

Math, Problem Set #4, Smooth and Convex Optimization

OSM Lab, Jan Ertl

Due Monday, July 16 at 6:00pm

1. Exercises from Chapter 6:

- 6, 7, 11, 15

For 6.15, write your code in a notebook and test it with the function $f(x) = x^4 - 14x^3 + 60x^2 - 70x$ and initial guess $x_0 = 0, x_1 = 0.1$. Plot the function and the points and function values at each iteration in an appropriate graph.

2. Exercises from Chapter 7:

- 1, 2, 4, 8, 12, 13, 20, 21

References

- **Humpherys, Jeffrey and Tyler J. Jarvis**, Foundations of Applied Mathematics, Volume II: Algorithm Design and Optimization, forthcoming. SIAM, Philadelphia, PA.