Exercises for Lecture No. 5

Calculate, using the Newton method, the minimum of the function:

$$f(x_1, x_2) = Ax_1^2 + Bx_2^2 - 0.5Ax_1x_2 - 0.5Ax_1 - 0.5Bx_2 + AB$$

where:

A – number of letters in given name

B – number of letters in surname

initial point: $\boldsymbol{X}$ = ***(-2A, 2B)***

Please solve the exercise analytically - use a calculator for final calculations.

Take the Kuhn – Tucker condition as the convergence (stop) criterion (< 10e-5)