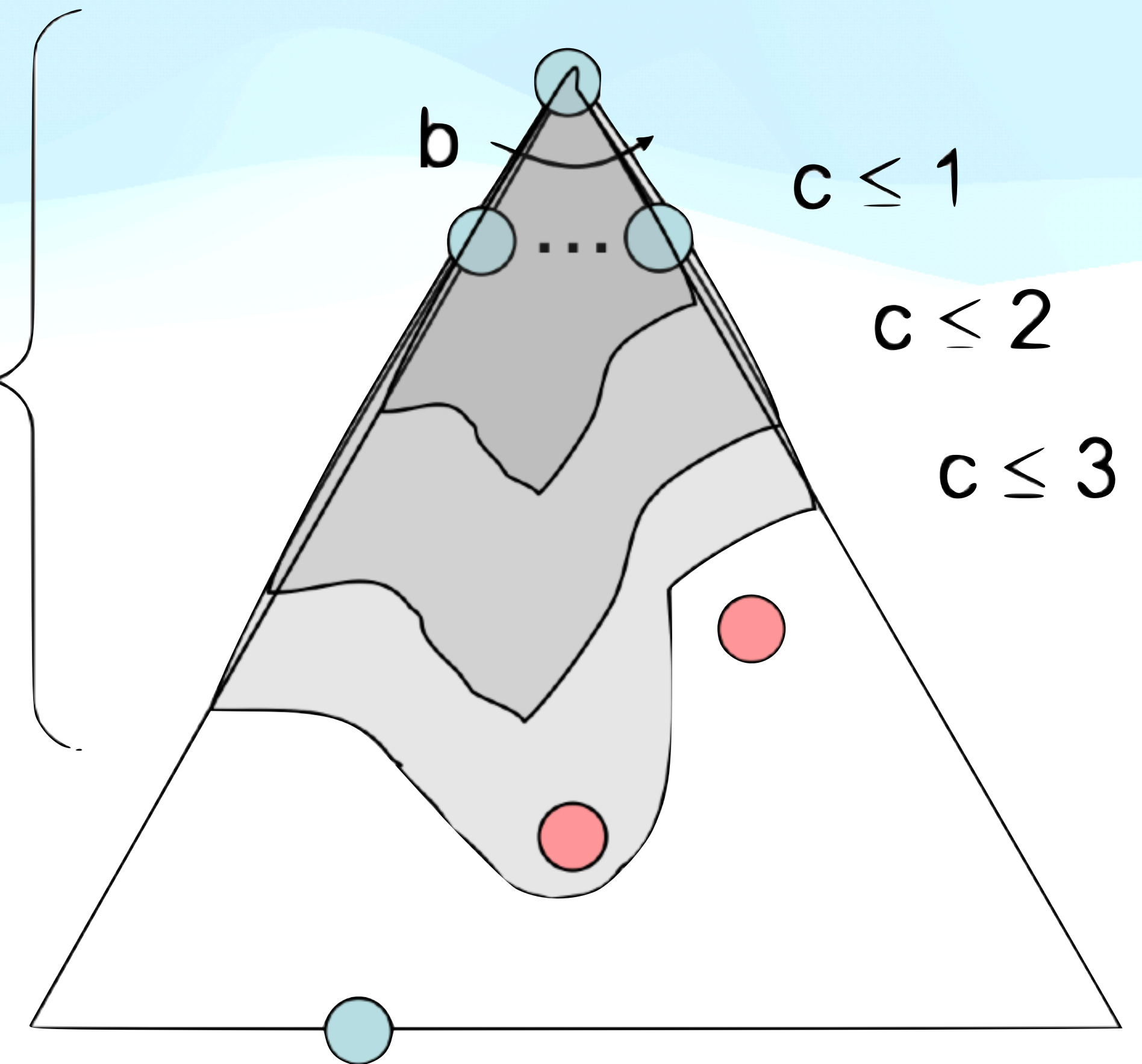


# Uniform Cost Search

- Solution cost  $C^*$ , incremental arc cost  $\epsilon$
- Similar with BFS:
  - Space complexity:  $b^{C^*/\epsilon}$
  - Time complexity:  $b^{C^*/\epsilon}$
- Optimal: Yes
- Completeness: Yes

$C^*/\epsilon$  “tiers”





# Greedy Search Algorithm (using $h$ )

## Important aspect

- Heuristic function  $h(x) \approx h^*(x)$
- The order of the nodes in fringe **Smallest**  $h(x)$
- Should the same state be generated?
  - Same as the EXPANDED states **NO (reached)**
  - Same as the states IN fringe **NO**
- When to report the goal?
  - When generated? **Yes**
  - When expanded?

