1. Define matrix mymat by replicating the sequence 1:5 for 4 times and transforming into a matrix, sum over rows and columns.

```
> mymat<-matrix(rep(1:5, 4), ncol=4)
> mymat
     [,1] [,2] [,3] [,4]
[1,]    1    1    1    1
[2,]    2    2    2    2
[3,]    3    3    3    3
[4,]    4    4    4    4
[5,]    5    5    5    5
```

```
> apply(mymat,1,sum)
[1]  4  8 12 16 20
```

```
> apply(mymat, 2, sum)
[1] 15 15 15 15
```