

The aim of this work is to find procedures for testing the equality of means of a bivariate normal distribution when observations are missing on one or both variables. One of the possible solutions is to discard the incomplete data and to use the paired t test. In this thesis we describe tests that enable using all available data. For the case of missing observations on one variable, the solutions of Banerjee, Welch and Mehta and Gurland are presented. For the case of missing observations on both variables, the solutions of Banerjee, Welch, Bhoj and the solution based on the maximal likelihood estimate are presented. We compare the solutions found to each other and to the paired t test on simulated data. The software R 2.5.1 is used for this purpose.