Hill climbing (local search)

n-queens

n x n

$q_1, q_2, q_3, q_4$
Some problem with hill climbing

Heuristic: move to a neighbor that has fewer conflicts

Can neural network training be thought of as a hill-climbing procedure? It tries to reach a better solution.

---

Graphs illustrating various functions.
Bidirectional search

Basic idea: start two searches
one from the start
other from the goal

When there is a common node
combine the two solutions
loop until solution is found

take node

generate children

put children into frontier

run this from A

check in the other frontier

running from B