FOR DECATHLON DATASET

Define a PCA for the decathlon dataset and discuss why the model you own works well (or not) looking the variables chart. We recommend using FactoMineR package to do this analysis. Interpret variables and individuals charts to understand the relations between the different variables of interest and individuals scores on the dimensions

PRINCIPAL COMPONENT REGRESSION

Now we are going to continue with principal component regression.

We want to construct a linear regression model to predict the points of each athlete. To do so you must first decide the number of principal components to be included in the regression as independent variables. Justify your answer.

Check the assumptions of the regression model.

Is the prediction accurate enough?