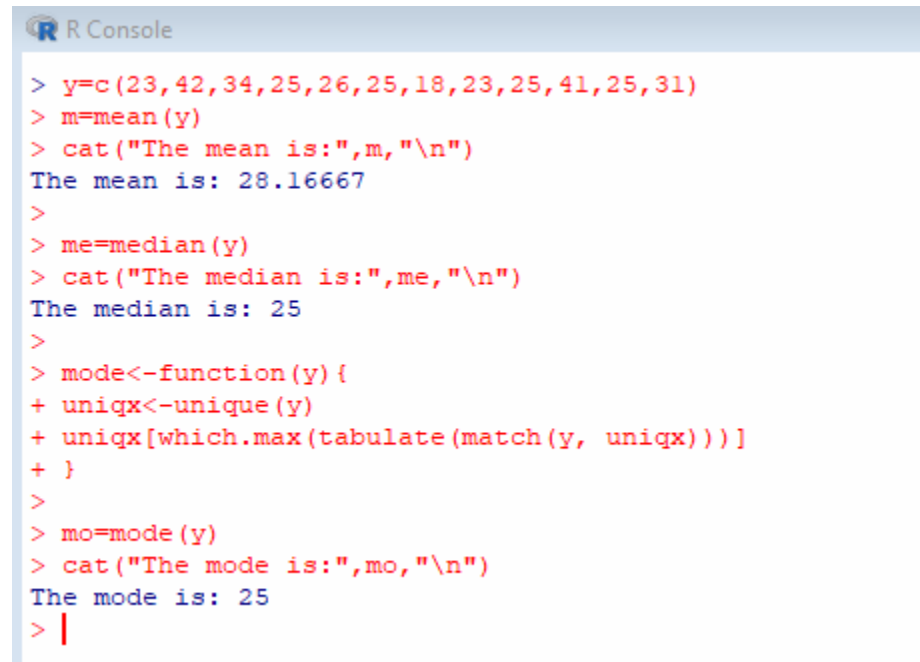
```
}
```

```
mo=mode(y)
```

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```
cat("The mode is:",mo,"\n")
```

### OUTPUT:



```
R Console
> y=c(23,42,34,25,26,25,18,23,25,41,25,31)
> m=mean(y)
> cat("The mean is:",m,"\n")
The mean is: 28.16667
>
> me=median(y)
> cat("The median is:",me,"\n")
The median is: 25
>
> mode<-function(y) {
+   uniqx<-unique(y)
+   uniqx[which.max(tabulate(match(y, uniqx)))]
+ }
>
> mo=mode(y)
> cat("The mode is:",mo,"\n")
The mode is: 25
> |
```

### Q1)

```
x=c(5,10,15,20,25,30,35)
```

```
f=c(4,10,22,34,30,21,7)
```

```
y=rep(x,f)
```

```
m=mean(y)
```

```
cat("The mean is:",m,"\n")
```

```
me=median(y)
```

```
cat("The median is:",me,"\n")
```

```
mode <- function(x) {
```

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```
uniqx<- unique(x)
uniqx[which.max(tabulate(match(x, uniqx)))]
}
mo=mode(y)
cat("The mode is:",mo,"\n")
```

### OutPut:

```
> x=c(5,10,15,20,25,30,35)
> f=c(4,10,22,34,30,21,7)
> y=rep(x,f)
> m=mean(y)
> cat("The mean is:",m,"\n")
The mean is: 21.52344
>
> me=median(y)
> cat("The median is:",me,"\n")
The median is: 20
>
> mode <- function(x) {
+   uniqx<- unique(x)
+   uniqx[which.max(tabulate(match(x, uniqx)))]
+ }
> mo=mode(y)
```

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```
> cat("The mode is:",mo,"\n")
```

The mode is: 20

### Q2.

```
x=c(12,14,16,18,20,22,24,26,30,32)
```

```
f=c(8,15,28,32,46,35,24,15,10,6)
```

```
y=rep(x,f)
```

```
m=mean(y)
```

```
cat("The mean is:",m,"\n")
```

```
me=median(y)
```

```
cat("The median is:",me,"\n")
```

```
mode <- function(x) {
```

```
  uniqx<- unique(x)
```

```
  uniqx[which.max(tabulate(match(x, uniqx)))]
```

```
}
```

```
mo=mode(y)
```

```
cat("The mode is:",mo,"\n")
```

### OutPut:

```
> x=c(12,14,16,18,20,22,24,26,30,32)
```

```
> f=c(8,15,28,32,46,35,24,15,10,6)
```

```
> y=rep(x,f)
```

```
> m=mean(y)
```

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```
> cat("The mean is:",m,"\n")
```

The mean is: 20.44749

```
>
```

```
> me=median(y)
```

```
> cat("The median is:",me,"\n")
```

The median is: 20

```
>
```

```
> mode <- function(x) {
```

```
+ uniqx<- unique(x)
```

```
+ uniqx[which.max(tabulate(match(x, uniqx)))]
```

```
+ }
```

```
> mo=mode(y)
```

```
> cat("The mode is:",mo,"\n")
```

The mode is: 20

```
>
```