Review of HW1_G4

Regarding HW1(a), Solutions of parts a and b are ok but I did not find the proof of statements and also parts c and d.

Regarding HW1(b): All the parts are correct

Regarding HW1(c): Your approach is agreeable. Since Heissian is diagonal, Newton can be a good method. Regarding part d, with adding a twice differentiable r(x), since Heissian is Hermitian and positive definite matrix, it may possible to use Schur complement method in order to compute the inverse of Heissian matrix.