**Heuristic functions**.

Consider a search algorithm (like A\*) that visits a series of nodes *n1, n1,* etc.

Let

f(n) = g(n) + h(n),

where

* f(n) is an evaluation used by the search algorithm to measure the cost at a node
* g(n) is the cost from the start node to the current node, as currently known to the search algorithm
* h(n) is an estimated (heuristic) cost from the current node to the goal node.

The following terms are of use:

* *Admissible* — An admissible heuristic is one for which h(n) <= h\*(n), where h\*(n) is the true cost. That is, the heuristic never overestimates the true cost.
* *Consistent* — A heuristic function h(n) is consistent if h(n) <= c(n, p) + h(p) and h(goal) = 0 for all goal nodes, where c(n,p) is the cost to reach p from n. Note that all consistent heuristics are admissible.