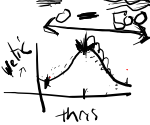


Optimization

best? threshold



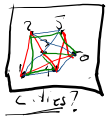
Local Search

hill climbing
gradient descent

takes derivative
set to 0
solve for x



- problems
- solution
- metric
- space of solutions



order
tour → visit each city
distance to tour
distance between cities

best? look at all possible solutions

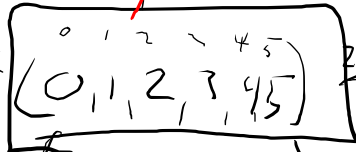
$$n! = 6 \cdot 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1$$

$O(n!)$

relation

Approximations
Heuristics

Neighborhood of solutions
definition
swap



swap (1, 4)
(0, 4, 2, 3, 1, 5)

500 × $O(n^2)$
neighborhood

Local Minima

