**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 extroversion and anxiety in the sample. Can we actually compute Pearson’s coefficient, and if so what is its value? Justify your answer.

2. We want to predict the RT of fake brand detection from a regression equation with two predictors: RT of real brand detection and extroversion. 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 two predictors; b) What would be the predicted value of the RT of fake brand detection for someone with a zero value in both RT of real brand detection and extroversion?; and c) If we conduct a stepwise regression, which predictor/s would enter the equation?

3. We have answered the 20 questions of an exam completely at random—all were TRUE-FALSE questions. Indicate the following: 1) what is the probability of guessing correctly all questions; and 2) what is the probability of guessing correctly at least one question.

4. What percentage of people have an IQ between 100 and 140? Assume that the IQ follows approximately a normal distribution with mean 100 and standard deviation 15.