A^* search algorithm (using $g + h$)
Important aspect

- The order of the nodes in fringe **Smallest** $g(x) + h(x)$
- Should the same state be generated?
  - Same as the EXPANDED states **NO (reached)**
  - Same as the states IN fringe **Replace if lower** $g(x)$ **<u>why?</u>**
- When to report the goal?
  - When generated? **No (why)**
  - When expanded? **Yes**

Heuristic functions

- Admissible heuristic function $0 \leq h(x) \leq h^*(x)$
  - Why?
  - What if $h(x) = 0$?
  - What if $h(x) = h^*(x)$?
- How to verify admissible heuristic function?
  - Consistent heuristic functions: $h(n) \leq c(n, a, n') + h(n')$ -> f is increasing
  - Consistent functions are admissible!