**Second Continuous Evaluation (December 2020), Statistics-I, group ARA**

We have the database (<http://www.uv.es/mperea/logE2.jasp>) that contains data of 30 people, with the RT (Response Time) detecting a real brand, the RT detecting a fake (counterfeit) brand, extroversion, ranking at chess, ranking at poker, and anxiety.

1. We want to examine the relationship between the ranking at chess and the ranking at poker in the sample. What is the value of the appropriate correlation index? What does it mean?

2. We want to predict the RT of fake brand detection from a regression equation with two predictors: RT of real brand detection, extroversion, and anxiety. Please answer the following questions: a) What percentage of variance of the RTs of fake brand detection can be explained by the regression equation formed by these three predictors; b) Do you think the equation suffered from collinearity problems?; and c) Which one is the worst predictor? Justify your answer.

3. We have randomly tossed simultaneously two coins. The random variable X is the number of faces. We want to know: a) the value of f(2) and what it reflects; b) the value of F(2) , indicating what it reflects.

4. What is the approximate cut-off point in a public examination where only the top 5% of candidates will be selected? Please keep in mind that, in previous years of that public examination, the distribution of the marks consistently followed a normal distribution with mean 20 and standard deviation 4.