

A*

$$② f = g + h$$

g = cost from start to node

h = n to end

Node | position

C	10	<u>E</u> → D, C, K
B	20	$g = 0$
E	30	$h = 150 - 30 = 120$
D	40	$f = 120$
H	50	↓
K	60	* D: $g = 1, h = 150 - 40 = 110, f = 111$
A	70	* C: $g = 4, h = 150 - 10 = 140, f = 144$
G	90	* K: $g = 5, h = 150 - 60 = 90, f = 95$
P	100	$g = 5 \rightarrow K \rightarrow H$
M	110	* H: $g = 5 + 3 = 8, h = 150 - 50 = 100, f = 108$
D	130	$g = 1 \rightarrow \underline{D} \rightarrow B, G, H$
F	140	B: $g = 1 + 2 = 3, h = 150 - 20 = 130, f = 133$
L	150	C: $g = 1 + 2 = 3, h = 140, f = 143$

* H: $g = 1 + 2 = 3, h = 100, f = 103$

(cost: 1) E → D

+ 2 D → H

5 H → G

2 G → L

10

E → D → H → G → L

COST = 10

$g = 3 \underline{H} \rightarrow A, G$

* A: $g = 3 + 2 = 5, h = 150 - 70 = 80, f = 85$

* G: $g = 3 + 5 = 8, h = 150 - 90 = 60, f = 68$

$g = 8 \rightarrow \underline{G} \rightarrow F, L, P, M$

F: $g = 8 + 10 = 18, h = 150 - 140 = 10, f = 108$

* L: $g = 8 + 2 = 10, h = 150 - 150 = 0, f = 10$

P: $g = 8 + 3 = 11, h = 80, f = 61$

M: $g = 8 + 1 = 9, h = 40, f = 49$