
IEOR 151 – HOMEWORK 3
DUE WEDNESDAY, SEPTEMBER 25, 2013 IN CLASS

1. Suppose 5 different hypothesis tests have been conducted, with p -values of: Test 1 ($p = 0.07$), Test 2 ($p = 0.001$), Test 3 ($p = 0.015$), Test 4 ($p = 0.005$), Test 5 ($p = 0.05$).
 - (a) Using the Bonferroni correction, which tests should be accepted or rejected when the family-wise error rate is $\alpha = 0.05$. (2 points)
 - (b) Using the Holm–Bonferroni method, which tests should be accepted or rejected when the family-wise error rate is $\alpha = 0.05$. (3 points)

2. Suppose that three groups whose measurements are expected to be Gaussian are compared, and an F -test gives $p = 0.01$. The p -values for the pairwise comparisons are given by $p_{12} = 0.010$, $p_{13} = 0.007$, and $p_{23} = 0.030$.
 - (a) Using the Bonferroni correction, which tests should be accepted or rejected when the family-wise error rate is $\alpha = 0.05$. (3 points)
 - (b) Using the Holm–Bonferroni method, which tests should be accepted or rejected when the family-wise error rate is $\alpha = 0.05$. (4 points)