

STATISTICS APPLIED TO BUSINESS ADMINISTRATION
ACADEMIC YEAR 2015-2016
PRACTICAL EXERCISE 8 (15 MINUTES)

Date: _____

Complete name: _____ ID number: _____

EXERCISE 1 (10 POINTS)

In a given city we wish to estimate the mean price of houses. We have evidence that this variable may behave in a different way for different neighborhoods and that, within each of these neighborhoods, house prices are homogeneous. Let A and B be two specific neighborhoods under study, each having the same number of houses; that is, $N_A = N_B$. In addition, it is known that, from information obtained from a previous study carried out in these neighborhoods, $\sigma_A^2 < \sigma_B^2$.

1. **(5 points)** If proportional allocation is used, what would be the relation between the strata sample sizes n_A and n_B ? Comment on your response.
2. **(5 points)** If n -optimal allocation is used, what would be the relation between the strata sample sizes n_A and n_B ? Comment on your response.