## Fundations examination part 2

## 1. Exercice 1:

Let consider the dataset saved in the file data1.txt.

Those observations are associated to a point process and we would like to see if it can be an homogeneous Poisson Process with intensity  $\lambda$ .

If it is the case, the time arrival between two points should be an exponential random variable with parameter  $\lambda$ .

Convince me thanks to different ways that its is the case for this dataset and provide an estimation for  $\lambda$ .

## 2. Exercice 2:

Let consider the two datasets ukcomp1\_r.dat et ukcomp2\_r.dat. The first one is the training set while the second one is the test set.

We want to explain the variable RETCAP by the others ans try to identify the variables really needed for the explanation.

## 3. Exercice 3:

Let consider the article MTGAUE.

Read it and try to understand the scope and the way to answer to the scope.