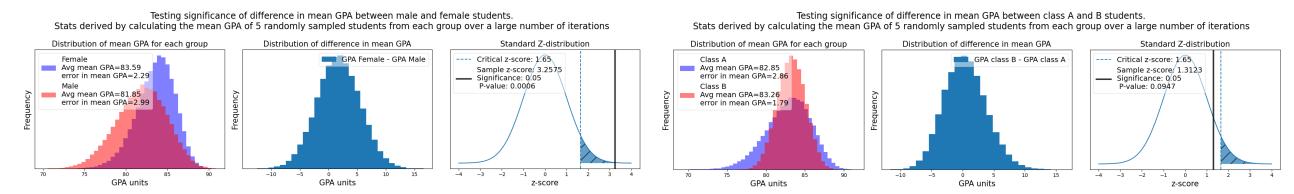
Student performance report No. of students in each class **Count of Success status** Proportion of scores in different maths subjects • female • male Success **0 1 2** Distribution of GPA by class Distribution of GPA with gender Calculus 171.96 Statistics 85.13 class A B •female •male 60 Functional. 200 75.32 Probability 83.88 50 50 40 100 20 Algebra 76.06 Measure 80.76 Calculus2 78.94 — 60 100 В 100 A female A male B female gender Average of Algebra Average of Calculus1 Average of Calculus2 Average of Statistics Average of Probability Average of Measure Average of Functional analysis Average of GPA 80.79 85.73 83.66 female 75.44 71.27 83.38 81.46 76.75 female 76.70 68.75 78.50 83.90 86.80 80.80 75.75 83.32 76.79 75.14 74.75 84.11 82.71 79.39 72.39 81.45 male male 75.67 72.89 83.11 87.89 83.67 81.22 75.89 83.09 76.06 71.96 78.94 85.13 83.88 80.76 75.32 82.96 **Average**

Testing the following 2 null hypotheses. 1. There is no statistically significant difference between the mean scores of female and male students (H1₀). And; 2. There is no statistically difference between the mean performance of class A and class B students (H2₀).



The figure above on the left shows that the sample z score lies beyond the critical decision score of 1.65. Therefore, with a 95% confidence level, we can reject the null hypothesis H1₀ that the average GPA between male and female students are statistically same. The figure on the right shows a sample z score lower than the critical score. We therefore do not reject the null hypothesis H2₀.