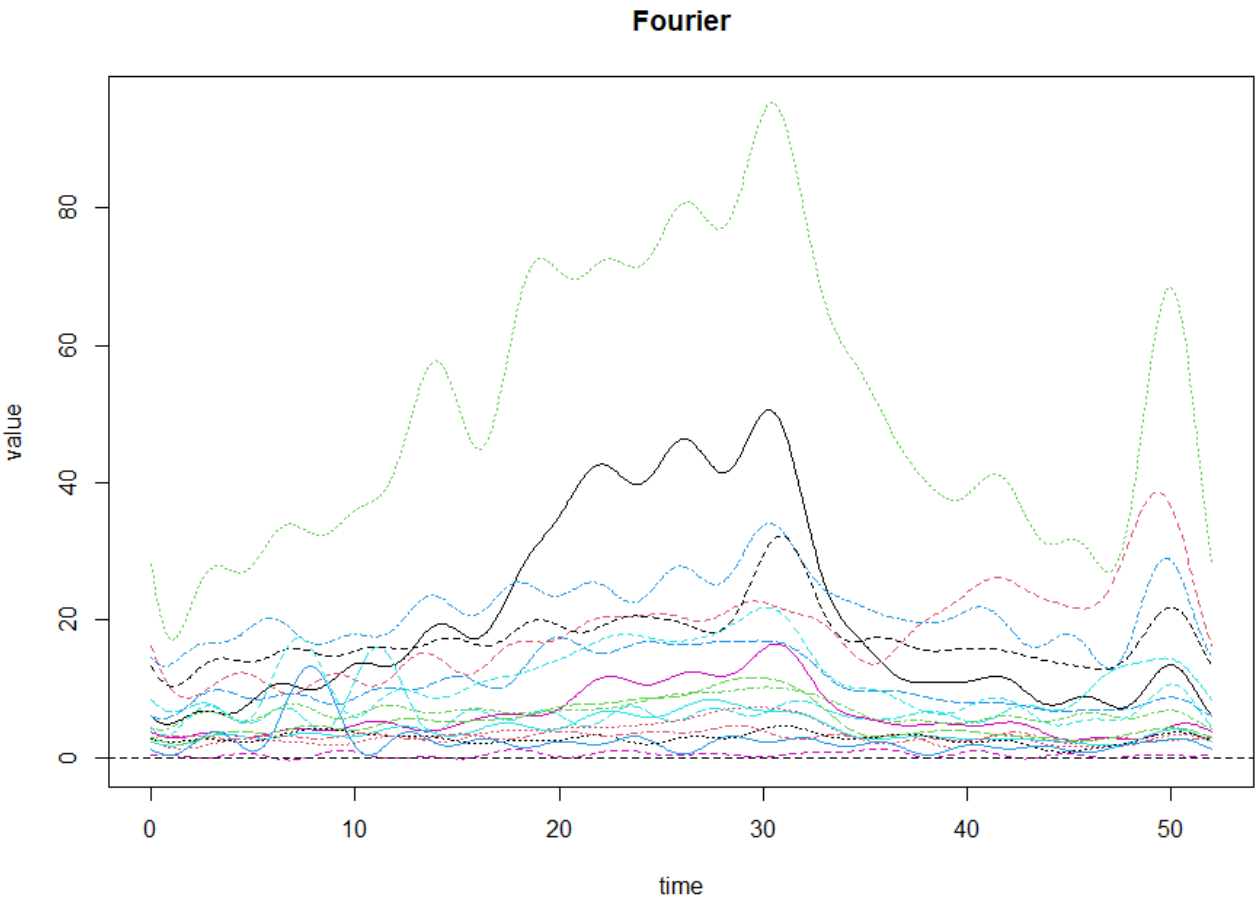
APPLIED STATISTICS EXAM **18/01/2023**

MANUEL PERACCI 10824742

EXERCISE 4

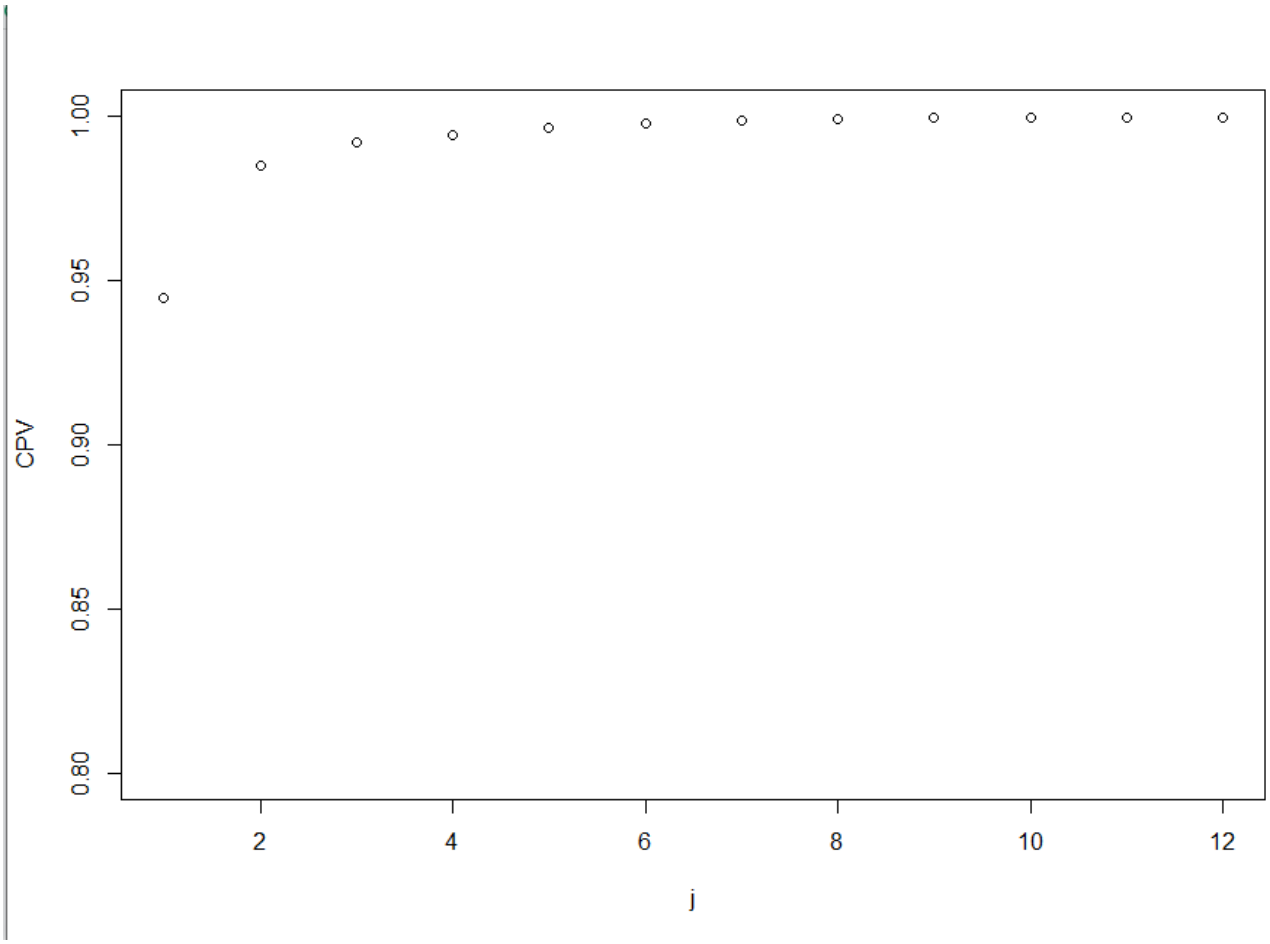
A)



The first three coefficients for the first cocktail are:

146.024827 7.178419 -89.349090

B)



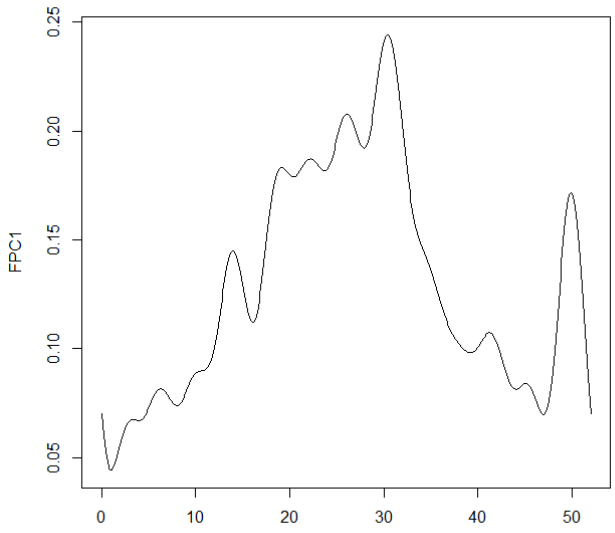
The cumulative explained variance for the first five components are:

0.9445601 0.9850849 0.9922901 0.9945525 0.9963772

While the first five variances are:

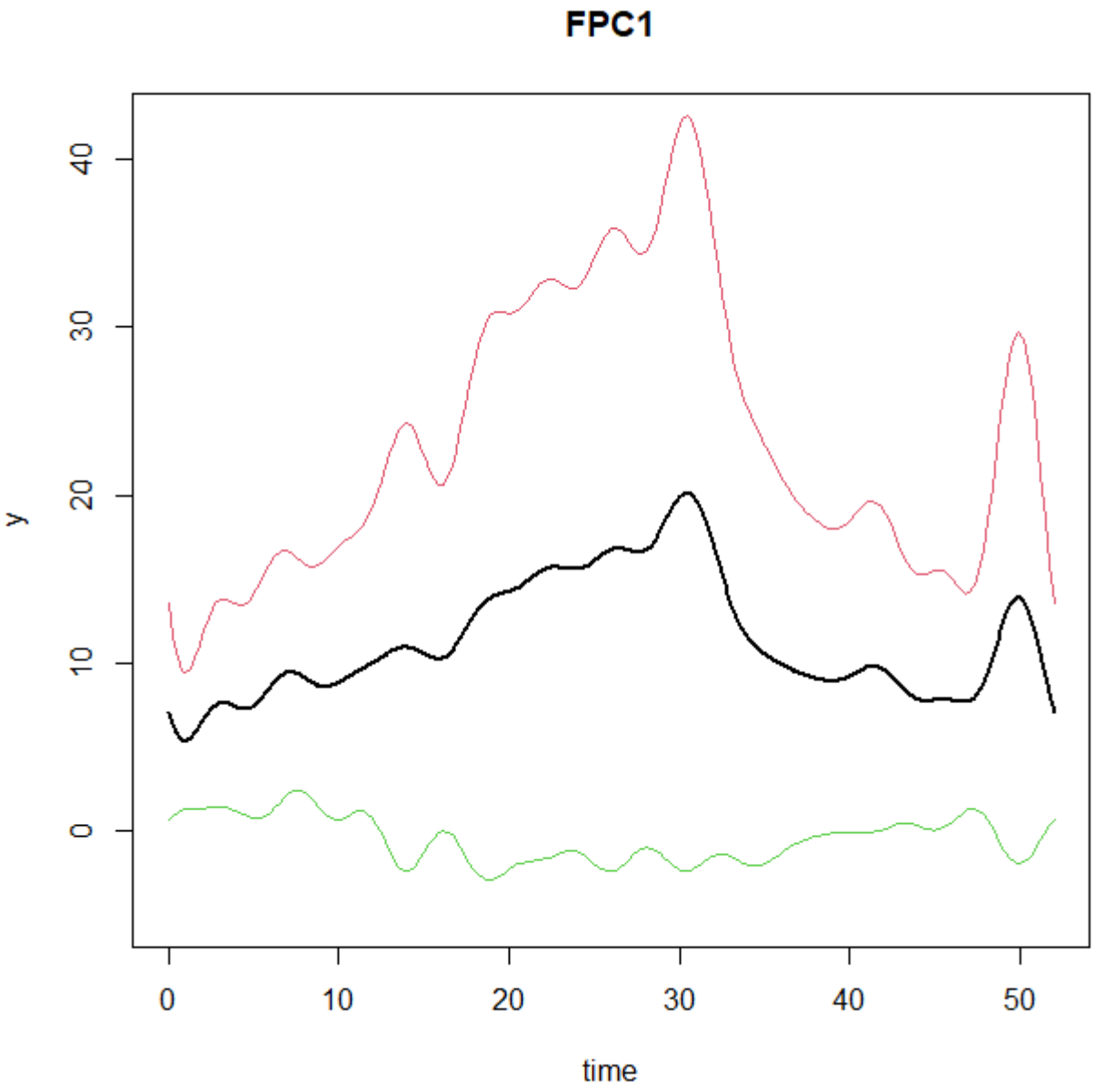
8480.61652 363.84676 64.69158 20.31281 16.38286

C)



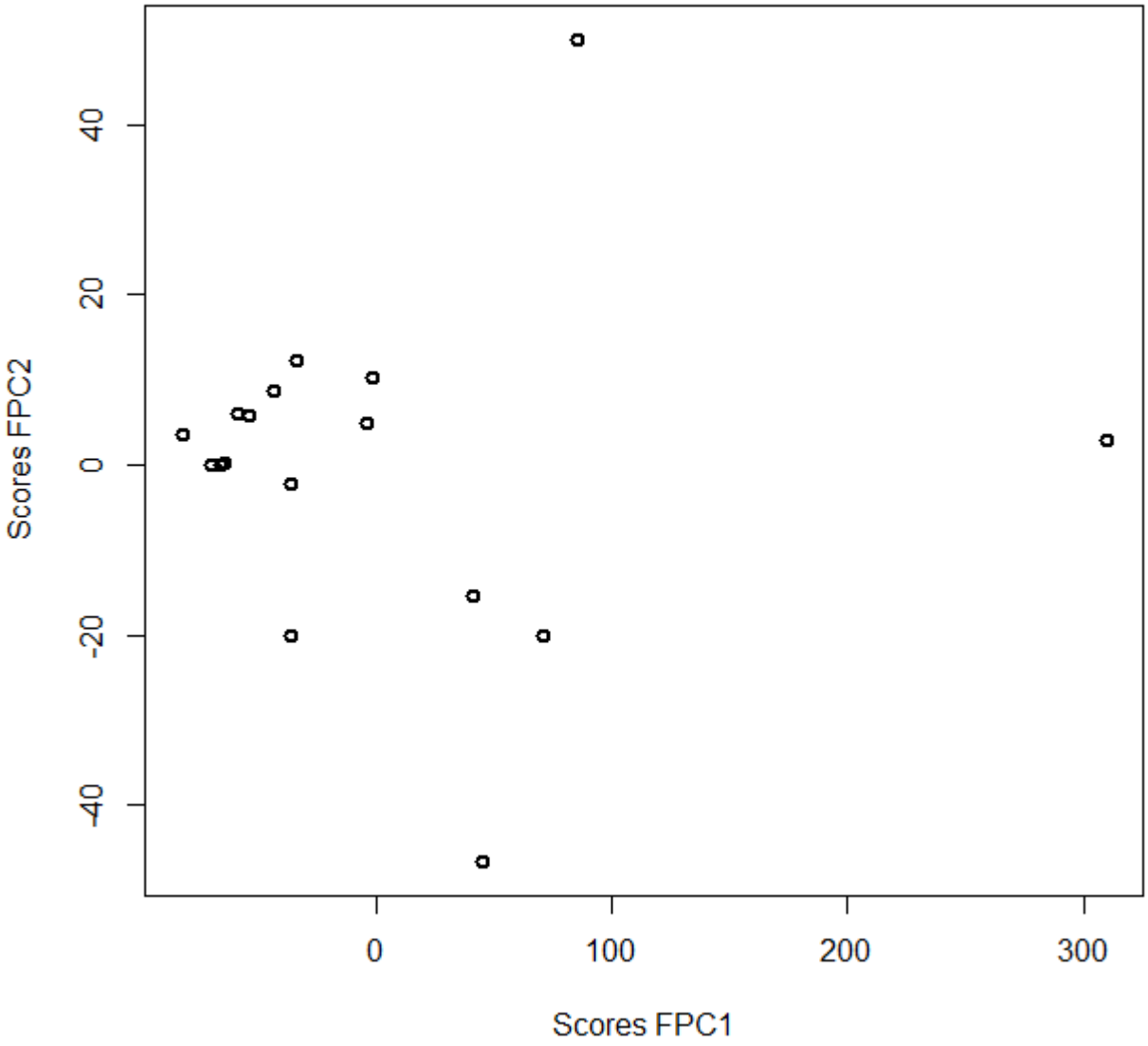
Clearly the first component alone explains almost 95% of all the variability of the dataset, so we can just take the first one.

D)



looking at the plot we can say that the first principal component is a weighted average of the consumption of cocktails during all the year. However, there is much more amplitude variation on the peaks of the graph, so during the summer and the brief winter holidays.

E)



It seems that Mojito and Spritz are the most interesting cases, because they are isolated from the rest of the group.

It seems that spritz is by far the most consumed and it has the highest scores in the first component. While Mojito has the highest scores in FPC2.