Combinatorial Optimization

Disclaimer

This contains lessons from Mr. Berrachedi, with contents that are either added, changed or rearranged, written by HADIOUCHE Azouaou.

Chapter 1

Introduction

O ptimization in general is the process of finding minimum or maximum of numerical functions, i.e. functions $f : E \to \mathbb{R}$ where E is a set. In the case of combinatorial optimization, we consider the set to be discrete, that is, we take the sets to be finite or countable.

> **Note**: *Discrete sets are considered in general to be either spaces with the order topology being a discrete topology or having an induced topology that is a discrete topology. I am not sure why we took the above definition for this course.*

The notations and the terminology all comes from the continuous optimization course, here is a simple terminology remainder

Term	Definition
Objecti	