

2025-2026

简答 4 分 $\times 5 = 20$ 分

计算 15 分 $\times 3 = 45$ 分

建模 15 分 + 20 分 = 35 分.

简答：简单计算/简单判断/简单证明/简单推导 (not limited to the following points)

definition of local and global minimum (Taylor series expansion)

Convex 相关 convex function 定义 判断

convex optimization 定义 判断

standard formulation of LP

optimality condition of LP

dual problem

branch& bound

cutting plane

KKT

steepest descent

Newton

Gauss-Newton

line search: binary search, golden search

Interior point (2 types)

exterior point

Optimization in AI (neural network)

dynamic programming (shortest path)

dynamic programming (backward or forward)

计算 (not limited to the following points)

Simplex method

KKT

steepest descent

Newton

Gauss-Newton

Interior point (2 types)

exterior point

dynamic programming (shortest path)

dynamic programming (backward and forward)

建模问题 (not limited to the following points)

LP, MILP

NLP

dynamic programming