Hw4 Report

Implement L-M algorithm with sympy. Sympy is a Python library for symbolic mathematics. It keeps the code as simple as possible. Before you run this code, you need to install sympy package. Use command: pip install sympy

In this code, I minimize 3 objective functions.

1. cos(exp(x)) (x,)

x = 3.34195445619387

min f = -0.999999999999980

1. (x - 1)\*\*2 + (exp(y) - 2)\*\*2 (x, y)

x = 0.999999895885601

y = 0.693147180558852

min f = 1.08398079895803e-14

1. (x - y + 1)\*\*2 + (x + y + 2)\*\*2 (x, y)

x = -1.49999999962500

y = -0.499999999875000

min f = 3.12500051712734e-19