**Second continuous activity, 20 December 2018. ARA Group (1)**

(Exercises 1 and 2) We have a database from children/adolescents with autism spectrum disorders, including several variables from the "*Child Behavior Checklist (CBCL)*" and the "*Autism Diagnostic Interview-Revised (ADI-R)*". We also have some sociodemographic and linguistic information (<http://www.uv.es/mperea/20Decembee.sav>)

Exercise 1. We want to find out the degree of the relationship between the level of Valencian and English in the sample. (Copy paste from SPSS.) Please add a brief sentence with your conclusions.

Exercise 2. We want to predict the total score on the CBCL test (CBCL\_total) from the predictors: a) language scale from ADI-R, b) social scale from ADI-R, and c) age. Please answer the following questions: i) What percentage of variance of total score of CBCL can be explained by the regression equation; ii) Has the equation suffered from collinearity problems? (Copy/paste from SPSS.) Justify your answer.

Exercise 3. The probability density function of the random variable X is f(x)=0.2 for 10<X<d and f(x)=0 otherwise. Please answer the following questions: i) What is the value of f(14) and what does it mean?; ii) What is the value of F(14) and what does it mean?

Exercise 4. We have a new euro coin, and we want to know whether it is well balanced. To check this hypothesis, we threw the coin 100 times, and the outcome was 60 heads and 40 tails. If we use the 95th percentile criterion, can we conclude that the coin is well balanced?

