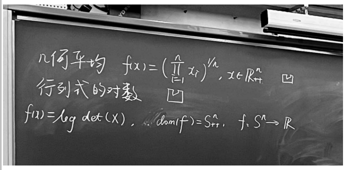
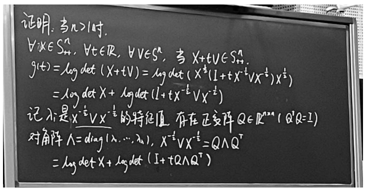
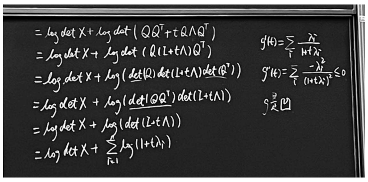
2023.09.14

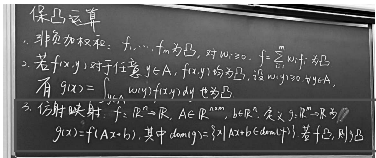
Part 1



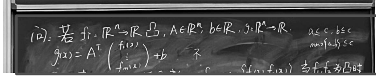




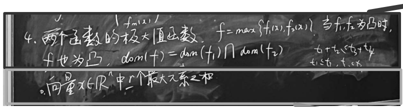
Part 2

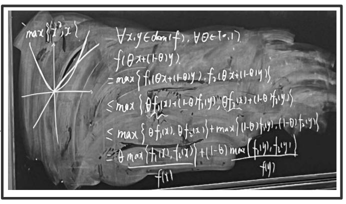


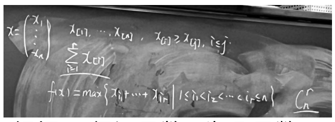
此处照片没拍到，可以用基本定义证明，将x用凸组合代入



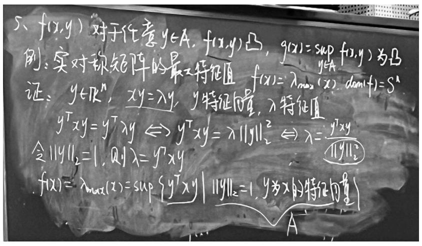
答：不能保证函数g为凸，因为A中的元素不一定全部满足 1 中的 wi >= 0.





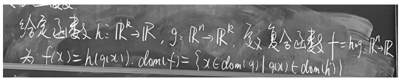


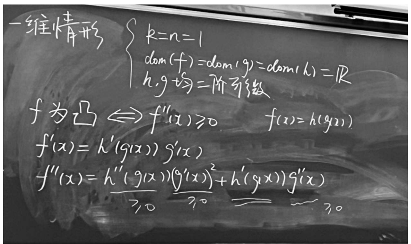
根据 4 得证函数 f 为凸函数

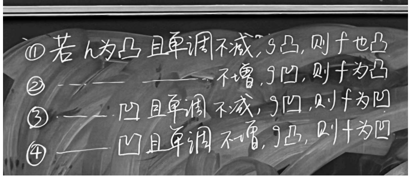


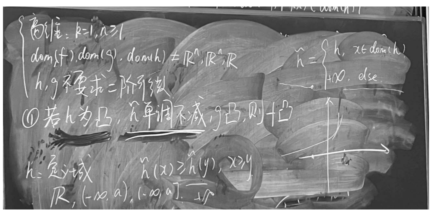
Part 3

复合函数



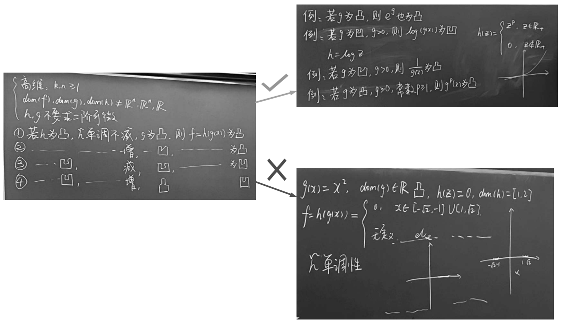




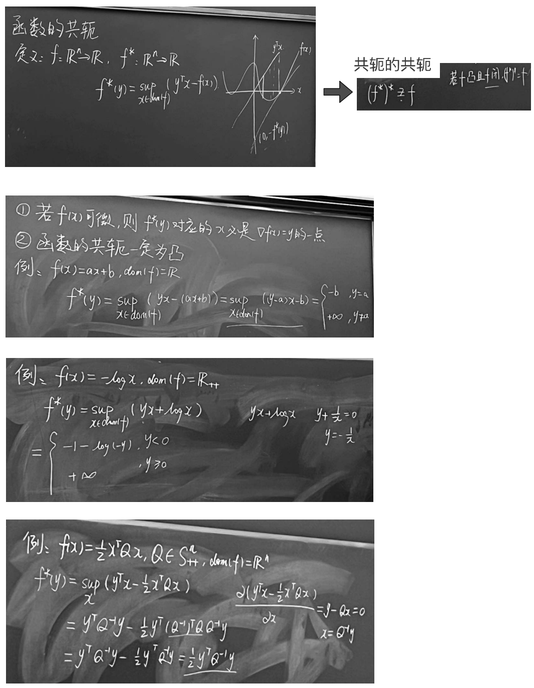


2023.09.19

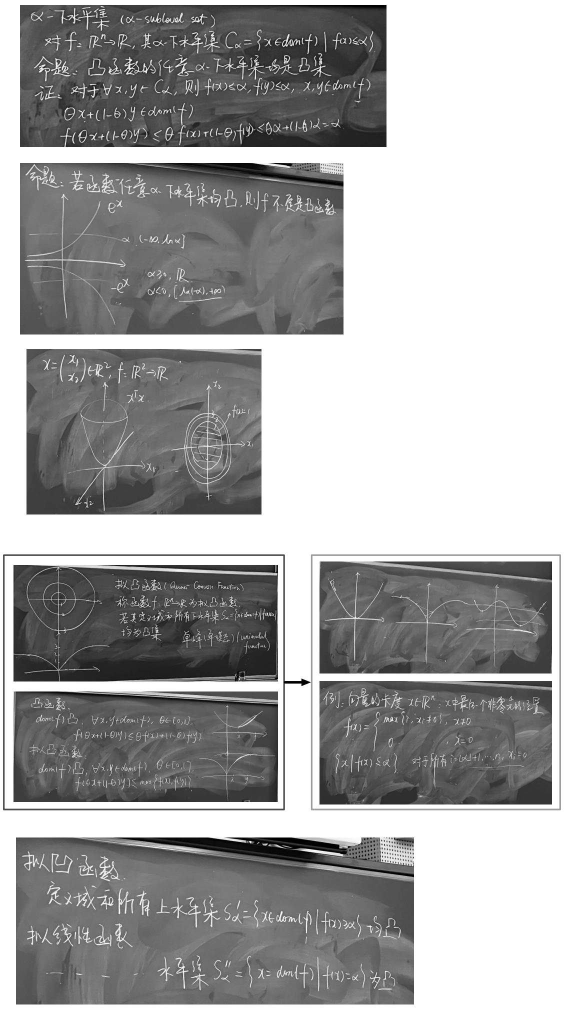
Part 1



Part 2

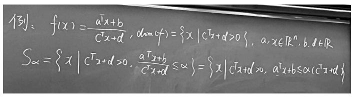


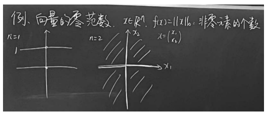
Part 3

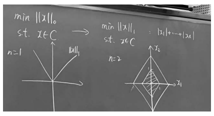


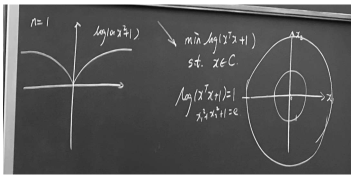
2023.09.21

Part 1 凸与拟凸一些例子

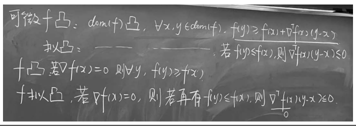


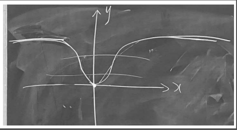


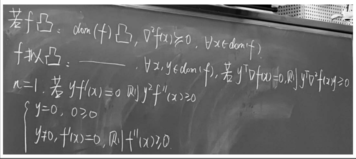


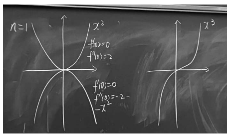


Part 2 凸与拟凸一些定义

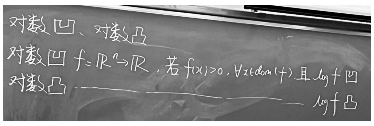


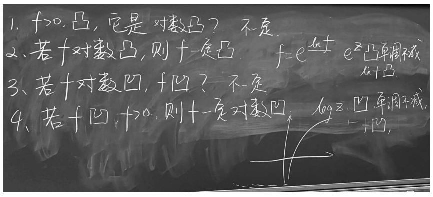




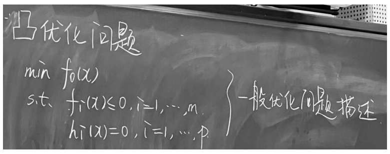


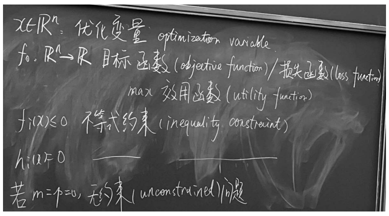
Part 3 对数凹、对数凸

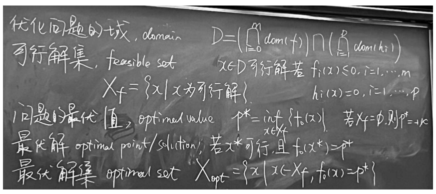


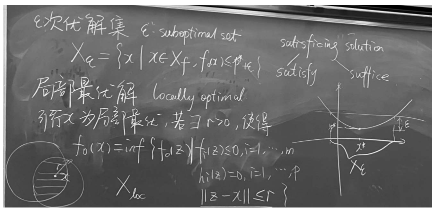


Part 4 凸优化问题



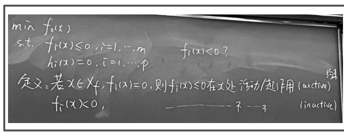


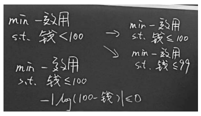


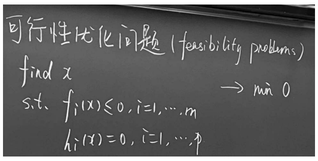


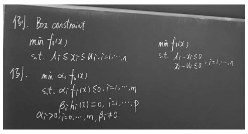
2023.09.26

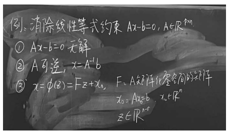
Part 1

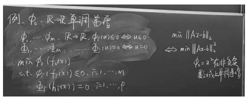


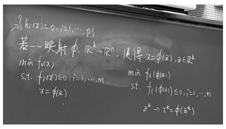




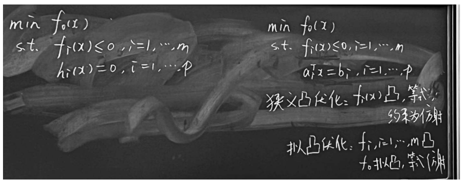


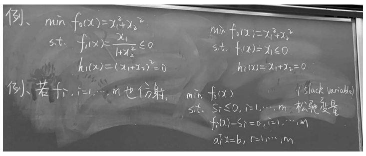




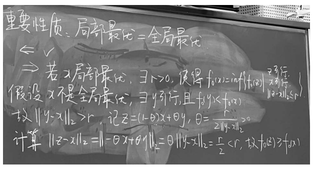


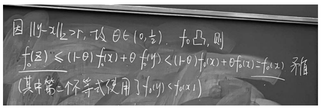
Part 2

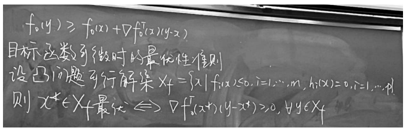


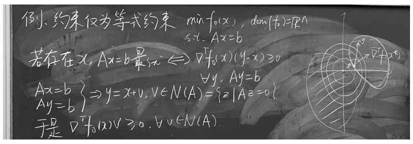


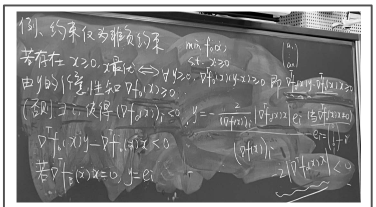
当优化目标为凸函数

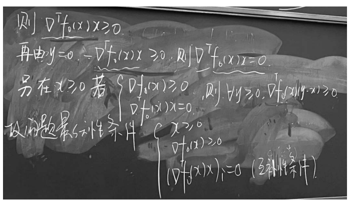








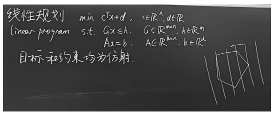


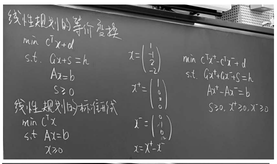


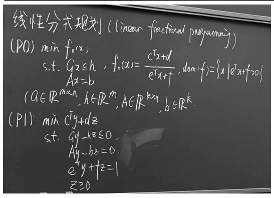
2023.09.28

Part 1

线性规划

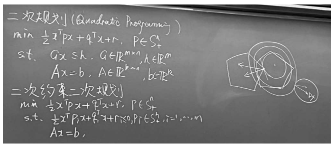


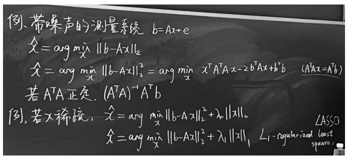


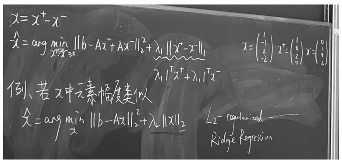


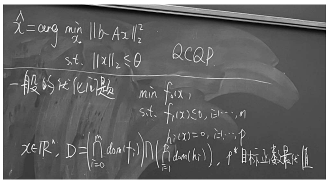
Part 2

二次规划和二次约束二次规划



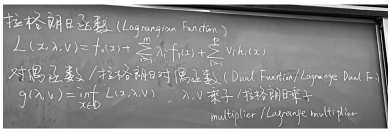


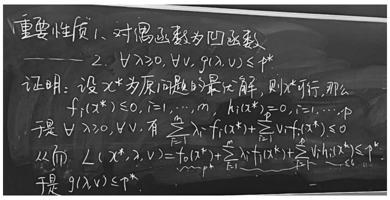


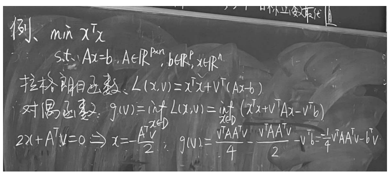


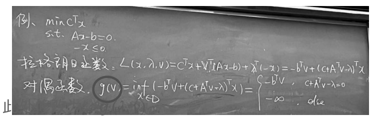
Part 3

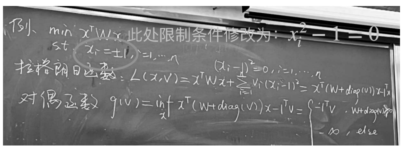
拉格朗日函数







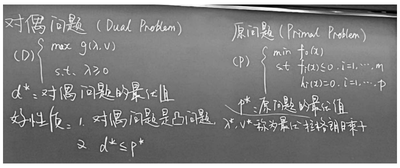


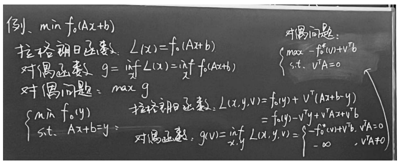


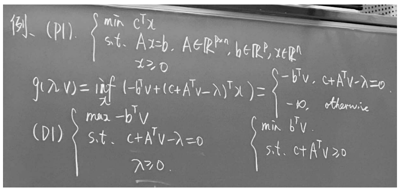
此处限制条件修改为：$x_i^2-1=0$

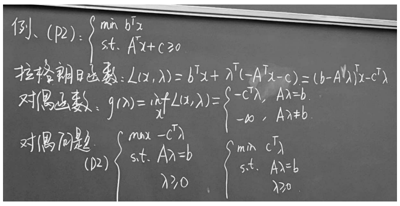
2023.10.10

Part 1 对偶问题

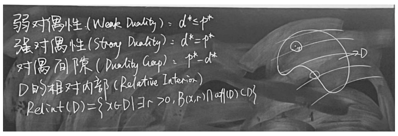


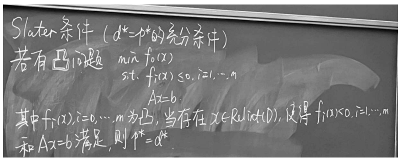


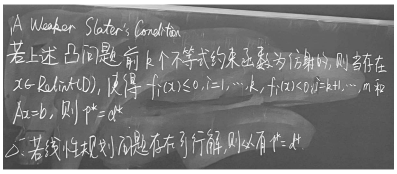


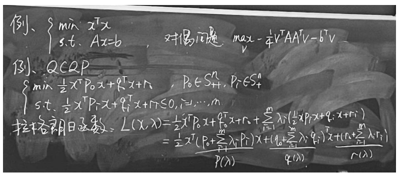


Part 2 Duality

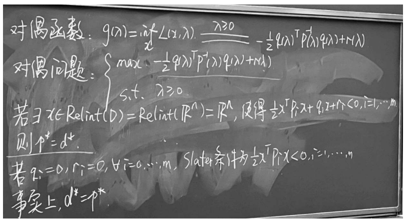


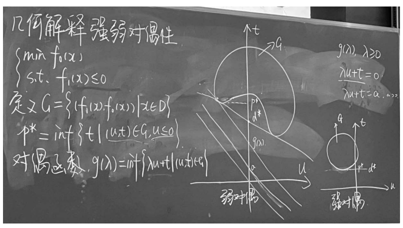






至少有一个Pi, i=1,...,m是正定的

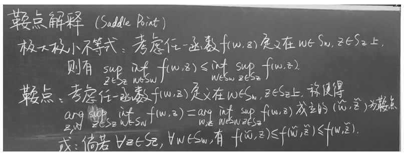


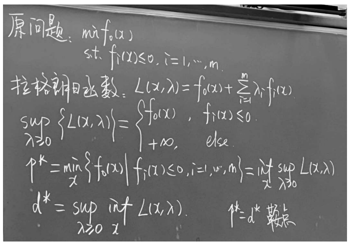


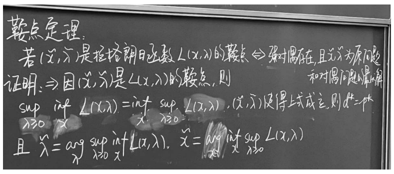
2023.10.12

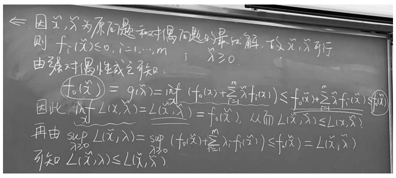
Part 1

鞍点



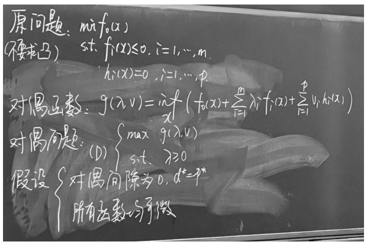


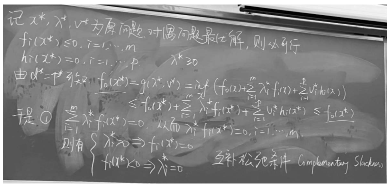


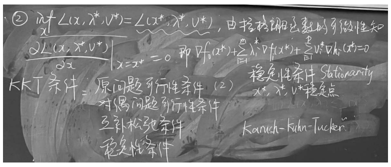


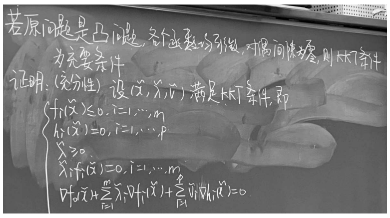
Part 2

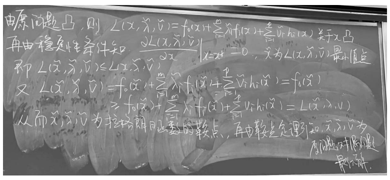
KKT条件

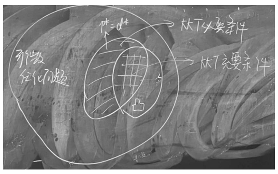








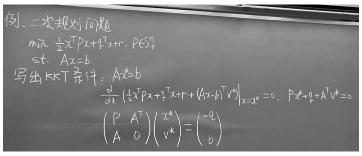


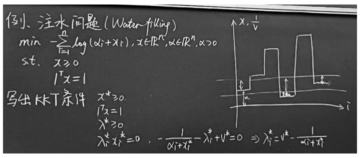


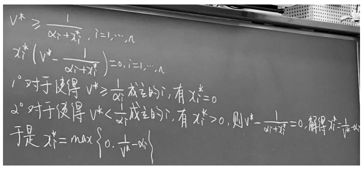
2023.10.17

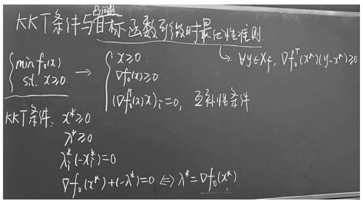
Part 1

KKT条件



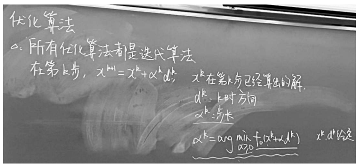


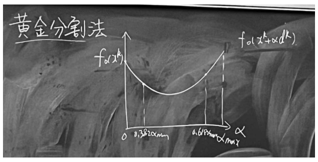


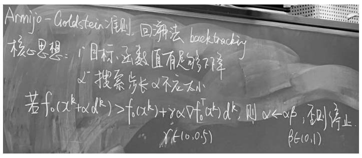


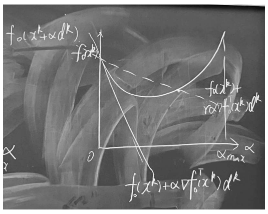
Part 2

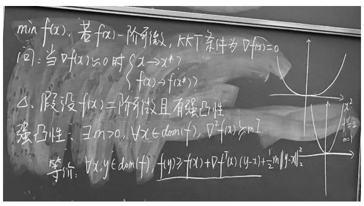
优化问题

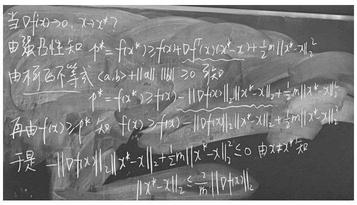


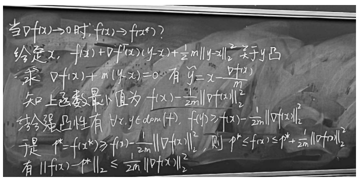






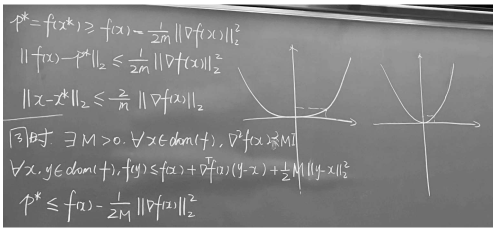


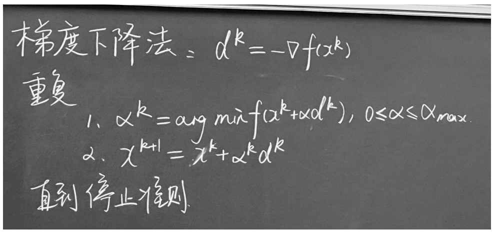


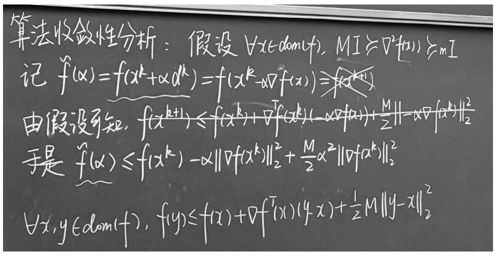


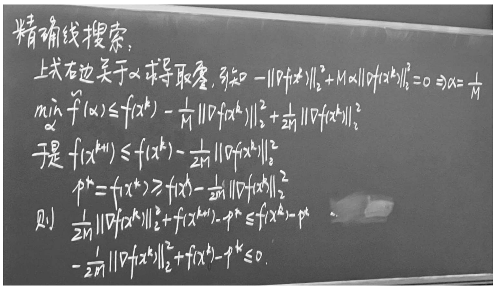
2023.10.19

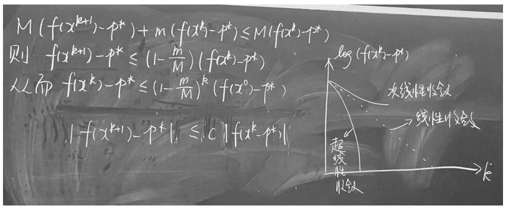
Part 1 梯度下降法

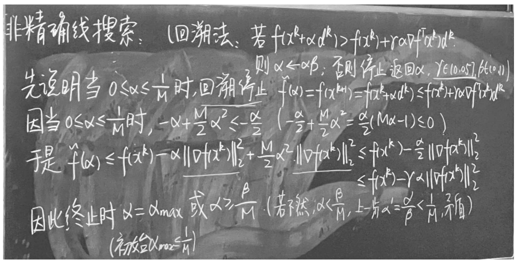


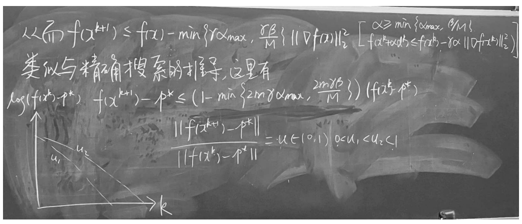


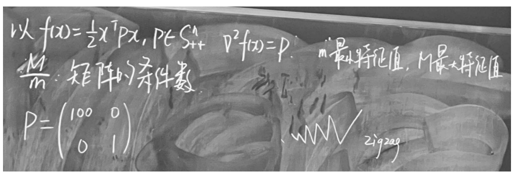










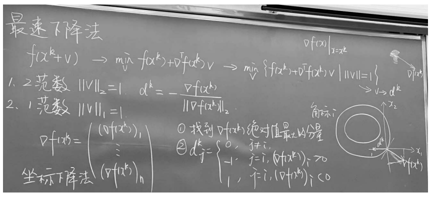


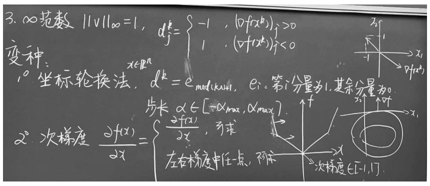
最后一张最速梯度下降法没有拍到

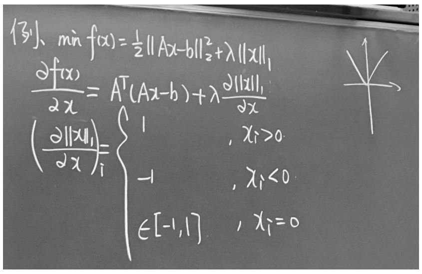
2023.10.24

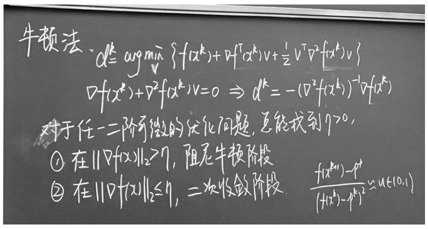
Part 1

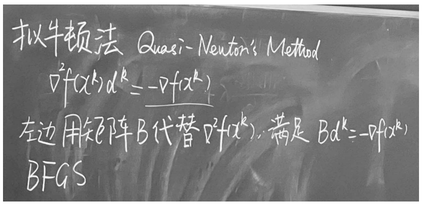
无约束优化





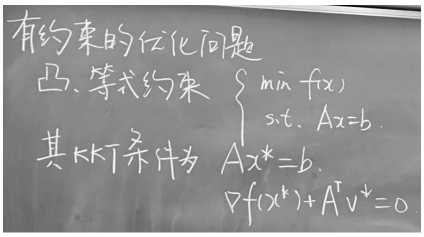


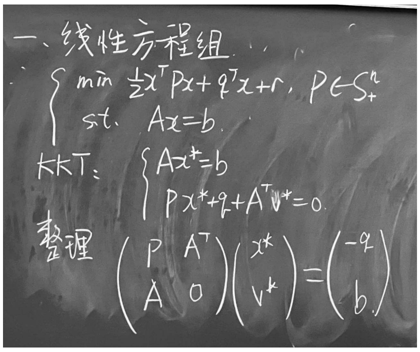


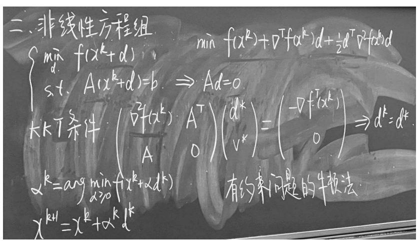


Part 2

带约束的优化



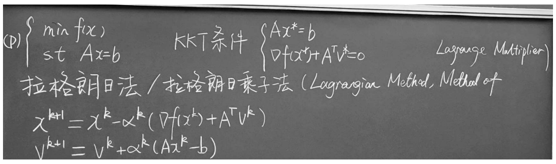


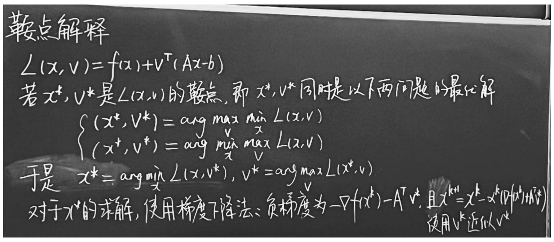


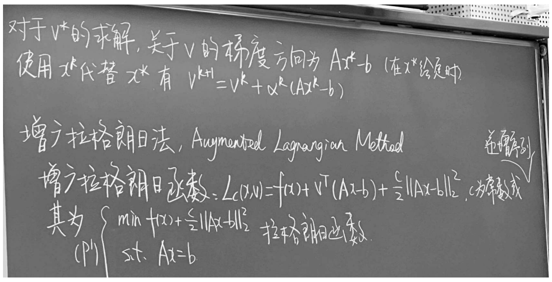
2023.10.26

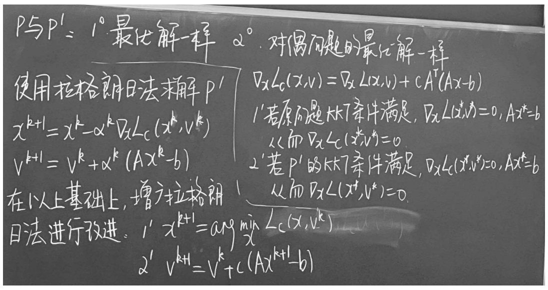
Part 1

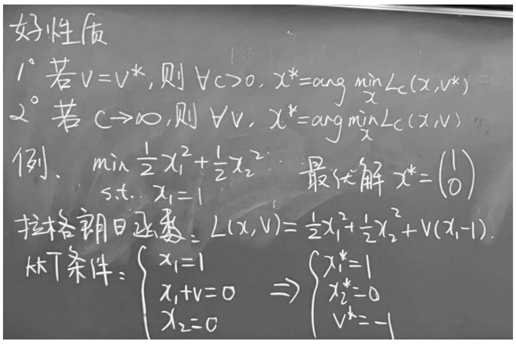
拉格朗日乘子法

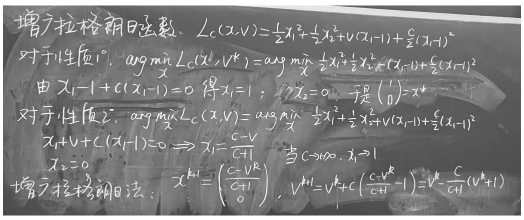


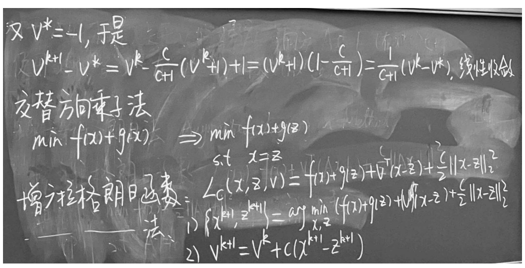


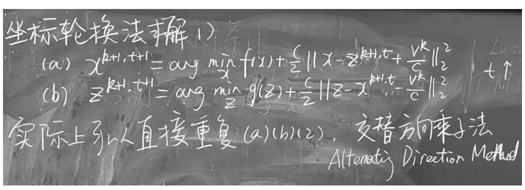








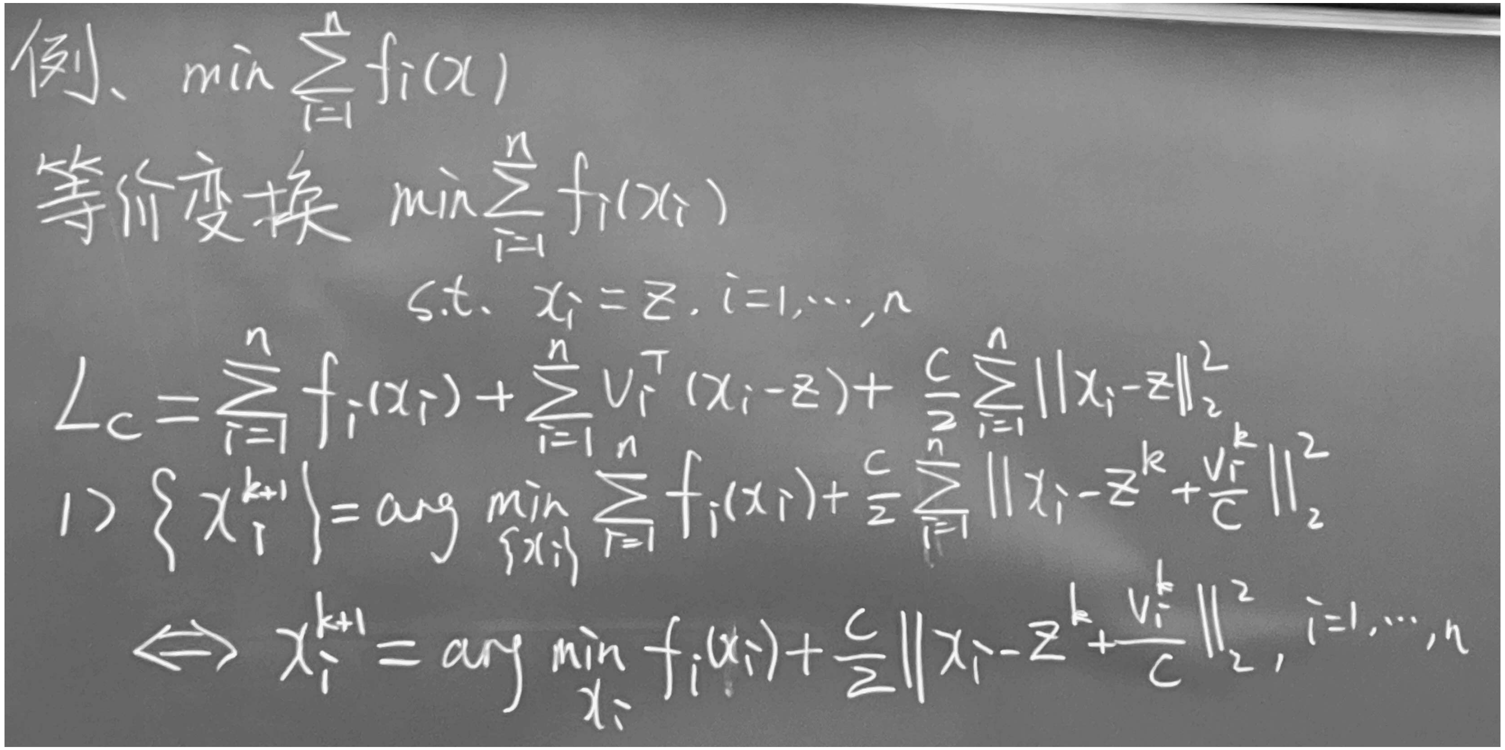


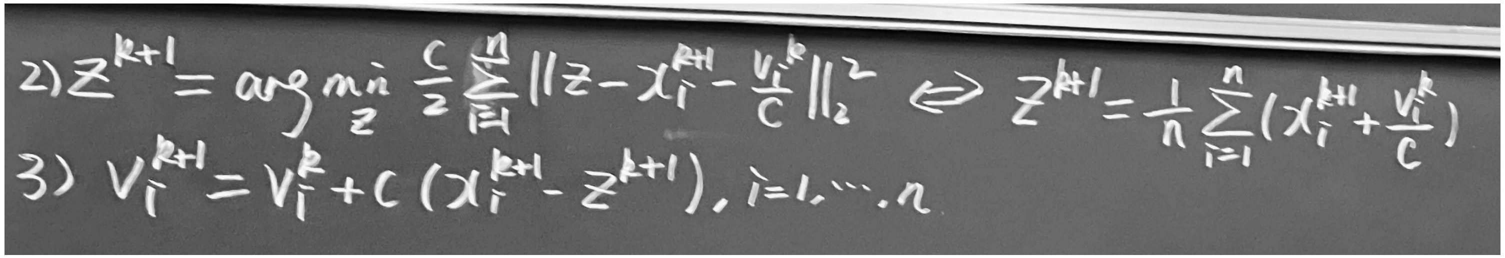


2023.10.31

Part 1

拉格朗日乘子法2





2023.11.2

课程归纳