

^{like BFS} $f(n) = h(n) + g(n)$ ^{like greedy BF} A^* search is optimal, when $h(n)$ is admissible

和 best first 区别在于 A^* 的 $h(n)$ 是 admissible

即 $h(n) \leq h^*(n)$ $h^*(n)$ 是 true cost from n to goal

就是说设计的启发式算法的 $h(n)$ 的设计必须是满足不超过实际的 cost

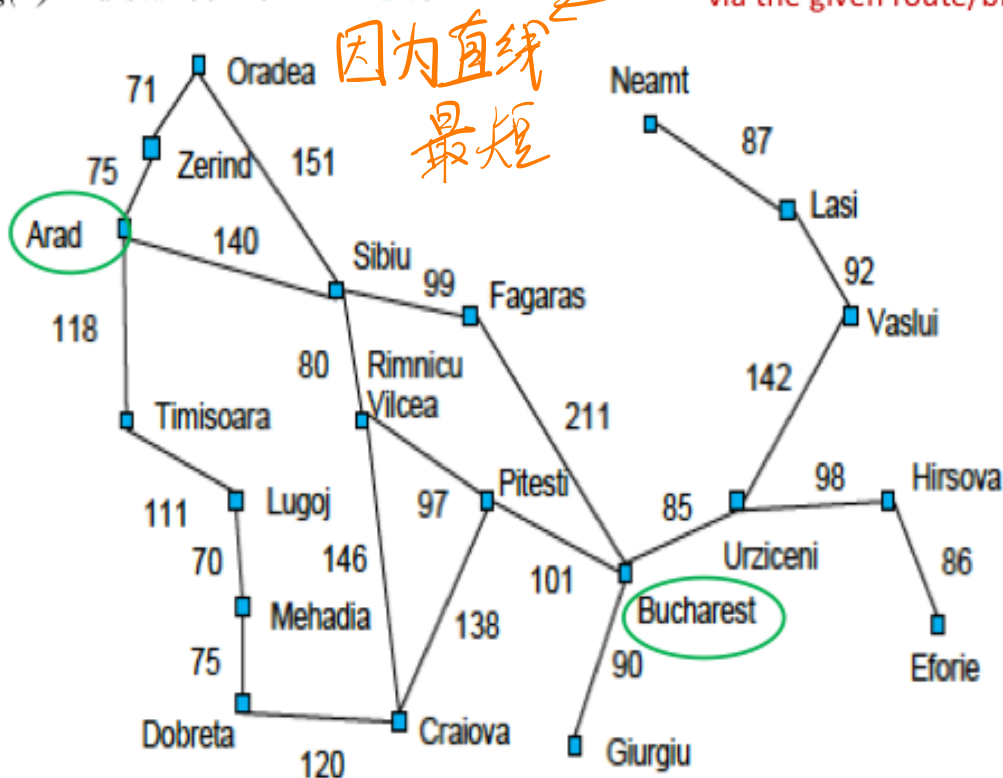
比如: 8 数字问题中用 tiles out of place 就是 admissible, 因为 out of place 的值 \leq 真实需要移动的值

$f(n)$: estimated total cost of path through n to goal (Whole Life)

evaluation function $f(n) = h(n) + g(n)$

$h(n)$ = straight-line distance from n to **Bucharest** (admissible h)

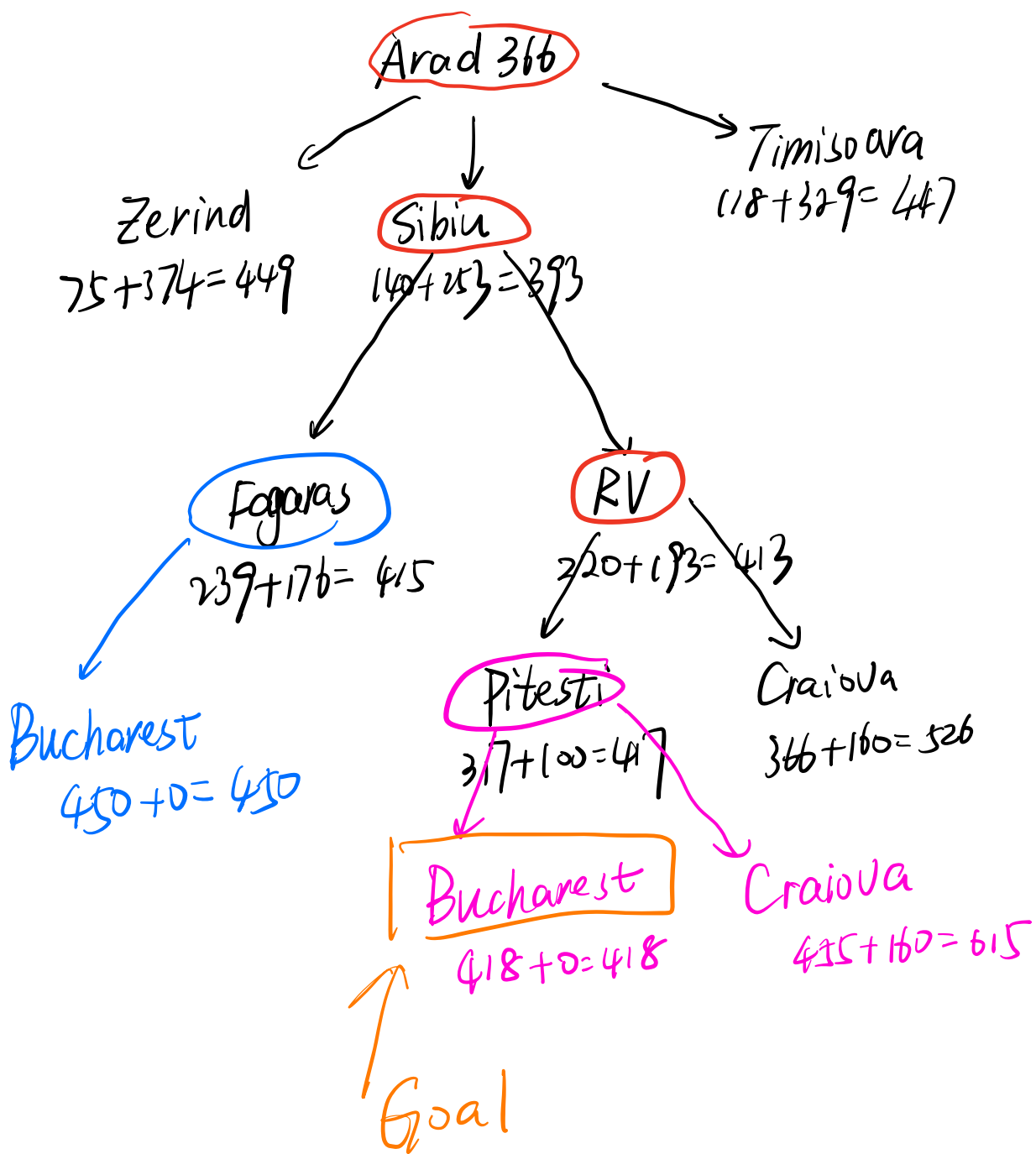
$g(n)$ = distance from **Arad** to n via the given route/branch



SLD from a to b

Straight-line distance to Bucharest

Arad	366
Bucharest	0
Craiova	160
Dobreta	242
Eforie	161
Fagaras	176
Giurgiu	77
Hirsova	151
Iasi	226
Lugoj	244
Mehadia	241
Neamt	234
Oradea	380
Pitesti	100
Rimnicu Vilcea	193
Sibiu	253
Timisoara	329
Urziceni	80
Vaslui	199
Zerind	374



和 greedy best first 结果不同!