236330 – Introduction to Optimization and Deep Learning

HW1

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**Task 1:**

Gradient calculation:

Hessian calculation:

**Task2:**

Gradient calculation:

Hessian calculation:

**Task 5:**

Final results:

|  |  |  |
| --- | --- | --- |
|  | Infinity norm | |
|  | epsilon of minimal gradient error | epsilon of minimal hessian error |
| f1 | 4.24E-23 | 4.24E-23 |
| f2 | 6.81E-18 | 3.04E-17 |

Plots:











