Correction TP2

Ex1

```
> X1=data.frame(Ident=1:5,sexe=c("H","F","F","H","H"),Poids=c(75,68,48,72,83))
> X1
  Ident sexe Poids
1     1    H    75
2     2    F    68
3     3    F    48
4     4    H    72
5     5    H    83
> X2=data.frame(Ident=1:5,sexe=c("H","F","F","H","H"),Taille=c(182,165,160,178,183))
> X2
  Ident sexe Taille
1     1    H    182
2     2    F    165
3     3    F    160
4     4    H    178
5     5    H    183
> merge(X1,X2)
  Ident sexe Poids Taille
1     1    H    75    182
2     2    F    68    165
3     3    F    48    160
4     4    H    72    178
5     5    H    83    183
```

Ex2

```
# par masque logique
> taille[sexe>0]
[1] 160 170 150
# par indice
> taille[2:4]
```

Ex3

```
> x[x>2 & x<3]
[1] 2.1 2.8 2.7 2.3
```

Ex4

```
> Y=matrix(c(1,0,3,4,6,6,0,4,5,6,2,3,0,1,2,4),nc=4)
> Y
     [,1] [,2] [,3] [,4]
[1,]    1    6    5    0
[2,]    0    6    6    1
[3,]    3    0    2    2
[4,]    4    4    3    4

> rownames(Y)<-paste("row",1:4,sep="-")
> colnames(Y)<-paste("column",1:4)
```

```
> Y
     column 1 column 2 column 3 column 4
row-1        1        6        5        0
row-2        0        6        6        1
row-3        3        0        2        2
row-4        4        4        3        4
```

Ex5

```
> d=subset(Orange,select=c(age,circumference))
> d
> summary(d)
> apply(d,MARGIN=2,FUN=quantile)
 #probs=seq(0,1,0.25)

> apply(d,2,quantile,probs=seq(0,1,by=0.1))
     age circumference
0%    118          30.0
10%   118          32.4
20%   484          56.6
30%   664          76.2
40%   664         109.8
50%  1004         115.0
60%  1231         139.4
70%  1231         144.4
80%  1372         172.4
90%  1582         193.4
100% 1582         214.0
```

Ex.6

```
W<-rep(c(8,2,6),3)
X<-c(rep(4,7),rep(9,5),rep(2,3))
X<-rep(c(4,9,2),c(7,5,3))
```

Ex 7

```
> taille=c(178,175,160,191,176,155,163,174,182)
> taille
[1] 178 175 160 191 176 155 163 174 182
> taille2=c(164,172,156,195,166)
> taille2
[1] 164 172 156 195 166

> new.taille=c(rep(taille2,2),taille[3:9])
> new.taille
 [1] 164 172 156 195 166 164 172 156 195 166 160 191 176 155 163 174 182

> new.taille=c(rep(taille2,2),tail(taille,n=10))
> new.taille
 [1] 164 172 156 195 166 164 172 156 195 166 178 175 160 191 176 155 163 174 182
```

Ex 8

```
> new.iris=iris[iris[,5]=="versicolor",]
> new.iris

> new.iris[order(new.iris[,1], decreasing=TRUE),]
   Sepal.Length Sepal.Width Petal.Length Petal.Width    Species
51          7.0         3.2          4.7         1.4 versicolor
53          6.9         3.1          4.9         1.5 versicolor
77          6.8         2.8          4.8         1.4 versicolor
```

Ex 9

```
> A <- matrix(c("8", "9", "16", "2"), nrow = 2)
> A
     [,1] [,2]
[1,] "8"  "16"
[2,] "9"  "2"

A<- apply(A, c(1, 2), as.numeric)
```