

8-Puzzle problem using A\* search Algorithm

Enter the Current State

7 2 4

5 0 6

8 3 1

Enter the Goal State

1 2 3

4 5 6

7 8 0

Enter the heuristic number that you want to proceed with

1. Manhattan

2. Misplaced Tiles

1

-----  
Level 0 - [[7,2,4][5,0,6][8,3,1]]

-----  
Node Chosen for Level 1 - [[7,2,4][5,0,6][8,3,1]]

Generated Nodes :

-----  
[[7,0,4][5,2,6][8,3,1]] -  $f(n) = 1 + 15 = 16$

[[7,2,4][5,6,0][8,3,1]] -  $f(n) = 1 + 15 = 16$

[[7,2,4][0,5,6][8,3,1]] -  $f(n) = 1 + 13 = 14$

[[7,2,4][5,3,6][8,0,1]] -  $f(n) = 1 + 13 = 14$   
-----

Node Chosen for Level 2 - [[7,0,4][5,2,6][8,3,1]]

Generated Nodes :

-----  
[[7,4,0][5,2,6][8,3,1]] -  $f(n) = 2 + 14 = 16$

[[0,7,4][5,2,6][8,3,1]] -  $f(n) = 2 + 16 = 18$

[[7,2,4][5,0,6][8,3,1]] - Already visited Node!  
-----

Node Chosen for Level 2 - [[7,2,4][5,6,0][8,3,1]]

Generated Nodes :

-----  
[[7,2,0][5,6,4][8,3,1]] -  $f(n) = 2 + 14 = 16$

[[7,2,4][5,0,6][8,3,1]] - Already visited Node!

[[7,2,4][5,6,1][8,3,0]] -  $f(n) = 2 + 14 = 16$   
-----

Node Chosen for Level 3 - [[7,4,0][5,2,6][8,3,1]]

Generated Nodes :

-----  
[[7,0,4][5,2,6][8,3,1]] - Already visited Node!

[[7,4,6][5,2,0][8,3,1]] -  $f(n) = 3 + 15 = 18$   
-----

Node Chosen for Level 3 - [[7,2,0][5,6,4][8,3,1]]

Generated Nodes :

[[7,0,2][5,6,4][8,3,1]] -  $f(n) = 3 + 15 = 18$   
[[7,2,4][5,6,0][8,3,1]] - Already visited Node!

---

Node Chosen for Level 3 - [[7,2,4][5,6,1][8,3,0]]

Generated Nodes :

---

[[7,2,4][5,6,0][8,3,1]] - Already visited Node!  
[[7,2,4][5,6,1][8,0,3]] -  $f(n) = 3 + 13 = 16$

---

Node Chosen for Level 4 - [[7,2,4][5,6,1][8,0,3]]

Generated Nodes :

---

[[7,2,4][5,0,1][8,6,3]] -  $f(n) = 4 + 14 = 18$   
[[7,2,4][5,6,1][8,3,0]] - Already visited Node!  
[[7,2,4][5,6,1][0,8,3]] -  $f(n) = 4 + 12 = 16$

---

Node Chosen for Level 5 - [[7,2,4][5,6,1][0,8,3]]

Generated Nodes :

---

[[7,2,4][0,6,1][5,8,3]] -  $f(n) = 5 + 13 = 18$   
[[7,2,4][5,6,1][8,0,3]] - Already visited Node!

---

Node Chosen for Level 3 - [[0,7,4][5,2,6][8,3,1]]

Generated Nodes :

---

[[7,0,4][5,2,6][8,3,1]] - Already visited Node!  
[[5,7,4][0,2,6][8,3,1]] -  $f(n) = 3 + 17 = 20$

---

Node Chosen for Level 4 - [[7,4,6][5,2,0][8,3,1]]

Generated Nodes :

---

[[7,4,0][5,2,6][8,3,1]] - Already visited Node!  
[[7,4,6][5,0,2][8,3,1]] -  $f(n) = 4 + 16 = 20$   
[[7,4,6][5,2,1][8,3,0]] -  $f(n) = 4 + 14 = 18$

---

Node Chosen for Level 4 - [[7,0,2][5,6,4][8,3,1]]

Generated Nodes :

---

[[7,2,0][5,6,4][8,3,1]] - Already visited Node!  
[[0,7,2][5,6,4][8,3,1]] -  $f(n) = 4 + 16 = 20$   
[[7,6,2][5,0,4][8,3,1]] -  $f(n) = 4 + 16 = 20$

---

Node Chosen for Level 5 - [[7,2,4][5,0,1][8,6,3]]

Generated Nodes :

---

$[[7,0,4][5,2,1][8,6,3]] - f(n) = 5 + 15 = 20$   
 $[[7,2,4][5,1,0][8,6,3]] - f(n) = 5 + 13 = 18$   
 $[[7,2,4][0,5,1][8,6,3]] - f(n) = 5 + 13 = 18$   
 $[[7,2,4][5,6,1][8,0,3]] - \text{Already visited Node!}$

---

Node Chosen for Level 6 -  $[[7,2,4][0,6,1][5,8,3]]$

Generated Nodes :

$[[0,2,4][7,6,1][5,8,3]] - f(n) = 6 + 12 = 18$   
 $[[7,2,4][6,0,1][5,8,3]] - f(n) = 6 + 14 = 20$   
 $[[7,2,4][5,6,1][0,8,3]] - \text{Already visited Node!}$

---

Node Chosen for Level 5 -  $[[7,4,6][5,2,1][8,3,0]]$

Generated Nodes :

$[[7,4,6][5,2,0][8,3,1]] - \text{Already visited Node!}$   
 $[[7,4,6][5,2,1][8,0,3]] - f(n) = 5 + 13 = 18$

---

Node Chosen for Level 6 -  $[[7,2,4][5,1,0][8,6,3]]$

Generated Nodes :

$[[7,2,0][5,1,4][8,6,3]] - f(n) = 6 + 12 = 18$   
 $[[7,2,4][5,0,1][8,6,3]] - \text{Already visited Node!}$   
 $[[7,2,4][5,1,3][8,6,0]] - f(n) = 6 + 12 = 18$

---

Node Chosen for Level 6 -  $[[7,2,4][0,5,1][8,6,3]]$

Generated Nodes :

$[[0,2,4][7,5,1][8,6,3]] - f(n) = 6 + 12 = 18$   
 $[[7,2,4][5,0,1][8,6,3]] - \text{Already visited Node!}$   
 $[[7,2,4][8,5,1][0,6,3]] - f(n) = 6 + 14 = 20$

---

Node Chosen for Level 7 -  $[[0,2,4][7,6,1][5,8,3]]$

Generated Nodes :

$[[2,0,4][7,6,1][5,8,3]] - f(n) = 7 + 13 = 20$   
 $[[7,2,4][0,6,1][5,8,3]] - \text{Already visited Node!}$

---

Node Chosen for Level 6 -  $[[7,4,6][5,2,1][8,0,3]]$

Generated Nodes :

$[[7,4,6][5,0,1][8,2,3]] - f(n) = 6 + 14 = 20$   
 $[[7,4,6][5,2,1][8,3,0]] - \text{Already visited Node!}$   
 $[[7,4,6][5,2,1][0,8,3]] - f(n) = 6 + 12 = 18$

---

Node Chosen for Level 7 -  $[[7,2,0][5,1,4][8,6,3]]$

Generated Nodes :

-----  
[[7,0,2][5,1,4][8,6,3]] -  $f(n) = 7 + 13 = 20$   
[[7,2,4][5,1,0][8,6,3]] - Already visited Node!

-----  
Node Chosen for Level 7 - [[7,2,4][5,1,3][8,6,0]]

Generated Nodes :

-----  
[[7,2,4][5,1,0][8,6,3]] - Already visited Node!  
[[7,2,4][5,1,3][8,0,6]] -  $f(n) = 7 + 11 = 18$

-----  
Node Chosen for Level 7 - [[0,2,4][7,5,1][8,6,3]]

Generated Nodes :

-----  
[[2,0,4][7,5,1][8,6,3]] -  $f(n) = 7 + 13 = 20$   
[[7,2,4][0,5,1][8,6,3]] - Already visited Node!

-----  
Node Chosen for Level 7 - [[7,4,6][5,2,1][0,8,3]]

Generated Nodes :

-----  
[[7,4,6][0,2,1][5,8,3]] -  $f(n) = 7 + 13 = 20$   
[[7,4,6][5,2,1][8,0,3]] - Already visited Node!

-----  
Node Chosen for Level 8 - [[7,2,4][5,1,3][8,0,6]]

Generated Nodes :

-----  
[[7,2,4][5,0,3][8,1,6]] -  $f(n) = 8 + 12 = 20$   
[[7,2,4][5,1,3][8,6,0]] - Already visited Node!  
[[7,2,4][5,1,3][0,8,6]] -  $f(n) = 8 + 10 = 18$

-----  
Node Chosen for Level 9 - [[7,2,4][5,1,3][0,8,6]]

Generated Nodes :

-----  
[[7,2,4][0,1,3][5,8,6]] -  $f(n) = 9 + 11 = 20$   
[[7,2,4][5,1,3][8,0,6]] - Already visited Node!

-----  
Node Chosen for Level 4 - [[5,7,4][0,2,6][8,3,1]]

Generated Nodes :

-----  
[[0,7,4][5,2,6][8,3,1]] - Already visited Node!  
[[5,7,4][2,0,6][8,3,1]] -  $f(n) = 4 + 18 = 22$   
[[5,7,4][8,2,6][0,3,1]] -  $f(n) = 4 + 18 = 22$

-----  
Node Chosen for Level 5 - [[7,4,6][5,0,2][8,3,1]]

Generated Nodes :

---

$[7,0,6][5,4,2][8,3,1]$  -  $f(n) = 5 + 15 = 20$   
 $[7,4,6][5,2,0][8,3,1]$  - Already visited Node!  
 $[7,4,6][0,5,2][8,3,1]$  -  $f(n) = 5 + 15 = 20$   
 $[7,4,6][5,3,2][8,0,1]$  -  $f(n) = 5 + 15 = 20$

---

Node Chosen for Level 5 -  $[0,7,2][5,6,4][8,3,1]$

Generated Nodes :

---

$[7,0,2][5,6,4][8,3,1]$  - Already visited Node!  
 $[5,7,2][0,6,4][8,3,1]$  -  $f(n) = 5 + 17 = 22$

---

Node Chosen for Level 5 -  $[7,6,2][5,0,4][8,3,1]$

Generated Nodes :

---

$[7,0,2][5,6,4][8,3,1]$  - Already visited Node!  
 $[7,6,2][5,4,0][8,3,1]$  -  $f(n) = 5 + 15 = 20$   
 $[7,6,2][0,5,4][8,3,1]$  -  $f(n) = 5 + 15 = 20$   
 $[7,6,2][5,3,4][8,0,1]$  -  $f(n) = 5 + 15 = 20$

---

Node Chosen for Level 6 -  $[7,0,4][5,2,1][8,6,3]$

Generated Nodes :

---

$[7,4,0][5,2,1][8,6,3]$  -  $f(n) = 6 + 14 = 20$   
 $[0,7,4][5,2,1][8,6,3]$  -  $f(n) = 6 + 16 = 22$   
 $[7,2,4][5,0,1][8,6,3]$  - Already visited Node!

---

Node Chosen for Level 7 -  $[7,2,4][6,0,1][5,8,3]$

Generated Nodes :

---

$[7,0,4][6,2,1][5,8,3]$  -  $f(n) = 7 + 15 = 22$   
 $[7,2,4][6,1,0][5,8,3]$  -  $f(n) = 7 + 13 = 20$   
 $[7,2,4][0,6,1][5,8,3]$  - Already visited Node!  
 $[7,2,4][6,8,1][5,0,3]$  -  $f(n) = 7 + 15 = 22$

---

Node Chosen for Level 7 -  $[7,2,4][8,5,1][0,6,3]$

Generated Nodes :

---

$[7,2,4][0,5,1][8,6,3]$  - Already visited Node!  
 $[7,2,4][8,5,1][6,0,3]$  -  $f(n) = 7 + 15 = 22$

---

Node Chosen for Level 8 -  $[2,0,4][7,6,1][5,8,3]$

Generated Nodes :

---

$[2,4,0][7,6,1][5,8,3]$  -  $f(n) = 8 + 12 = 20$

[[0,2,4][7,6,1][5,8,3]] - Already visited Node!  
[[2,6,4][7,0,1][5,8,3]] -  $f(n) = 8 + 14 = 22$

---

Node Chosen for Level 7 - [[7,4,6][5,0,1][8,2,3]]

Generated Nodes :

---

[[7,0,6][5,4,1][8,2,3]] -  $f(n) = 7 + 13 = 20$   
[[7,4,6][5,1,0][8,2,3]] -  $f(n) = 7 + 13 = 20$   
[[7,4,6][0,5,1][8,2,3]] -  $f(n) = 7 + 13 = 20$   
[[7,4,6][5,2,1][8,0,3]] - Already visited Node!

---

Node Chosen for Level 8 - [[7,0,2][5,1,4][8,6,3]]

Generated Nodes :

---

[[7,2,0][5,1,4][8,6,3]] - Already visited Node!  
[[0,7,2][5,1,4][8,6,3]] -  $f(n) = 8 + 14 = 22$   
[[7,1,2][5,0,4][8,6,3]] -  $f(n) = 8 + 12 = 20$

---

Node Chosen for Level 8 - [[2,0,4][7,5,1][8,6,3]]

Generated Nodes :

---

[[2,4,0][7,5,1][8,6,3]] -  $f(n) = 8 + 12 = 20$   
[[0,2,4][7,5,1][8,6,3]] - Already visited Node!  
[[2,5,4][7,0,1][8,6,3]] -  $f(n) = 8 + 14 = 22$

---

Node Chosen for Level 8 - [[7,4,6][0,2,1][5,8,3]]

Generated Nodes :

---

[[0,4,6][7,2,1][5,8,3]] -  $f(n) = 8 + 12 = 20$   
[[7,4,6][2,0,1][5,8,3]] -  $f(n) = 8 + 14 = 22$   
[[7,4,6][5,2,1][0,8,3]] - Already visited Node!

---

Node Chosen for Level 9 - [[7,2,4][5,0,3][8,1,6]]

Generated Nodes :

---

[[7,0,4][5,2,3][8,1,6]] -  $f(n) = 9 + 13 = 22$   
[[7,2,4][5,3,0][8,1,6]] -  $f(n) = 9 + 13 = 22$   
[[7,2,4][0,5,3][8,1,6]] -  $f(n) = 9 + 11 = 20$   
[[7,2,4][5,1,3][8,0,6]] - Already visited Node!

---

Node Chosen for Level 10 - [[7,2,4][0,1,3][5,8,6]]

Generated Nodes :

---

[[0,2,4][7,1,3][5,8,6]] -  $f(n) = 10 + 10 = 20$   
[[7,2,4][1,0,3][5,8,6]] -  $f(n) = 10 + 10 = 20$   
[[7,2,4][5,1,3][0,8,6]] - Already visited Node!

---

Node Chosen for Level 6 -  $[[7,0,6][5,4,2][8,3,1]]$

Generated Nodes :

---

$[[7,6,0][5,4,2][8,3,1]] - f(n) = 6 + 16 = 22$   
 $[[0,7,6][5,4,2][8,3,1]] - f(n) = 6 + 16 = 22$   
 $[[7,4,6][5,0,2][8,3,1]] - \text{Already visited Node!}$

---

Node Chosen for Level 6 -  $[[7,4,6][0,5,2][8,3,1]]$

Generated Nodes :

---

$[[0,4,6][7,5,2][8,3,1]] - f(n) = 6 + 14 = 20$   
 $[[7,4,6][5,0,2][8,3,1]] - \text{Already visited Node!}$   
 $[[7,4,6][8,5,2][0,3,1]] - f(n) = 6 + 16 = 22$

---

Node Chosen for Level 6 -  $[[7,4,6][5,3,2][8,0,1]]$

Generated Nodes :

---

$[[7,4,6][5,0,2][8,3,1]] - \text{Already visited Node!}$   
 $[[7,4,6][5,3,2][8,1,0]] - f(n) = 6 + 14 = 20$   
 $[[7,4,6][5,3,2][0,8,1]] - f(n) = 6 + 14 = 20$

---

Node Chosen for Level 6 -  $[[7,6,2][5,4,0][8,3,1]]$

Generated Nodes :

---

$[[7,6,0][5,4,2][8,3,1]] - f(n) = 6 + 16 = 22$   
 $[[7,6,2][5,0,4][8,3,1]] - \text{Already visited Node!}$   
 $[[7,6,2][5,4,1][8,3,0]] - f(n) = 6 + 14 = 20$

---

Node Chosen for Level 6 -  $[[7,6,2][0,5,4][8,3,1]]$

Generated Nodes :

---

$[[0,6,2][7,5,4][8,3,1]] - f(n) = 6 + 14 = 20$   
 $[[7,6,2][5,0,4][8,3,1]] - \text{Already visited Node!}$   
 $[[7,6,2][8,5,4][0,3,1]] - f(n) = 6 + 16 = 22$

---

Node Chosen for Level 6 -  $[[7,6,2][5,3,4][8,0,1]]$

Generated Nodes :

---

$[[7,6,2][5,0,4][8,3,1]] - \text{Already visited Node!}$   
 $[[7,6,2][5,3,4][8,1,0]] - f(n) = 6 + 14 = 20$   
 $[[7,6,2][5,3,4][0,8,1]] - f(n) = 6 + 14 = 20$

---

Node Chosen for Level 7 -  $[[7,4,0][5,2,1][8,6,3]]$

Generated Nodes :

-----  
[[7,0,4][5,2,1][8,6,3]] - Already visited Node!  
[[7,4,1][5,2,0][8,6,3]] -  $f(n) = 7 + 13 = 20$   
-----

Node Chosen for Level 8 - [[7,2,4][6,1,0][5,8,3]]

Generated Nodes :

-----  
[[7,2,0][6,1,4][5,8,3]] -  $f(n) = 8 + 12 = 20$   
[[7,2,4][6,0,1][5,8,3]] - Already visited Node!  
[[7,2,4][6,1,3][5,8,0]] -  $f(n) = 8 + 12 = 20$   
-----

Node Chosen for Level 9 - [[2,4,0][7,6,1][5,8,3]]

Generated Nodes :

-----  
[[2,0,4][7,6,1][5,8,3]] - Already visited Node!  
[[2,4,1][7,6,0][5,8,3]] -  $f(n) = 9 + 11 = 20$   
-----

Node Chosen for Level 8 - [[7,0,6][5,4,1][8,2,3]]

Generated Nodes :

-----  
[[7,6,0][5,4,1][8,2,3]] -  $f(n) = 8 + 14 = 22$   
[[0,7,6][5,4,1][8,2,3]] -  $f(n) = 8 + 14 = 22$   
[[7,4,6][5,0,1][8,2,3]] - Already visited Node!  
-----

Node Chosen for Level 8 - [[7,4,6][5,1,0][8,2,3]]

Generated Nodes :

-----  
[[7,4,0][5,1,6][8,2,3]] -  $f(n) = 8 + 12 = 20$   
[[7,4,6][5,0,1][8,2,3]] - Already visited Node!  
[[7,4,6][5,1,3][8,2,0]] -  $f(n) = 8 + 12 = 20$   
-----

Node Chosen for Level 8 - [[7,4,6][0,5,1][8,2,3]]

Generated Nodes :

-----  
[[0,4,6][7,5,1][8,2,3]] -  $f(n) = 8 + 12 = 20$   
[[7,4,6][5,0,1][8,2,3]] - Already visited Node!  
[[7,4,6][8,5,1][0,2,3]] -  $f(n) = 8 + 14 = 22$   
-----

Node Chosen for Level 9 - [[7,1,2][5,0,4][8,6,3]]

Generated Nodes :

-----  
[[7,0,2][5,1,4][8,6,3]] - Already visited Node!  
[[7,1,2][5,4,0][8,6,3]] -  $f(n) = 9 + 11 = 20$   
[[7,1,2][0,5,4][8,6,3]] -  $f(n) = 9 + 11 = 20$   
[[7,1,2][5,6,4][8,0,3]] -  $f(n) = 9 + 11 = 20$   
-----



Node Chosen for Level 9 – [[2,4,0][7,5,1][8,6,3]]

Generated Nodes :

-----  
[[2,0,4][7,5,1][8,6,3]] – Already visited Node!  
[[2,4,1][7,5,0][8,6,3]] –  $f(n) = 9 + 11 = 20$   
-----

Node Chosen for Level 9 – [[0,4,6][7,2,1][5,8,3]]

Generated Nodes :

-----  
[[4,0,6][7,2,1][5,8,3]] –  $f(n) = 9 + 11 = 20$   
[[7,4,6][0,2,1][5,8,3]] – Already visited Node!  
-----

Node Chosen for Level 10 – [[7,2,4][0,5,3][8,1,6]]

Generated Nodes :

-----  
[[0,2,4][7,5,3][8,1,6]] –  $f(n) = 10 + 10 = 20$   
[[7,2,4][5,0,3][8,1,6]] – Already visited Node!  
[[7,2,4][8,5,3][0,1,6]] –  $f(n) = 10 + 12 = 22$   
-----

Node Chosen for Level 11 – [[0,2,4][7,1,3][5,8,6]]

Generated Nodes :

-----  
[[2,0,4][7,1,3][5,8,6]] –  $f(n) = 11 + 11 = 22$   
[[7,2,4][0,1,3][5,8,6]] – Already visited Node!  
-----

Node Chosen for Level 11 – [[7,2,4][1,0,3][5,8,6]]

Generated Nodes :

-----  
[[7,0,4][1,2,3][5,8,6]] –  $f(n) = 11 + 11 = 22$   
[[7,2,4][1,3,0][5,8,6]] –  $f(n) = 11 + 11 = 22$   
[[7,2,4][0,1,3][5,8,6]] – Already visited Node!  
[[7,2,4][1,8,3][5,0,6]] –  $f(n) = 11 + 11 = 22$   
-----

Node Chosen for Level 7 – [[0,4,6][7,5,2][8,3,1]]

Generated Nodes :

-----  
[[4,0,6][7,5,2][8,3,1]] –  $f(n) = 7 + 13 = 20$   
[[7,4,6][0,5,2][8,3,1]] – Already visited Node!  
-----

Node Chosen for Level 7 – [[7,4,6][5,3,2][8,1,0]]

Generated Nodes :

-----  
[[7,4,6][5,3,0][8,1,2]] –  $f(n) = 7 + 15 = 22$   
[[7,4,6][5,3,2][8,0,1]] – Already visited Node!  
-----

Node Chosen for Level 7 -  $[[7,4,6][5,3,2][0,8,1]]$

Generated Nodes :

-----  
 $[[7,4,6][0,3,2][5,8,1]] - f(n) = 7 + 15 = 22$   
 $[[7,4,6][5,3,2][8,0,1]] - \text{Already visited Node!}$   
-----

Node Chosen for Level 7 -  $[[7,6,2][5,4,1][8,3,0]]$

Generated Nodes :

-----  
 $[[7,6,2][5,4,0][8,3,1]] - \text{Already visited Node!}$   
 $[[7,6,2][5,4,1][8,0,3]] - f(n) = 7 + 13 = 20$   
-----

Node Chosen for Level 7 -  $[[0,6,2][7,5,4][8,3,1]]$

Generated Nodes :

-----  
 $[[6,0,2][7,5,4][8,3,1]] - f(n) = 7 + 15 = 22$   
 $[[7,6,2][0,5,4][8,3,1]] - \text{Already visited Node!}$   
-----

Node Chosen for Level 7 -  $[[7,6,2][5,3,4][8,1,0]]$

Generated Nodes :

-----  
 $[[7,6,2][5,3,0][8,1,4]] - f(n) = 7 + 15 = 22$   
 $[[7,6,2][5,3,4][8,0,1]] - \text{Already visited Node!}$   
-----

Node Chosen for Level 7 -  $[[7,6,2][5,3,4][0,8,1]]$

Generated Nodes :

-----  
 $[[7,6,2][0,3,4][5,8,1]] - f(n) = 7 + 15 = 22$   
 $[[7,6,2][5,3,4][8,0,1]] - \text{Already visited Node!}$   
-----

Node Chosen for Level 8 -  $[[7,4,1][5,2,0][8,6,3]]$

Generated Nodes :

-----  
 $[[7,4,0][5,2,1][8,6,3]] - \text{Already visited Node!}$   
 $[[7,4,1][5,0,2][8,6,3]] - f(n) = 8 + 14 = 22$   
 $[[7,4,1][5,2,3][8,6,0]] - f(n) = 8 + 12 = 20$   
-----

Node Chosen for Level 9 -  $[[7,2,0][6,1,4][5,8,3]]$

Generated Nodes :

-----  
 $[[7,0,2][6,1,4][5,8,3]] - f(n) = 9 + 13 = 22$   
 $[[7,2,4][6,1,0][5,8,3]] - \text{Already visited Node!}$   
-----

Node Chosen for Level 9 -  $[[7,2,4][6,1,3][5,8,0]]$

Generated Nodes :

-----  
[[7,2,4][6,1,0][5,8,3]] - Already visited Node!  
[[7,2,4][6,1,3][5,0,8]] -  $f(n) = 9 + 13 = 22$   
-----

Node Chosen for Level 10 - [[2,4,1][7,6,0][5,8,3]]

Generated Nodes :

-----  
[[2,4,0][7,6,1][5,8,3]] - Already visited Node!  
[[2,4,1][7,0,6][5,8,3]] -  $f(n) = 10 + 10 = 20$   
[[2,4,1][7,6,3][5,8,0]] -  $f(n) = 10 + 10 = 20$   
-----

Node Chosen for Level 9 - [[7,4,0][5,1,6][8,2,3]]

Generated Nodes :

-----  
[[7,0,4][5,1,6][8,2,3]] -  $f(n) = 9 + 13 = 22$   
[[7,4,6][5,1,0][8,2,3]] - Already visited Node!  
-----

Node Chosen for Level 9 - [[7,4,6][5,1,3][8,2,0]]

Generated Nodes :

-----  
[[7,4,6][5,1,0][8,2,3]] - Already visited Node!  
[[7,4,6][5,1,3][8,0,2]] -  $f(n) = 9 + 13 = 22$   
-----

Node Chosen for Level 9 - [[0,4,6][7,5,1][8,2,3]]

Generated Nodes :

-----  
[[4,0,6][7,5,1][8,2,3]] -  $f(n) = 9 + 11 = 20$   
[[7,4,6][0,5,1][8,2,3]] - Already visited Node!  
-----

Node Chosen for Level 10 - [[7,1,2][5,4,0][8,6,3]]

Generated Nodes :

-----  
[[7,1,0][5,4,2][8,6,3]] -  $f(n) = 10 + 12 = 22$   
[[7,1,2][5,0,4][8,6,3]] - Already visited Node!  
[[7,1,2][5,4,3][8,6,0]] -  $f(n) = 10 + 10 = 20$   
-----

Node Chosen for Level 10 - [[7,1,2][0,5,4][8,6,3]]

Generated Nodes :

-----  
[[0,1,2][7,5,4][8,6,3]] -  $f(n) = 10 + 10 = 20$   
[[7,1,2][5,0,4][8,6,3]] - Already visited Node!  
[[7,1,2][8,5,4][0,6,3]] -  $f(n) = 10 + 12 = 22$   
-----

Node Chosen for Level 10 - [[7,1,2][5,6,4][8,0,3]]

Generated Nodes :

-----  
[[7,1,2][5,0,4][8,6,3]] - Already visited Node!  
[[7,1,2][5,6,4][8,3,0]] -  $f(n) = 10 + 12 = 22$   
[[7,1,2][5,6,4][0,8,3]] -  $f(n) = 10 + 10 = 20$   
-----

Node Chosen for Level 10 - [[2,4,1][7,5,0][8,6,3]]

Generated Nodes :

-----  
[[2,4,0][7,5,1][8,6,3]] - Already visited Node!  
[[2,4,1][7,0,5][8,6,3]] -  $f(n) = 10 + 12 = 22$   
[[2,4,1][7,5,3][8,6,0]] -  $f(n) = 10 + 10 = 20$   
-----

Node Chosen for Level 10 - [[4,0,6][7,2,1][5,8,3]]

Generated Nodes :

-----  
[[4,6,0][7,2,1][5,8,3]] -  $f(n) = 10 + 12 = 22$   
[[0,4,6][7,2,1][5,8,3]] - Already visited Node!  
[[4,2,6][7,0,1][5,8,3]] -  $f(n) = 10 + 10 = 20$   
-----

Node Chosen for Level 11 - [[0,2,4][7,5,3][8,1,6]]

Generated Nodes :

-----  
[[2,0,4][7,5,3][8,1,6]] -  $f(n) = 11 + 11 = 22$   
[[7,2,4][0,5,3][8,1,6]] - Already visited Node!  
-----

Node Chosen for Level 8 - [[4,0,6][7,5,2][8,3,1]]

Generated Nodes :

-----  
[[4,6,0][7,5,2][8,3,1]] -  $f(n) = 8 + 14 = 22$   
[[0,4,6][7,5,2][8,3,1]] - Already visited Node!  
[[4,5,6][7,0,2][8,3,1]] -  $f(n) = 8 + 14 = 22$   
-----

Node Chosen for Level 8 - [[7,6,2][5,4,1][8,0,3]]

Generated Nodes :

-----  
[[7,6,2][5,0,1][8,4,3]] -  $f(n) = 8 + 14 = 22$   
[[7,6,2][5,4,1][8,3,0]] - Already visited Node!  
[[7,6,2][5,4,1][0,8,3]] -  $f(n) = 8 + 12 = 20$   
-----

Node Chosen for Level 9 - [[7,4,1][5,2,3][8,6,0]]

Generated Nodes :

-----  
[[7,4,1][5,2,0][8,6,3]] - Already visited Node!  
[[7,4,1][5,2,3][8,0,6]] -  $f(n) = 9 + 11 = 20$   
-----

Node Chosen for Level 11 – [[2,4,1][7,0,6][5,8,3]]

Generated Nodes :

-----  
[[2,0,1][7,4,6][5,8,3]] –  $f(n) = 11 + 9 = 20$   
[[2,4,1][7,6,0][5,8,3]] – Already visited Node!  
[[2,4,1][0,7,6][5,8,3]] –  $f(n) = 11 + 11 = 22$   
[[2,4,1][7,8,6][5,0,3]] –  $f(n) = 11 + 11 = 22$   
-----

Node Chosen for Level 11 – [[2,4,1][7,6,3][5,8,0]]

Generated Nodes :

-----  
[[2,4,1][7,6,0][5,8,3]] – Already visited Node!  
[[2,4,1][7,6,3][5,0,8]] –  $f(n) = 11 + 11 = 22$   
-----

Node Chosen for Level 10 – [[4,0,6][7,5,1][8,2,3]]

Generated Nodes :

-----  
[[4,6,0][7,5,1][8,2,3]] –  $f(n) = 10 + 12 = 22$   
[[0,4,6][7,5,1][8,2,3]] – Already visited Node!  
[[4,5,6][7,0,1][8,2,3]] –  $f(n) = 10 + 12 = 22$   
-----

Node Chosen for Level 11 – [[7,1,2][5,4,3][8,6,0]]

Generated Nodes :

-----  
[[7,1,2][5,4,0][8,6,3]] – Already visited Node!  
[[7,1,2][5,4,3][8,0,6]] –  $f(n) = 11 + 9 = 20$   
-----

Node Chosen for Level 11 – [[0,1,2][7,5,4][8,6,3]]

Generated Nodes :

-----  
[[1,0,2][7,5,4][8,6,3]] –  $f(n) = 11 + 9 = 20$   
[[7,1,2][0,5,4][8,6,3]] – Already visited Node!  
-----

Node Chosen for Level 11 – [[7,1,2][5,6,4][0,8,3]]

Generated Nodes :

-----  
[[7,1,2][0,6,4][5,8,3]] –  $f(n) = 11 + 11 = 22$   
[[7,1,2][5,6,4][8,0,3]] – Already visited Node!  
-----

Node Chosen for Level 11 – [[2,4,1][7,5,3][8,6,0]]

Generated Nodes :

-----  
[[2,4,1][7,5,0][8,6,3]] – Already visited Node!  
[[2,4,1][7,5,3][8,0,6]] –  $f(n) = 11 + 9 = 20$   
-----

Node Chosen for Level 11 – [[4,2,6][7,0,1][5,8,3]]

Generated Nodes :

-----  
[[4,0,6][7,2,1][5,8,3]] – Already visited Node!  
[[4,2,6][7,1,0][5,8,3]] –  $f(n) = 11 + 9 = 20$   
[[4,2,6][0,7,1][5,8,3]] –  $f(n) = 11 + 11 = 22$   
[[4,2,6][7,8,1][5,0,3]] –  $f(n) = 11 + 11 = 22$   
-----

Node Chosen for Level 9 – [[7,6,2][5,4,1][0,8,3]]

Generated Nodes :

-----  
[[7,6,2][0,4,1][5,8,3]] –  $f(n) = 9 + 13 = 22$   
[[7,6,2][5,4,1][8,0,3]] – Already visited Node!  
-----

Node Chosen for Level 10 – [[7,4,1][5,2,3][8,0,6]]

Generated Nodes :

-----  
[[7,4,1][5,0,3][8,2,6]] –  $f(n) = 10 + 12 = 22$   
[[7,4,1][5,2,3][8,6,0]] – Already visited Node!  
[[7,4,1][5,2,3][0,8,6]] –  $f(n) = 10 + 10 = 20$   
-----

Node Chosen for Level 12 – [[2,0,1][7,4,6][5,8,3]]

Generated Nodes :

-----  
[[2,1,0][7,4,6][5,8,3]] –  $f(n) = 12 + 8 = 20$   
[[0,2,1][7,4,6][5,8,3]] –  $f(n) = 12 + 8 = 20$   
[[2,4,1][7,0,6][5,8,3]] – Already visited Node!  
-----

Node Chosen for Level 12 – [[7,1,2][5,4,3][8,0,6]]

Generated Nodes :

-----  
[[7,1,2][5,0,3][8,4,6]] –  $f(n) = 12 + 10 = 22$   
[[7,1,2][5,4,3][8,6,0]] – Already visited Node!  
[[7,1,2][5,4,3][0,8,6]] –  $f(n) = 12 + 8 = 20$   
-----

Node Chosen for Level 12 – [[1,0,2][7,5,4][8,6,3]]

Generated Nodes :

-----  
[[1,2,0][7,5,4][8,6,3]] –  $f(n) = 12 + 8 = 20$   
[[0,1,2][7,5,4][8,6,3]] – Already visited Node!  
[[1,5,2][7,0,4][8,6,3]] –  $f(n) = 12 + 10 = 22$   
-----

Node Chosen for Level 12 – [[2,4,1][7,5,3][8,0,6]]

Generated Nodes :

-----

$[[2,4,1][7,0,3][8,5,6]] - f(n) = 12 + 10 = 22$   
 $[[2,4,1][7,5,3][8,6,0]] - \text{Already visited Node!}$   
 $[[2,4,1][7,5,3][0,8,6]] - f(n) = 12 + 8 = 20$

---

Node Chosen for Level 12 -  $[[4,2,6][7,1,0][5,8,3]]$

Generated Nodes :

$[[4,2,0][7,1,6][5,8,3]] - f(n) = 12 + 8 = 20$   
 $[[4,2,6][7,0,1][5,8,3]] - \text{Already visited Node!}$   
 $[[4,2,6][7,1,3][5,8,0]] - f(n) = 12 + 8 = 20$

---

Node Chosen for Level 11 -  $[[7,4,1][5,2,3][0,8,6]]$

Generated Nodes :

$[[7,4,1][0,2,3][5,8,6]] - f(n) = 11 + 11 = 22$   
 $[[7,4,1][5,2,3][8,0,6]] - \text{Already visited Node!}$

---

Node Chosen for Level 13 -  $[[2,1,0][7,4,6][5,8,3]]$

Generated Nodes :

$[[2,0,1][7,4,6][5,8,3]] - \text{Already visited Node!}$   
 $[[2,1,6][7,4,0][5,8,3]] - f(n) = 13 + 9 = 22$

---

Node Chosen for Level 13 -  $[[0,2,1][7,4,6][5,8,3]]$

Generated Nodes :

$[[2,0,1][7,4,6][5,8,3]] - \text{Already visited Node!}$   
 $[[7,2,1][0,4,6][5,8,3]] - f(n) = 13 + 9 = 22$

---

Node Chosen for Level 13 -  $[[7,1,2][5,4,3][0,8,6]]$

Generated Nodes :

$[[7,1,2][0,4,3][5,8,6]] - f(n) = 13 + 9 = 22$   
 $[[7,1,2][5,4,3][8,0,6]] - \text{Already visited Node!}$

---

Node Chosen for Level 13 -  $[[1,2,0][7,5,4][8,6,3]]$

Generated Nodes :

$[[1,0,2][7,5,4][8,6,3]] - \text{Already visited Node!}$   
 $[[1,2,4][7,5,0][8,6,3]] - f(n) = 13 + 9 = 22$

---

Node Chosen for Level 13 -  $[[2,4,1][7,5,3][0,8,6]]$

Generated Nodes :

$[[2,4,1][0,5,3][7,8,6]] - f(n) = 13 + 7 = 20$

[[2,4,1][7,5,3][8,0,6]] - Already visited Node!

Node Chosen for Level 13 - [[4,2,0][7,1,6][5,8,3]]

Generated Nodes :

[[4,0,2][7,1,6][5,8,3]] -  $f(n) = 13 + 9 = 22$

[[4,2,6][7,1,0][5,8,3]] - Already visited Node!

Node Chosen for Level 13 - [[4,2,6][7,1,3][5,8,0]]

Generated Nodes :

[[4,2,6][7,1,0][5,8,3]] - Already visited Node!

[[4,2,6][7,1,3][5,0,8]] -  $f(n) = 13 + 9 = 22$

Node Chosen for Level 14 - [[2,4,1][0,5,3][7,8,6]]

Generated Nodes :

[[0,4,1][2,5,3][7,8,6]] -  $f(n) = 14 + 8 = 22$

[[2,4,1][5,0,3][7,8,6]] -  $f(n) = 14 + 8 = 22$

[[2,4,1][7,5,3][0,8,6]] - Already visited Node!

Node Chosen for Level 5 - [[5,7,4][2,0,6][8,3,1]]

Generated Nodes :

[[5,0,4][2,7,6][8,3,1]] -  $f(n) = 5 + 17 = 22$

[[5,7,4][2,6,0][8,3,1]] -  $f(n) = 5 + 19 = 24$

[[5,7,4][0,2,6][8,3,1]] - Already visited Node!

[[5,7,4][2,3,6][8,0,1]] -  $f(n) = 5 + 17 = 22$

Node Chosen for Level 5 - [[5,7,4][8,2,6][0,3,1]]

Generated Nodes :

[[5,7,4][0,2,6][8,3,1]] - Already visited Node!

[[5,7,4][8,2,6][3,0,1]] -  $f(n) = 5 + 19 = 24$

Node Chosen for Level 6 - [[5,7,2][0,6,4][8,3,1]]

Generated Nodes :

[[0,7,2][5,6,4][8,3,1]] - Already visited Node!

[[5,7,2][6,0,4][8,3,1]] -  $f(n) = 6 + 18 = 24$

[[5,7,2][8,6,4][0,3,1]] -  $f(n) = 6 + 18 = 24$

Node Chosen for Level 7 - [[0,7,4][5,2,1][8,6,3]]

Generated Nodes :



[[7,0,4][5,2,1][8,6,3]] - Already visited Node!  
[[5,7,4][0,2,1][8,6,3]] -  $f(n) = 7 + 17 = 24$

---

Node Chosen for Level 8 - [[7,0,4][6,2,1][5,8,3]]

Generated Nodes :

---

[[7,4,0][6,2,1][5,8,3]] -  $f(n) = 8 + 14 = 22$   
[[0,7,4][6,2,1][5,8,3]] -  $f(n) = 8 + 16 = 24$   
[[7,2,4][6,0,1][5,8,3]] - Already visited Node!

---

Node Chosen for Level 8 - [[7,2,4][6,8,1][5,0,3]]

Generated Nodes :

---

[[7,2,4][6,0,1][5,8,3]] - Already visited Node!  
[[7,2,4][6,8,1][5,3,0]] -  $f(n) = 8 + 16 = 24$   
[[7,2,4][6,8,1][0,5,3]] -  $f(n) = 8 + 14 = 22$

---

Node Chosen for Level 8 - [[7,2,4][8,5,1][6,0,3]]

Generated Nodes :

---

[[7,2,4][8,0,1][6,5,3]] -  $f(n) = 8 + 16 = 24$   
[[7,2,4][8,5,1][6,3,0]] -  $f(n) = 8 + 16 = 24$   
[[7,2,4][8,5,1][0,6,3]] - Already visited Node!

---

Node Chosen for Level 9 - [[2,6,4][7,0,1][5,8,3]]

Generated Nodes :

---

[[2,0,4][7,6,1][5,8,3]] - Already visited Node!  
[[2,6,4][7,1,0][5,8,3]] -  $f(n) = 9 + 13 = 22$   
[[2,6,4][0,7,1][5,8,3]] -  $f(n) = 9 + 15 = 24$   
[[2,6,4][7,8,1][5,0,3]] -  $f(n) = 9 + 15 = 24$

---

Node Chosen for Level 9 - [[0,7,2][5,1,4][8,6,3]]

Generated Nodes :

---

[[7,0,2][5,1,4][8,6,3]] - Already visited Node!  
[[5,7,2][0,1,4][8,6,3]] -  $f(n) = 9 + 15 = 24$

---

Node Chosen for Level 9 - [[2,5,4][7,0,1][8,6,3]]

Generated Nodes :

---

[[2,0,4][7,5,1][8,6,3]] - Already visited Node!  
[[2,5,4][7,1,0][8,6,3]] -  $f(n) = 9 + 13 = 22$   
[[2,5,4][0,7,1][8,6,3]] -  $f(n) = 9 + 15 = 24$   
[[2,5,4][7,6,1][8,0,3]] -  $f(n) = 9 + 13 = 22$

---

Node Chosen for Level 9 – [[7,4,6][2,0,1][5,8,3]]

Generated Nodes :

-----  
[[7,0,6][2,4,1][5,8,3]] –  $f(n) = 9 + 13 = 22$   
[[7,4,6][2,1,0][5,8,3]] –  $f(n) = 9 + 13 = 22$   
[[7,4,6][0,2,1][5,8,3]] – Already visited Node!  
[[7,4,6][2,8,1][5,0,3]] –  $f(n) = 9 + 15 = 24$   
-----

Node Chosen for Level 10 – [[7,0,4][5,2,3][8,1,6]]

Generated Nodes :

-----  
[[7,4,0][5,2,3][8,1,6]] –  $f(n) = 10 + 12 = 22$   
[[0,7,4][5,2,3][8,1,6]] –  $f(n) = 10 + 14 = 24$   
[[7,2,4][5,0,3][8,1,6]] – Already visited Node!  
-----

Node Chosen for Level 10 – [[7,2,4][5,3,0][8,1,6]]

Generated Nodes :

-----  
[[7,2,0][5,3,4][8,1,6]] –  $f(n) = 10 + 12 = 22$   
[[7,2,4][5,0,3][8,1,6]] – Already visited Node!  
[[7,2,4][5,3,6][8,1,0]] –  $f(n) = 10 + 12 = 22$   
-----

Node Chosen for Level 7 – [[7,6,0][5,4,2][8,3,1]]

Generated Nodes :

-----  
[[7,0,6][5,4,2][8,3,1]] – Already visited Node!  
[[7,6,2][5,4,0][8,3,1]] – Already visited Node!  
-----

Node Chosen for Level 7 – [[0,7,6][5,4,2][8,3,1]]

Generated Nodes :

-----  
[[7,0,6][5,4,2][8,3,1]] – Already visited Node!  
[[5,7,6][0,4,2][8,3,1]] –  $f(n) = 7 + 17 = 24$   
-----

Node Chosen for Level 7 – [[7,4,6][8,5,2][0,3,1]]

Generated Nodes :

-----  
[[7,4,6][0,5,2][8,3,1]] – Already visited Node!  
[[7,4,6][8,5,2][3,0,1]] –  $f(n) = 7 + 17 = 24$   
-----

Node Chosen for Level 7 – [[7,6,0][5,4,2][8,3,1]]

Generated Nodes :

-----  
[[7,0,6][5,4,2][8,3,1]] – Already visited Node!  
[[7,6,2][5,4,0][8,3,1]] – Already visited Node!  
-----

---

Node Chosen for Level 7 -  $[[7,6,2][8,5,4][0,3,1]]$

Generated Nodes :

---

$[[7,6,2][0,5,4][8,3,1]]$  - Already visited Node!  
 $[[7,6,2][8,5,4][3,0,1]]$  -  $f(n) = 7 + 17 = 24$

---

Node Chosen for Level 9 -  $[[7,6,0][5,4,1][8,2,3]]$

Generated Nodes :

---

$[[7,0,6][5,4,1][8,2,3]]$  - Already visited Node!  
 $[[7,6,1][5,4,0][8,2,3]]$  -  $f(n) = 9 + 13 = 22$

---

Node Chosen for Level 9 -  $[[0,7,6][5,4,1][8,2,3]]$

Generated Nodes :

---

$[[7,0,6][5,4,1][8,2,3]]$  - Already visited Node!  
 $[[5,7,6][0,4,1][8,2,3]]$  -  $f(n) = 9 + 15 = 24$

---

Node Chosen for Level 9 -  $[[7,4,6][8,5,1][0,2,3]]$

Generated Nodes :

---

$[[7,4,6][0,5,1][8,2,3]]$  - Already visited Node!  
 $[[7,4,6][8,5,1][2,0,3]]$  -  $f(n) = 9 + 15 = 24$

---

Node Chosen for Level 11 -  $[[7,2,4][8,5,3][0,1,6]]$

Generated Nodes :

---

$[[7,2,4][0,5,3][8,1,6]]$  - Already visited Node!  
 $[[7,2,4][8,5,3][1,0,6]]$  -  $f(n) = 11 + 11 = 22$

---

Node Chosen for Level 12 -  $[[2,0,4][7,1,3][5,8,6]]$

Generated Nodes :

---

$[[2,4,0][7,1,3][5,8,6]]$  -  $f(n) = 12 + 10 = 22$   
 $[[0,2,4][7,1,3][5,8,6]]$  - Already visited Node!  
 $[[2,1,4][7,0,3][5,8,6]]$  -  $f(n) = 12 + 10 = 22$

---

Node Chosen for Level 12 -  $[[7,0,4][1,2,3][5,8,6]]$

Generated Nodes :

---

$[[7,4,0][1,2,3][5,8,6]]$  -  $f(n) = 12 + 10 = 22$   
 $[[0,7,4][1,2,3][5,8,6]]$  -  $f(n) = 12 + 12 = 24$   
 $[[7,2,4][1,0,3][5,8,6]]$  - Already visited Node!

---

Node Chosen for Level 12 – [[7,2,4][1,3,0][5,8,6]]

Generated Nodes :

-----  
[[7,2,0][1,3,4][5,8,6]] –  $f(n) = 12 + 10 = 22$   
[[7,2,4][1,0,3][5,8,6]] – Already visited Node!  
[[7,2,4][1,3,6][5,8,0]] –  $f(n) = 12 + 10 = 22$   
-----

Node Chosen for Level 12 – [[7,2,4][1,8,3][5,0,6]]

Generated Nodes :

-----  
[[7,2,4][1,0,3][5,8,6]] – Already visited Node!  
[[7,2,4][1,8,3][5,6,0]] –  $f(n) = 12 + 12 = 24$   
[[7,2,4][1,8,3][0,5,6]] –  $f(n) = 12 + 10 = 22$   
-----

Node Chosen for Level 8 – [[7,4,6][5,3,0][8,1,2]]

Generated Nodes :

-----  
[[7,4,0][5,3,6][8,1,2]] –  $f(n) = 8 + 14 = 22$   
[[7,4,6][5,0,3][8,1,2]] –  $f(n) = 8 + 14 = 22$   
[[7,4,6][5,3,2][8,1,0]] – Already visited Node!  
-----

Node Chosen for Level 8 – [[7,4,6][0,3,2][5,8,1]]

Generated Nodes :

-----  
[[0,4,6][7,3,2][5,8,1]] –  $f(n) = 8 + 14 = 22$   
[[7,4,6][3,0,2][5,8,1]] –  $f(n) = 8 + 16 = 24$   
[[7,4,6][5,3,2][0,8,1]] – Already visited Node!  
-----

Node Chosen for Level 8 – [[6,0,2][7,5,4][8,3,1]]

Generated Nodes :

-----  
[[6,2,0][7,5,4][8,3,1]] –  $f(n) = 8 + 14 = 22$   
[[0,6,2][7,5,4][8,3,1]] – Already visited Node!  
[[6,5,2][7,0,4][8,3,1]] –  $f(n) = 8 + 16 = 24$   
-----

Node Chosen for Level 8 – [[7,6,2][5,3,0][8,1,4]]

Generated Nodes :

-----  
[[7,6,0][5,3,2][8,1,4]] –  $f(n) = 8 + 16 = 24$   
[[7,6,2][5,0,3][8,1,4]] –  $f(n) = 8 + 14 = 22$   
[[7,6,2][5,3,4][8,1,0]] – Already visited Node!  
-----

Node Chosen for Level 8 – [[7,6,2][0,3,4][5,8,1]]

Generated Nodes :

-----

$[[0,6,2][7,3,4][5,8,1]] - f(n) = 8 + 14 = 22$   
 $[[7,6,2][3,0,4][5,8,1]] - f(n) = 8 + 16 = 24$   
 $[[7,6,2][5,3,4][0,8,1]] - \text{Already visited Node!}$

---

Node Chosen for Level 9 -  $[[7,4,1][5,0,2][8,6,3]]$

Generated Nodes :

$[[7,0,1][5,4,2][8,6,3]] - f(n) = 9 + 13 = 22$   
 $[[7,4,1][5,2,0][8,6,3]] - \text{Already visited Node!}$   
 $[[7,4,1][0,5,2][8,6,3]] - f(n) = 9 + 13 = 22$   
 $[[7,4,1][5,6,2][8,0,3]] - f(n) = 9 + 13 = 22$

---

Node Chosen for Level 10 -  $[[7,0,2][6,1,4][5,8,3]]$

Generated Nodes :

$[[7,2,0][6,1,4][5,8,3]] - \text{Already visited Node!}$   
 $[[0,7,2][6,1,4][5,8,3]] - f(n) = 10 + 14 = 24$   
 $[[7,1,2][6,0,4][5,8,3]] - f(n) = 10 + 12 = 22$

---

Node Chosen for Level 10 -  $[[7,2,4][6,1,3][5,0,8]]$

Generated Nodes :

$[[7,2,4][6,0,3][5,1,8]] - f(n) = 10 + 14 = 24$   
 $[[7,2,4][6,1,3][5,8,0]] - \text{Already visited Node!}$   
 $[[7,2,4][6,1,3][0,5,8]] - f(n) = 10 + 12 = 22$

---

Node Chosen for Level 10 -  $[[7,0,4][5,1,6][8,2,3]]$

Generated Nodes :

$[[7,4,0][5,1,6][8,2,3]] - \text{Already visited Node!}$   
 $[[0,7,4][5,1,6][8,2,3]] - f(n) = 10 + 14 = 24$   
 $[[7,1,4][5,0,6][8,2,3]] - f(n) = 10 + 12 = 22$

---

Node Chosen for Level 10 -  $[[7,4,6][5,1,3][8,0,2]]$

Generated Nodes :

$[[7,4,6][5,0,3][8,1,2]] - f(n) = 10 + 14 = 24$   
 $[[7,4,6][5,1,3][8,2,0]] - \text{Already visited Node!}$   
 $[[7,4,6][5,1,3][0,8,2]] - f(n) = 10 + 12 = 22$

---

Node Chosen for Level 11 -  $[[7,1,0][5,4,2][8,6,3]]$

Generated Nodes :

$[[7,0,1][5,4,2][8,6,3]] - f(n) = 11 + 13 = 24$   
 $[[7,1,2][5,4,0][8,6,3]] - \text{Already visited Node!}$

---

Node Chosen for Level 11 – [[7,1,2][8,5,4][0,6,3]]

Generated Nodes :

-----  
[[7,1,2][0,5,4][8,6,3]] – Already visited Node!  
[[7,1,2][8,5,4][6,0,3]] –  $f(n) = 11 + 13 = 24$   
-----

Node Chosen for Level 11 – [[7,1,2][5,6,4][8,3,0]]

Generated Nodes :

-----  
[[7,1,2][5,6,0][8,3,4]] –  $f(n) = 11 + 13 = 24$   
[[7,1,2][5,6,4][8,0,3]] – Already visited Node!  
-----

Node Chosen for Level 11 – [[2,4,1][7,0,5][8,6,3]]

Generated Nodes :

-----  
[[2,0,1][7,4,5][8,6,3]] –  $f(n) = 11 + 11 = 22$   
[[2,4,1][7,5,0][8,6,3]] – Already visited Node!  
[[2,4,1][0,7,5][8,6,3]] –  $f(n) = 11 + 13 = 24$   
[[2,4,1][7,6,5][8,0,3]] –  $f(n) = 11 + 11 = 22$   
-----

Node Chosen for Level 11 – [[4,6,0][7,2,1][5,8,3]]

Generated Nodes :

-----  
[[4,0,6][7,2,1][5,8,3]] – Already visited Node!  
[[4,6,1][7,2,0][5,8,3]] –  $f(n) = 11 + 11 = 22$   
-----

Node Chosen for Level 12 – [[2,0,4][7,5,3][8,1,6]]

Generated Nodes :

-----  
[[2,4,0][7,5,3][8,1,6]] –  $f(n) = 12 + 10 = 22$   
[[0,2,4][7,5,3][8,1,6]] – Already visited Node!  
[[2,5,4][7,0,3][8,1,6]] –  $f(n) = 12 + 12 = 24$   
-----

Node Chosen for Level 9 – [[4,6,0][7,5,2][8,3,1]]

Generated Nodes :

-----  
[[4,0,6][7,5,2][8,3,1]] – Already visited Node!  
[[4,6,2][7,5,0][8,3,1]] –  $f(n) = 9 + 13 = 22$   
-----

Node Chosen for Level 9 – [[4,5,6][7,0,2][8,3,1]]

Generated Nodes :

-----  
[[4,0,6][7,5,2][8,3,1]] – Already visited Node!  
[[4,5,6][7,2,0][8,3,1]] –  $f(n) = 9 + 13 = 22$   
[[4,5,6][0,7,2][8,3,1]] –  $f(n) = 9 + 15 = 24$

$[[4,5,6][7,3,2][8,0,1]] - f(n) = 9 + 13 = 22$

---

Node Chosen for Level 9 -  $[[7,6,2][5,0,1][8,4,3]]$

Generated Nodes :

---

$[[7,0,2][5,6,1][8,4,3]] - f(n) = 9 + 13 = 22$   
 $[[7,6,2][5,1,0][8,4,3]] - f(n) = 9 + 13 = 22$   
 $[[7,6,2][0,5,1][8,4,3]] - f(n) = 9 + 13 = 22$   
 $[[7,6,2][5,4,1][8,0,3]] - \text{Already visited Node!}$

---

Node Chosen for Level 12 -  $[[2,4,1][0,7,6][5,8,3]]$

Generated Nodes :

---

$[[0,4,1][2,7,6][5,8,3]] - f(n) = 12 + 12 = 24$   
 $[[2,4,1][7,0,6][5,8,3]] - \text{Already visited Node!}$   
 $[[2,4,1][5,7,6][0,8,3]] - f(n) = 12 + 10 = 22$

---

Node Chosen for Level 12 -  $[[2,4,1][7,8,6][5,0,3]]$

Generated Nodes :

---

$[[2,4,1][7,0,6][5,8,3]] - \text{Already visited Node!}$   
 $[[2,4,1][7,8,6][5,3,0]] - f(n) = 12 + 12 = 24$   
 $[[2,4,1][7,8,6][0,5,3]] - f(n) = 12 + 10 = 22$

---

Node Chosen for Level 12 -  $[[2,4,1][7,6,3][5,0,8]]$

Generated Nodes :

---

$[[2,4,1][7,0,3][5,6,8]] - f(n) = 12 + 12 = 24$   
 $[[2,4,1][7,6,3][5,8,0]] - \text{Already visited Node!}$   
 $[[2,4,1][7,6,3][0,5,8]] - f(n) = 12 + 10 = 22$

---

Node Chosen for Level 11 -  $[[4,6,0][7,5,1][8,2,3]]$

Generated Nodes :

---

$[[4,0,6][7,5,1][8,2,3]] - \text{Already visited Node!}$   
 $[[4,6,1][7,5,0][8,2,3]] - f(n) = 11 + 11 = 22$

---

Node Chosen for Level 11 -  $[[4,5,6][7,0,1][8,2,3]]$

Generated Nodes :

---

$[[4,0,6][7,5,1][8,2,3]] - \text{Already visited Node!}$   
 $[[4,5,6][7,1,0][8,2,3]] - f(n) = 11 + 11 = 22$   
 $[[4,5,6][0,7,1][8,2,3]] - f(n) = 11 + 13 = 24$   
 $[[4,5,6][7,2,1][8,0,3]] - f(n) = 11 + 11 = 22$

---

Node Chosen for Level 12 -  $[[7,1,2][0,6,4][5,8,3]]$

Generated Nodes :

---

$[[0,1,2][7,6,4][5,8,3]] - f(n) = 12 + 10 = 22$   
 $[[7,1,2][6,0,4][5,8,3]] - f(n) = 12 + 12 = 24$   
 $[[7,1,2][5,6,4][0,8,3]] - \text{Already visited Node!}$

---

Node Chosen for Level 12 -  $[[4,2,6][0,7,1][5,8,3]]$

Generated Nodes :

---

$[[0,2,6][4,7,1][5,8,3]] - f(n) = 12 + 10 = 22$   
 $[[4,2,6][7,0,1][5,8,3]] - \text{Already visited Node!}$   
 $[[4,2,6][5,7,1][0,8,3]] - f(n) = 12 + 10 = 22$

---

Node Chosen for Level 12 -  $[[4,2,6][7,8,1][5,0,3]]$

Generated Nodes :

---

$[[4,2,6][7,0,1][5,8,3]] - \text{Already visited Node!}$   
 $[[4,2,6][7,8,1][5,3,0]] - f(n) = 12 + 12 = 24$   
 $[[4,2,6][7,8,1][0,5,3]] - f(n) = 12 + 10 = 22$

---

Node Chosen for Level 10 -  $[[7,6,2][0,4,1][5,8,3]]$

Generated Nodes :

---

$[[0,6,2][7,4,1][5,8,3]] - f(n) = 10 + 12 = 22$   
 $[[7,6,2][4,0,1][5,8,3]] - f(n) = 10 + 12 = 22$   
 $[[7,6,2][5,4,1][0,8,3]] - \text{Already visited Node!}$

---

Node Chosen for Level 11 -  $[[7,4,1][5,0,3][8,2,6]]$

Generated Nodes :

---

$[[7,0,1][5,4,3][8,2,6]] - f(n) = 11 + 11 = 22$   
 $[[7,4,1][5,3,0][8,2,6]] - f(n) = 11 + 13 = 24$   
 $[[7,4,1][0,5,3][8,2,6]] - f(n) = 11 + 11 = 22$   
 $[[7,4,1][5,2,3][8,0,6]] - \text{Already visited Node!}$

---

Node Chosen for Level 13 -  $[[7,1,2][5,0,3][8,4,6]]$

Generated Nodes :

---

$[[7,0,2][5,1,3][8,4,6]] - f(n) = 13 + 11 = 24$   
 $[[7,1,2][5,3,0][8,4,6]] - f(n) = 13 + 11 = 24$   
 $[[7,1,2][0,5,3][8,4,6]] - f(n) = 13 + 9 = 22$   
 $[[7,1,2][5,4,3][8,0,6]] - \text{Already visited Node!}$

---

Node Chosen for Level 13 -  $[[1,5,2][7,0,4][8,6,3]]$

Generated Nodes :



-----  
[[1,0,2][7,5,4][8,6,3]] - Already visited Node!  
[[1,5,2][7,4,0][8,6,3]] -  $f(n) = 13 + 9 = 22$   
[[1,5,2][0,7,4][8,6,3]] -  $f(n) = 13 + 11 = 24$   
[[1,5,2][7,6,4][8,0,3]] -  $f(n) = 13 + 9 = 22$   
-----

Node Chosen for Level 13 - [[2,4,1][7,0,3][8,5,6]]

Generated Nodes :

-----  
[[2,0,1][7,4,3][8,5,6]] -  $f(n) = 13 + 9 = 22$   
[[2,4,1][7,3,0][8,5,6]] -  $f(n) = 13 + 11 = 24$   
[[2,4,1][0,7,3][8,5,6]] -  $f(n) = 13 + 11 = 24$   
[[2,4,1][7,5,3][8,0,6]] - Already visited Node!  
-----

Node Chosen for Level 12 - [[7,4,1][0,2,3][5,8,6]]

Generated Nodes :

-----  
[[0,4,1][7,2,3][5,8,6]] -  $f(n) = 12 + 10 = 22$   
[[7,4,1][2,0,3][5,8,6]] -  $f(n) = 12 + 12 = 24$   
[[7,4,1][5,2,3][0,8,6]] - Already visited Node!  
-----

Node Chosen for Level 14 - [[2,1,6][7,4,0][5,8,3]]

Generated Nodes :

-----  
[[2,1,0][7,4,6][5,8,3]] - Already visited Node!  
[[2,1,6][7,0,4][5,8,3]] -  $f(n) = 14 + 10 = 24$   
[[2,1,6][7,4,3][5,8,0]] -  $f(n) = 14 + 8 = 22$   
-----

Node Chosen for Level 14 - [[7,2,1][0,4,6][5,8,3]]

Generated Nodes :

-----  
[[0,2,1][7,4,6][5,8,3]] - Already visited Node!  
[[7,2,1][4,0,6][5,8,3]] -  $f(n) = 14 + 8 = 22$   
[[7,2,1][5,4,6][0,8,3]] -  $f(n) = 14 + 8 = 22$   
-----

Node Chosen for Level 14 - [[7,1,2][0,4,3][5,8,6]]

Generated Nodes :

-----  
[[0,1,2][7,4,3][5,8,6]] -  $f(n) = 14 + 8 = 22$   
[[7,1,2][4,0,3][5,8,6]] -  $f(n) = 14 + 8 = 22$   
[[7,1,2][5,4,3][0,8,6]] - Already visited Node!  
-----

Node Chosen for Level 14 - [[1,2,4][7,5,0][8,6,3]]

Generated Nodes :

-----  
[[1,2,0][7,5,4][8,6,3]] - Already visited Node!  
-----

$[[1,2,4][7,0,5][8,6,3]] - f(n) = 14 + 10 = 24$   
 $[[1,2,4][7,5,3][8,6,0]] - f(n) = 14 + 8 = 22$

---

Node Chosen for Level 14 -  $[[4,0,2][7,1,6][5,8,3]]$

Generated Nodes :

---

$[[4,2,0][7,1,6][5,8,3]] - \text{Already visited Node!}$   
 $[[0,4,2][7,1,6][5,8,3]] - f(n) = 14 + 10 = 24$   
 $[[4,1,2][7,0,6][5,8,3]] - f(n) = 14 + 8 = 22$

---

Node Chosen for Level 14 -  $[[4,2,6][7,1,3][5,0,8]]$

Generated Nodes :

---

$[[4,2,6][7,0,3][5,1,8]] - f(n) = 14 + 10 = 24$   
 $[[4,2,6][7,1,3][5,8,0]] - \text{Already visited Node!}$   
 $[[4,2,6][7,1,3][0,5,8]] - f(n) = 14 + 8 = 22$

---

Node Chosen for Level 15 -  $[[0,4,1][2,5,3][7,8,6]]$

Generated Nodes :

---

$[[4,0,1][2,5,3][7,8,6]] - f(n) = 15 + 7 = 22$   
 $[[2,4,1][0,5,3][7,8,6]] - \text{Already visited Node!}$

---

Node Chosen for Level 15 -  $[[2,4,1][5,0,3][7,8,6]]$

Generated Nodes :

---

$[[2,0,1][5,4,3][7,8,6]] - f(n) = 15 + 7 = 22$   
 $[[2,4,1][5,3,0][7,8,6]] - f(n) = 15 + 9 = 24$   
 $[[2,4,1][0,5,3][7,8,6]] - \text{Already visited Node!}$   
 $[[2,4,1][5,8,3][7,0,6]] - f(n) = 15 + 9 = 24$

---

Node Chosen for Level 6 -  $[[5,0,4][2,7,6][8,3,1]]$

Generated Nodes :

---

$[[5,4,0][2,7,6][8,3,1]] - f(n) = 6 + 16 = 22$   
 $[[0,5,4][2,7,6][8,3,1]] - f(n) = 6 + 16 = 22$   
 $[[5,7,4][2,0,6][8,3,1]] - \text{Already visited Node!}$

---

Node Chosen for Level 6 -  $[[5,7,4][2,3,6][8,0,1]]$

Generated Nodes :

---

$[[5,7,4][2,0,6][8,3,1]] - \text{Already visited Node!}$   
 $[[5,7,4][2,3,6][8,1,0]] - f(n) = 6 + 16 = 22$   
 $[[5,7,4][2,3,6][0,8,1]] - f(n) = 6 + 16 = 22$

---

Node Chosen for Level 9 -  $[[7,4,0][6,2,1][5,8,3]]$

Generated Nodes :

-----  
[[7,0,4][6,2,1][5,8,3]] - Already visited Node!  
[[7,4,1][6,2,0][5,8,3]] -  $f(n) = 9 + 13 = 22$   
-----

Node Chosen for Level 9 - [[7,2,4][6,8,1][0,5,3]]

Generated Nodes :

-----  
[[7,2,4][0,8,1][6,5,3]] -  $f(n) = 9 + 15 = 24$   
[[7,2,4][6,8,1][5,0,3]] - Already visited Node!  
-----

Node Chosen for Level 10 - [[2,6,4][7,1,0][5,8,3]]

Generated Nodes :

-----  
[[2,6,0][7,1,4][5,8,3]] -  $f(n) = 10 + 12 = 22$   
[[2,6,4][7,0,1][5,8,3]] - Already visited Node!  
[[2,6,4][7,1,3][5,8,0]] -  $f(n) = 10 + 12 = 22$   
-----

Node Chosen for Level 10 - [[2,5,4][7,1,0][8,6,3]]

Generated Nodes :

-----  
[[2,5,0][7,1,4][8,6,3]] -  $f(n) = 10 + 12 = 22$   
[[2,5,4][7,0,1][8,6,3]] - Already visited Node!  
[[2,5,4][7,1,3][8,6,0]] -  $f(n) = 10 + 12 = 22$   
-----

Node Chosen for Level 10 - [[2,5,4][7,6,1][8,0,3]]

Generated Nodes :

-----  
[[2,5,4][7,0,1][8,6,3]] - Already visited Node!  
[[2,5,4][7,6,1][8,3,0]] -  $f(n) = 10 + 14 = 24$   
[[2,5,4][7,6,1][0,8,3]] -  $f(n) = 10 + 12 = 22$   
-----

Node Chosen for Level 10 - [[7,0,6][2,4,1][5,8,3]]

Generated Nodes :

-----  
[[7,6,0][2,4,1][5,8,3]] -  $f(n) = 10 + 14 = 24$   
[[0,7,6][2,4,1][5,8,3]] -  $f(n) = 10 + 14 = 24$   
[[7,4,6][2,0,1][5,8,3]] - Already visited Node!  
-----

Node Chosen for Level 10 - [[7,4,6][2,1,0][5,8,3]]

Generated Nodes :

-----  
[[7,4,0][2,1,6][5,8,3]] -  $f(n) = 10 + 12 = 22$   
[[7,4,6][2,0,1][5,8,3]] - Already visited Node!  
[[7,4,6][2,1,3][5,8,0]] -  $f(n) = 10 + 12 = 22$   
-----

---

Node Chosen for Level 11 – [[7,4,0][5,2,3][8,1,6]]

Generated Nodes :

---

[[7,0,4][5,2,3][8,1,6]] – Already visited Node!  
[[7,4,3][5,2,0][8,1,6]] –  $f(n) = 11 + 11 = 22$

---

Node Chosen for Level 11 – [[7,2,0][5,3,4][8,1,6]]

Generated Nodes :

---

[[7,0,2][5,3,4][8,1,6]] –  $f(n) = 11 + 13 = 24$   
[[7,2,4][5,3,0][8,1,6]] – Already visited Node!

---

Node Chosen for Level 11 – [[7,2,4][5,3,6][8,1,0]]

Generated Nodes :

---

[[7,2,4][5,3,0][8,1,6]] – Already visited Node!  
[[7,2,4][5,3,6][8,0,1]] –  $f(n) = 11 + 13 = 24$

---

Node Chosen for Level 10 – [[7,6,1][5,4,0][8,2,3]]

Generated Nodes :

---

[[7,6,0][5,4,1][8,2,3]] – Already visited Node!  
[[7,6,1][5,0,4][8,2,3]] –  $f(n) = 10 + 14 = 24$   
[[7,6,1][5,4,3][8,2,0]] –  $f(n) = 10 + 12 = 22$

---

Node Chosen for Level 12 – [[7,2,4][8,5,3][1,0,6]]

Generated Nodes :

---

[[7,2,4][8,0,3][1,5,6]] –  $f(n) = 12 + 12 = 24$   
[[7,2,4][8,5,3][1,6,0]] –  $f(n) = 12 + 12 = 24$   
[[7,2,4][8,5,3][0,1,6]] – Already visited Node!

---

Node Chosen for Level 13 – [[2,4,0][7,1,3][5,8,6]]

Generated Nodes :

---

[[2,0,4][7,1,3][5,8,6]] – Already visited Node!  
[[2,4,3][7,1,0][5,8,6]] –  $f(n) = 13 + 9 = 22$

---

Node Chosen for Level 13 – [[2,1,4][7,0,3][5,8,6]]

Generated Nodes :

---

[[2,0,4][7,1,3][5,8,6]] – Already visited Node!  
[[2,1,4][7,3,0][5,8,6]] –  $f(n) = 13 + 11 = 24$   
[[2,1,4][0,7,3][5,8,6]] –  $f(n) = 13 + 11 = 24$

$[[2,1,4][7,8,3][5,0,6]] - f(n) = 13 + 11 = 24$

---

Node Chosen for Level 13 -  $[[7,4,0][1,2,3][5,8,6]]$

Generated Nodes :

---

$[[7,0,4][1,2,3][5,8,6]] - \text{Already visited Node!}$

$[[7,4,3][1,2,0][5,8,6]] - f(n) = 13 + 9 = 22$

---

Node Chosen for Level 13 -  $[[7,2,0][1,3,4][5,8,6]]$

Generated Nodes :

---

$[[7,0,2][1,3,4][5,8,6]] - f(n) = 13 + 11 = 24$

$[[7,2,4][1,3,0][5,8,6]] - \text{Already visited Node!}$

---

Node Chosen for Level 13 -  $[[7,2,4][1,3,6][5,8,0]]$

Generated Nodes :

---

$[[7,2,4][1,3,0][5,8,6]] - \text{Already visited Node!}$

$[[7,2,4][1,3,6][5,0,8]] - f(n) = 13 + 11 = 24$

---

Node Chosen for Level 13 -  $[[7,2,4][1,8,3][0,5,6]]$

Generated Nodes :

---

$[[7,2,4][0,8,3][1,5,6]] - f(n) = 13 + 11 = 24$

$[[7,2,4][1,8,3][5,0,6]] - \text{Already visited Node!}$

---

Node Chosen for Level 9 -  $[[7,4,0][5,3,6][8,1,2]]$

Generated Nodes :

---

$[[7,0,4][5,3,6][8,1,2]] - f(n) = 9 + 15 = 24$

$[[7,4,6][5,3,0][8,1,2]] - \text{Already visited Node!}$

---

Node Chosen for Level 9 -  $[[7,4,6][5,0,3][8,1,2]]$

Generated Nodes :

---

$[[7,0,6][5,4,3][8,1,2]] - f(n) = 9 + 13 = 22$

$[[7,4,6][5,3,0][8,1,2]] - \text{Already visited Node!}$

$[[7,4,6][0,5,3][8,1,2]] - f(n) = 9 + 13 = 22$

$[[7,4,6][5,1,3][8,0,2]] - \text{Already visited Node!}$

---

Node Chosen for Level 9 -  $[[0,4,6][7,3,2][5,8,1]]$

Generated Nodes :

---

$[[4,0,6][7,3,2][5,8,1]] - f(n) = 9 + 13 = 22$

$[[7,4,6][0,3,2][5,8,1]] - \text{Already visited Node!}$

---

Node Chosen for Level 9 – [[6,2,0][7,5,4][8,3,1]]

Generated Nodes :

---

[[6,0,2][7,5,4][8,3,1]] – Already visited Node!  
[[6,2,4][7,5,0][8,3,1]] –  $f(n) = 9 + 15 = 24$

---

Node Chosen for Level 9 – [[7,6,2][5,0,3][8,1,4]]

Generated Nodes :

---

[[7,0,2][5,6,3][8,1,4]] –  $f(n) = 9 + 13 = 22$   
[[7,6,2][5,3,0][8,1,4]] – Already visited Node!  
[[7,6,2][0,5,3][8,1,4]] –  $f(n) = 9 + 13 = 22$   
[[7,6,2][5,1,3][8,0,4]] –  $f(n) = 9 + 13 = 22$

---

Node Chosen for Level 9 – [[0,6,2][7,3,4][5,8,1]]

Generated Nodes :

---

[[6,0,2][7,3,4][5,8,1]] –  $f(n) = 9 + 15 = 24$   
[[7,6,2][0,3,4][5,8,1]] – Already visited Node!

---

Node Chosen for Level 10 – [[7,0,1][5,4,2][8,6,3]]

Generated Nodes :

---

[[7,1,0][5,4,2][8,6,3]] – Already visited Node!  
[[0,7,1][5,4,2][8,6,3]] –  $f(n) = 10 + 14 = 24$   
[[7,4,1][5,0,2][8,6,3]] – Already visited Node!

---

Node Chosen for Level 10 – [[7,4,1][0,5,2][8,6,3]]

Generated Nodes :

---

[[0,4,1][7,5,2][8,6,3]] –  $f(n) = 10 + 12 = 22$   
[[7,4,1][5,0,2][8,6,3]] – Already visited Node!  
[[7,4,1][8,5,2][0,6,3]] –  $f(n) = 10 + 14 = 24$

---

Node Chosen for Level 10 – [[7,4,1][5,6,2][8,0,3]]

Generated Nodes :

---

[[7,4,1][5,0,2][8,6,3]] – Already visited Node!  
[[7,4,1][5,6,2][8,3,0]] –  $f(n) = 10 + 14 = 24$   
[[7,4,1][5,6,2][0,8,3]] –  $f(n) = 10 + 12 = 22$

---

Node Chosen for Level 11 – [[7,1,2][6,0,4][5,8,3]]

Generated Nodes :

---

[[7,0,2][6,1,4][5,8,3]] - Already visited Node!  
[[7,1,2][6,4,0][5,8,3]] -  $f(n) = 11 + 11 = 22$   
[[7,1,2][0,6,4][5,8,3]] - Already visited Node!  
[[7,1,2][6,8,4][5,0,3]] -  $f(n) = 11 + 13 = 24$

---

Node Chosen for Level 11 - [[7,2,4][6,1,3][0,5,8]]

Generated Nodes :

[[7,2,4][0,1,3][6,5,8]] -  $f(n) = 11 + 13 = 24$   
[[7,2,4][6,1,3][5,0,8]] - Already visited Node!

---

Node Chosen for Level 11 - [[7,1,4][5,0,6][8,2,3]]

Generated Nodes :

[[7,0,4][5,1,6][8,2,3]] - Already visited Node!  
[[7,1,4][5,6,0][8,2,3]] -  $f(n) = 11 + 13 = 24$   
[[7,1,4][0,5,6][8,2,3]] -  $f(n) = 11 + 11 = 22$   
[[7,1,4][5,2,6][8,0,3]] -  $f(n) = 11 + 11 = 22$

---

Node Chosen for Level 11 - [[7,4,6][5,1,3][0,8,2]]

Generated Nodes :

[[7,4,6][0,1,3][5,8,2]] -  $f(n) = 11 + 13 = 24$   
[[7,4,6][5,1,3][8,0,2]] - Already visited Node!

---

Node Chosen for Level 12 - [[2,0,1][7,4,5][8,6,3]]

Generated Nodes :

[[2,1,0][7,4,5][8,6,3]] -  $f(n) = 12 + 10 = 22$   
[[0,2,1][7,4,5][8,6,3]] -  $f(n) = 12 + 10 = 22$   
[[2,4,1][7,0,5][8,6,3]] - Already visited Node!

---

Node Chosen for Level 12 - [[2,4,1][7,6,5][8,0,3]]

Generated Nodes :

[[2,4,1][7,0,5][8,6,3]] - Already visited Node!  
[[2,4,1][7,6,5][8,3,0]] -  $f(n) = 12 + 12 = 24$   
[[2,4,1][7,6,5][0,8,3]] -  $f(n) = 12 + 10 = 22$

---

Node Chosen for Level 12 - [[4,6,1][7,2,0][5,8,3]]

Generated Nodes :

[[4,6,0][7,2,1][5,8,3]] - Already visited Node!  
[[4,6,1][7,0,2][5,8,3]] -  $f(n) = 12 + 12 = 24$   
[[4,6,1][7,2,3][5,8,0]] -  $f(n) = 12 + 10 = 22$

---

Node Chosen for Level 13 – [[2,4,0][7,5,3][8,1,6]]

Generated Nodes :

-----  
[[2,0,4][7,5,3][8,1,6]] – Already visited Node!  
[[2,4,3][7,5,0][8,1,6]] –  $f(n) = 13 + 9 = 22$   
-----

Node Chosen for Level 10 – [[4,6,2][7,5,0][8,3,1]]

Generated Nodes :

-----  
[[4,6,0][7,5,2][8,3,1]] – Already visited Node!  
[[4,6,2][7,0,5][8,3,1]] –  $f(n) = 10 + 14 = 24$   
[[4,6,2][7,5,1][8,3,0]] –  $f(n) = 10 + 12 = 22$   
-----

Node Chosen for Level 10 – [[4,5,6][7,2,0][8,3,1]]

Generated Nodes :

-----  
[[4,5,0][7,2,6][8,3,1]] –  $f(n) = 10 + 12 = 22$   
[[4,5,6][7,0,2][8,3,1]] – Already visited Node!  
[[4,5,6][7,2,1][8,3,0]] –  $f(n) = 10 + 12 = 22$   
-----

Node Chosen for Level 10 – [[4,5,6][7,3,2][8,0,1]]

Generated Nodes :

-----  
[[4,5,6][7,0,2][8,3,1]] – Already visited Node!  
[[4,5,6][7,3,2][8,1,0]] –  $f(n) = 10 + 12 = 22$   
[[4,5,6][7,3,2][0,8,1]] –  $f(n) = 10 + 12 = 22$   
-----

Node Chosen for Level 10 – [[7,0,2][5,6,1][8,4,3]]

Generated Nodes :

-----  
[[7,2,0][5,6,1][8,4,3]] –  $f(n) = 10 + 12 = 22$   
[[0,7,2][5,6,1][8,4,3]] –  $f(n) = 10 + 14 = 24$   
[[7,6,2][5,0,1][8,4,3]] – Already visited Node!  
-----

Node Chosen for Level 10 – [[7,6,2][5,1,0][8,4,3]]

Generated Nodes :

-----  
[[7,6,0][5,1,2][8,4,3]] –  $f(n) = 10 + 14 = 24$   
[[7,6,2][5,0,1][8,4,3]] – Already visited Node!  
[[7,6,2][5,1,3][8,4,0]] –  $f(n) = 10 + 12 = 22$   
-----

Node Chosen for Level 10 – [[7,6,2][0,5,1][8,4,3]]

Generated Nodes :

-----  
[[0,6,2][7,5,1][8,4,3]] –  $f(n) = 10 + 12 = 22$



[[7,6,2][5,0,1][8,4,3]] - Already visited Node!  
[[7,6,2][8,5,1][0,4,3]] -  $f(n) = 10 + 14 = 24$

---

Node Chosen for Level 13 - [[2,4,1][5,7,6][0,8,3]]

Generated Nodes :

---

[[2,4,1][0,7,6][5,8,3]] - Already visited Node!  
[[2,4,1][5,7,6][8,0,3]] -  $f(n) = 13 + 11 = 24$

---

Node Chosen for Level 13 - [[2,4,1][7,8,6][0,5,3]]

Generated Nodes :

---

[[2,4,1][0,8,6][7,5,3]] -  $f(n) = 13 + 9 = 22$   
[[2,4,1][7,8,6][5,0,3]] - Already visited Node!

---

Node Chosen for Level 13 - [[2,4,1][7,6,3][0,5,8]]

Generated Nodes :

---

[[2,4,1][0,6,3][7,5,8]] -  $f(n) = 13 + 9 = 22$   
[[2,4,1][7,6,3][5,0,8]] - Already visited Node!

---

Node Chosen for Level 12 - [[4,6,1][7,5,0][8,2,3]]

Generated Nodes :

---

[[4,6,0][7,5,1][8,2,3]] - Already visited Node!  
[[4,6,1][7,0,5][8,2,3]] -  $f(n) = 12 + 12 = 24$   
[[4,6,1][7,5,3][8,2,0]] -  $f(n) = 12 + 10 = 22$

---

Node Chosen for Level 12 - [[4,5,6][7,1,0][8,2,3]]

Generated Nodes :

---

[[4,5,0][7,1,6][8,2,3]] -  $f(n) = 12 + 10 = 22$   
[[4,5,6][7,0,1][8,2,3]] - Already visited Node!  
[[4,5,6][7,1,3][8,2,0]] -  $f(n) = 12 + 10 = 22$

---

Node Chosen for Level 12 - [[4,5,6][7,2,1][8,0,3]]

Generated Nodes :

---

[[4,5,6][7,0,1][8,2,3]] - Already visited Node!  
[[4,5,6][7,2,1][8,3,0]] -  $f(n) = 12 + 12 = 24$   
[[4,5,6][7,2,1][0,8,3]] -  $f(n) = 12 + 10 = 22$

---

Node Chosen for Level 13 - [[0,1,2][7,6,4][5,8,3]]

Generated Nodes :

---

[[1,0,2][7,6,4][5,8,3]] -  $f(n) = 13 + 9 = 22$   
[[7,1,2][0,6,4][5,8,3]] - Already visited Node!

---

Node Chosen for Level 13 - [[0,2,6][4,7,1][5,8,3]]

Generated Nodes :

---

[[2,0,6][4,7,1][5,8,3]] -  $f(n) = 13 + 11 = 24$   
[[4,2,6][0,7,1][5,8,3]] - Already visited Node!

---

Node Chosen for Level 13 - [[4,2,6][5,7,1][0,8,3]]

Generated Nodes :

---

[[4,2,6][0,7,1][5,8,3]] - Already visited Node!  
[[4,2,6][5,7,1][8,0,3]] -  $f(n) = 13 + 11 = 24$

---

Node Chosen for Level 13 - [[4,2,6][7,8,1][0,5,3]]

Generated Nodes :

---

[[4,2,6][0,8,1][7,5,3]] -  $f(n) = 13 + 9 = 22$   
[[4,2,6][7,8,1][5,0,3]] - Already visited Node!

---

Node Chosen for Level 11 - [[0,6,2][7,4,1][5,8,3]]

Generated Nodes :

---

[[6,0,2][7,4,1][5,8,3]] -  $f(n) = 11 + 13 = 24$   
[[7,6,2][0,4,1][5,8,3]] - Already visited Node!

---

Node Chosen for Level 11 - [[7,6,2][4,0,1][5,8,3]]

Generated Nodes :

---

[[7,0,2][4,6,1][5,8,3]] -  $f(n) = 11 + 11 = 22$   
[[7,6,2][4,1,0][5,8,3]] -  $f(n) = 11 + 11 = 22$   
[[7,6,2][0,4,1][5,8,3]] - Already visited Node!  
[[7,6,2][4,8,1][5,0,3]] -  $f(n) = 11 + 13 = 24$

---

Node Chosen for Level 12 - [[7,0,1][5,4,3][8,2,6]]

Generated Nodes :

---

[[7,1,0][5,4,3][8,2,6]] -  $f(n) = 12 + 10 = 22$   
[[0,7,1][5,4,3][8,2,6]] -  $f(n) = 12 + 12 = 24$   
[[7,4,1][5,0,3][8,2,6]] - Already visited Node!

---

Node Chosen for Level 12 - [[7,4,1][0,5,3][8,2,6]]

Generated Nodes :

---

$[[0,4,1][7,5,3][8,2,6]] - f(n) = 12 + 10 = 22$   
 $[[7,4,1][5,0,3][8,2,6]] - \text{Already visited Node!}$   
 $[[7,4,1][8,5,3][0,2,6]] - f(n) = 12 + 12 = 24$

---

Node Chosen for Level 14 -  $[[7,1,2][0,5,3][8,4,6]]$

Generated Nodes :

$[[0,1,2][7,5,3][8,4,6]] - f(n) = 14 + 8 = 22$   
 $[[7,1,2][5,0,3][8,4,6]] - \text{Already visited Node!}$   
 $[[7,1,2][8,5,3][0,4,6]] - f(n) = 14 + 10 = 24$

---

Node Chosen for Level 14 -  $[[1,5,2][7,4,0][8,6,3]]$

Generated Nodes :

$[[1,5,0][7,4,2][8,6,3]] - f(n) = 14 + 10 = 24$   
 $[[1,5,2][7,0,4][8,6,3]] - \text{Already visited Node!}$   
 $[[1,5,2][7,4,3][8,6,0]] - f(n) = 14 + 8 = 22$

---

Node Chosen for Level 14 -  $[[1,5,2][7,6,4][8,0,3]]$

Generated Nodes :

$[[1,5,2][7,0,4][8,6,3]] - \text{Already visited Node!}$   
 $[[1,5,2][7,6,4][8,3,0]] - f(n) = 14 + 10 = 24$   
 $[[1,5,2][7,6,4][0,8,3]] - f(n) = 14 + 8 = 22$

---

Node Chosen for Level 14 -  $[[2,0,1][7,4,3][8,5,6]]$

Generated Nodes :

$[[2,1,0][7,4,3][8,5,6]] - f(n) = 14 + 8 = 22$   
 $[[0,2,1][7,4,3][8,5,6]] - f(n) = 14 + 8 = 22$   
 $[[2,4,1][7,0,3][8,5,6]] - \text{Already visited Node!}$

---

Node Chosen for Level 13 -  $[[0,4,1][7,2,3][5,8,6]]$

Generated Nodes :

$[[4,0,1][7,2,3][5,8,6]] - f(n) = 13 + 9 = 22$   
 $[[7,4,1][0,2,3][5,8,6]] - \text{Already visited Node!}$

---

Node Chosen for Level 15 -  $[[2,1,6][7,4,3][5,8,0]]$

Generated Nodes :

$[[2,1,6][7,4,0][5,8,3]] - \text{Already visited Node!}$   
 $[[2,1,6][7,4,3][5,0,8]] - f(n) = 15 + 9 = 24$

---

Node Chosen for Level 15 -  $[[7,2,1][4,0,6][5,8,3]]$

Generated Nodes :

---

$[[7,0,1][4,2,6][5,8,3]] - f(n) = 15 + 9 = 24$   
 $[[7,2,1][4,6,0][5,8,3]] - f(n) = 15 + 9 = 24$   
 $[[7,2,1][0,4,6][5,8,3]] - \text{Already visited Node!}$   
 $[[7,2,1][4,8,6][5,0,3]] - f(n) = 15 + 9 = 24$

---

Node Chosen for Level 15 -  $[[7,2,1][5,4,6][0,8,3]]$

Generated Nodes :

---

$[[7,2,1][0,4,6][5,8,3]] - \text{Already visited Node!}$   
 $[[7,2,1][5,4,6][8,0,3]] - f(n) = 15 + 9 = 24$

---

Node Chosen for Level 15 -  $[[0,1,2][7,4,3][5,8,6]]$

Generated Nodes :

---

$[[1,0,2][7,4,3][5,8,6]] - f(n) = 15 + 7 = 22$   
 $[[7,1,2][0,4,3][5,8,6]] - \text{Already visited Node!}$

---

Node Chosen for Level 15 -  $[[7,1,2][4,0,3][5,8,6]]$

Generated Nodes :

---

$[[7,0,2][4,1,3][5,8,6]] - f(n) = 15 + 9 = 24$   
 $[[7,1,2][4,3,0][5,8,6]] - f(n) = 15 + 9 = 24$   
 $[[7,1,2][0,4,3][5,8,6]] - \text{Already visited Node!}$   
 $[[7,1,2][4,8,3][5,0,6]] - f(n) = 15 + 9 = 24$

---

Node Chosen for Level 15 -  $[[1,2,4][7,5,3][8,6,0]]$

Generated Nodes :

---

$[[1,2,4][7,5,0][8,6,3]] - \text{Already visited Node!}$   
 $[[1,2,4][7,5,3][8,0,6]] - f(n) = 15 + 7 = 22$

---

Node Chosen for Level 15 -  $[[4,1,2][7,0,6][5,8,3]]$

Generated Nodes :

---

$[[4,0,2][7,1,6][5,8,3]] - \text{Already visited Node!}$   
 $[[4,1,2][7,6,0][5,8,3]] - f(n) = 15 + 9 = 24$   
 $[[4,1,2][0,7,6][5,8,3]] - f(n) = 15 + 9 = 24$   
 $[[4,1,2][7,8,6][5,0,3]] - f(n) = 15 + 9 = 24$

---

Node Chosen for Level 15 -  $[[4,2,6][7,1,3][0,5,8]]$

Generated Nodes :

---

$[[4,2,6][0,1,3][7,5,8]] - f(n) = 15 + 7 = 22$   
 $[[4,2,6][7,1,3][5,0,8]] - \text{Already visited Node!}$

---

Node Chosen for Level 16 –  $[[4,0,1][2,5,3][7,8,6]]$

Generated Nodes :

---

$[[4,1,0][2,5,3][7,8,6]] - f(n) = 16 + 6 = 22$   
 $[[0,4,1][2,5,3][7,8,6]] - \text{Already visited Node!}$   
 $[[4,5,1][2,0,3][7,8,6]] - f(n) = 16 + 8 = 24$

---

Node Chosen for Level 16 –  $[[2,0,1][5,4,3][7,8,6]]$

Generated Nodes :

---

$[[2,1,0][5,4,3][7,8,6]] - f(n) = 16 + 6 = 22$   
 $[[0,2,1][5,4,3][7,8,6]] - f(n) = 16 + 6 = 22$   
 $[[2,4,1][5,0,3][7,8,6]] - \text{Already visited Node!}$

---

Node Chosen for Level 7 –  $[[5,4,0][2,7,6][8,3,1]]$

Generated Nodes :

---

$[[5,0,4][2,7,6][8,3,1]] - \text{Already visited Node!}$   
 $[[5,4,6][2,7,0][8,3,1]] - f(n) = 7 + 17 = 24$

---

Node Chosen for Level 7 –  $[[0,5,4][2,7,6][8,3,1]]$

Generated Nodes :

---

$[[5,0,4][2,7,6][8,3,1]] - \text{Already visited Node!}$   
 $[[2,5,4][0,7,6][8,3,1]] - f(n) = 7 + 15 = 22$

---

Node Chosen for Level 7 –  $[[5,7,4][2,3,6][8,1,0]]$

Generated Nodes :

---

$[[5,7,4][2,3,0][8,1,6]] - f(n) = 7 + 17 = 24$   
 $[[5,7,4][2,3,6][8,0,1]] - \text{Already visited Node!}$

---

Node Chosen for Level 7 –  $[[5,7,4][2,3,6][0,8,1]]$

Generated Nodes :

---

$[[5,7,4][0,3,6][2,8,1]] - f(n) = 7 + 17 = 24$   
 $[[5,7,4][2,3,6][8,0,1]] - \text{Already visited Node!}$

---

Node Chosen for Level 10 –  $[[7,4,1][6,2,0][5,8,3]]$

Generated Nodes :

---

$[[7,4,0][6,2,1][5,8,3]] - \text{Already visited Node!}$   
 $[[7,4,1][6,0,2][5,8,3]] - f(n) = 10 + 14 = 24$   
 $[[7,4,1][6,2,3][5,8,0]] - f(n) = 10 + 12 = 22$

---

Node Chosen for Level 11 – [[2,6,0][7,1,4][5,8,3]]

Generated Nodes :

---

[[2,0,6][7,1,4][5,8,3]] –  $f(n) = 11 + 11 = 22$   
[[2,6,4][7,1,0][5,8,3]] – Already visited Node!

---

Node Chosen for Level 11 – [[2,6,4][7,1,3][5,8,0]]

Generated Nodes :

---

[[2,6,4][7,1,0][5,8,3]] – Already visited Node!  
[[2,6,4][7,1,3][5,0,8]] –  $f(n) = 11 + 13 = 24$

---

Node Chosen for Level 11 – [[2,5,0][7,1,4][8,6,3]]

Generated Nodes :

---

[[2,0,5][7,1,4][8,6,3]] –  $f(n) = 11 + 13 = 24$   
[[2,5,4][7,1,0][8,6,3]] – Already visited Node!

---

Node Chosen for Level 11 – [[2,5,4][7,1,3][8,6,0]]

Generated Nodes :

---

[[2,5,4][7,1,0][8,6,3]] – Already visited Node!  
[[2,5,4][7,1,3][8,0,6]] –  $f(n) = 11 + 11 = 22$

---

Node Chosen for Level 11 – [[2,5,4][7,6,1][0,8,3]]

Generated Nodes :

---

[[2,5,4][0,6,1][7,8,3]] –  $f(n) = 11 + 11 = 22$   
[[2,5,4][7,6,1][8,0,3]] – Already visited Node!

---

Node Chosen for Level 11 – [[7,4,0][2,1,6][5,8,3]]

Generated Nodes :

---

[[7,0,4][2,1,6][5,8,3]] –  $f(n) = 11 + 13 = 24$   
[[7,4,6][2,1,0][5,8,3]] – Already visited Node!

---

Node Chosen for Level 11 – [[7,4,6][2,1,3][5,8,0]]

Generated Nodes :

---

[[7,4,6][2,1,0][5,8,3]] – Already visited Node!  
[[7,4,6][2,1,3][5,0,8]] –  $f(n) = 11 + 13 = 24$

---

Node Chosen for Level 12 – [[7,4,3][5,2,0][8,1,6]]

Generated Nodes :

-----  
[[7,4,0][5,2,3][8,1,6]] - Already visited Node!  
[[7,4,3][5,0,2][8,1,6]] -  $f(n) = 12 + 12 = 24$   
[[7,4,3][5,2,6][8,1,0]] -  $f(n) = 12 + 10 = 22$   
-----

Node Chosen for Level 11 - [[7,6,1][5,4,3][8,2,0]]

Generated Nodes :

-----  
[[7,6,1][5,4,0][8,2,3]] - Already visited Node!  
[[7,6,1][5,4,3][8,0,2]] -  $f(n) = 11 + 13 = 24$   
-----

Node Chosen for Level 14 - [[2,4,3][7,1,0][5,8,6]]

Generated Nodes :

-----  
[[2,4,0][7,1,3][5,8,6]] - Already visited Node!  
[[2,4,3][7,0,1][5,8,6]] -  $f(n) = 14 + 10 = 24$   
[[2,4,3][7,1,6][5,8,0]] -  $f(n) = 14 + 8 = 22$   
-----

Node Chosen for Level 14 - [[7,4,3][1,2,0][5,8,6]]

Generated Nodes :

-----  
[[7,4,0][1,2,3][5,8,6]] - Already visited Node!  
[[7,4,3][1,0,2][5,8,6]] -  $f(n) = 14 + 10 = 24$   
[[7,4,3][1,2,6][5,8,0]] -  $f(n) = 14 + 8 = 22$   
-----

Node Chosen for Level 10 - [[7,0,6][5,4,3][8,1,2]]

Generated Nodes :

-----  
[[7,6,0][5,4,3][8,1,2]] -  $f(n) = 10 + 14 = 24$   
[[0,7,6][5,4,3][8,1,2]] -  $f(n) = 10 + 14 = 24$   
[[7,4,6][5,0,3][8,1,2]] - Already visited Node!  
-----

Node Chosen for Level 10 - [[7,4,6][0,5,3][8,1,2]]

Generated Nodes :

-----  
[[0,4,6][7,5,3][8,1,2]] -  $f(n) = 10 + 12 = 22$   
[[7,4,6][5,0,3][8,1,2]] - Already visited Node!  
[[7,4,6][8,5,3][0,1,2]] -  $f(n) = 10 + 14 = 24$   
-----

Node Chosen for Level 10 - [[4,0,6][7,3,2][5,8,1]]

Generated Nodes :

-----  
[[4,6,0][7,3,2][5,8,1]] -  $f(n) = 10 + 14 = 24$   
[[0,4,6][7,3,2][5,8,1]] - Already visited Node!  
[[4,3,6][7,0,2][5,8,1]] -  $f(n) = 10 + 12 = 22$   
-----

---

Node Chosen for Level 10 – [[7,0,2][5,6,3][8,1,4]]

Generated Nodes :

---

[[7,2,0][5,6,3][8,1,4]] –  $f(n) = 10 + 12 = 22$   
[[0,7,2][5,6,3][8,1,4]] –  $f(n) = 10 + 14 = 24$   
[[7,6,2][5,0,3][8,1,4]] – Already visited Node!

---

Node Chosen for Level 10 – [[7,6,2][0,5,3][8,1,4]]

Generated Nodes :

---

[[0,6,2][7,5,3][8,1,4]] –  $f(n) = 10 + 12 = 22$   
[[7,6,2][5,0,3][8,1,4]] – Already visited Node!  
[[7,6,2][8,5,3][0,1,4]] –  $f(n) = 10 + 14 = 24$

---

Node Chosen for Level 10 – [[7,6,2][5,1,3][8,0,4]]

Generated Nodes :

---

[[7,6,2][5,0,3][8,1,4]] – Already visited Node!  
[[7,6,2][5,1,3][8,4,0]] –  $f(n) = 10 + 12 = 22$   
[[7,6,2][5,1,3][0,8,4]] –  $f(n) = 10 + 12 = 22$

---

Node Chosen for Level 11 – [[0,4,1][7,5,2][8,6,3]]

Generated Nodes :

---

[[4,0,1][7,5,2][8,6,3]] –  $f(n) = 11 + 11 = 22$   
[[7,4,1][0,5,2][8,6,3]] – Already visited Node!

---

Node Chosen for Level 11 – [[7,4,1][5,6,2][0,8,3]]

Generated Nodes :

---

[[7,4,1][0,6,2][5,8,3]] –  $f(n) = 11 + 13 = 24$   
[[7,4,1][5,6,2][8,0,3]] – Already visited Node!

---

Node Chosen for Level 12 – [[7,1,2][6,4,0][5,8,3]]

Generated Nodes :

---

[[7,1,0][6,4,2][5,8,3]] –  $f(n) = 12 + 12 = 24$   
[[7,1,2][6,0,4][5,8,3]] – Already visited Node!  
[[7,1,2][6,4,3][5,8,0]] –  $f(n) = 12 + 10 = 22$

---

Node Chosen for Level 12 – [[7,1,4][0,5,6][8,2,3]]

Generated Nodes :

---

[[0,1,4][7,5,6][8,2,3]] –  $f(n) = 12 + 10 = 22$



[[7,1,4][5,0,6][8,2,3]] - Already visited Node!  
[[7,1,4][8,5,6][0,2,3]] -  $f(n) = 12 + 12 = 24$

---

Node Chosen for Level 12 - [[7,1,4][5,2,6][8,0,3]]

Generated Nodes :

---

[[7,1,4][5,0,6][8,2,3]] - Already visited Node!  
[[7,1,4][5,2,6][8,3,0]] -  $f(n) = 12 + 12 = 24$   
[[7,1,4][5,2,6][0,8,3]] -  $f(n) = 12 + 10 = 22$

---

Node Chosen for Level 13 - [[2,1,0][7,4,5][8,6,3]]

Generated Nodes :

---

[[2,0,1][7,4,5][8,6,3]] - Already visited Node!  
[[2,1,5][7,4,0][8,6,3]] -  $f(n) = 13 + 11 = 24$

---

Node Chosen for Level 13 - [[0,2,1][7,4,5][8,6,3]]

Generated Nodes :

---

[[2,0,1][7,4,5][8,6,3]] - Already visited Node!  
[[7,2,1][0,4,5][8,6,3]] -  $f(n) = 13 + 11 = 24$

---

Node Chosen for Level 13 - [[2,4,1][7,6,5][0,8,3]]

Generated Nodes :

---

[[2,4,1][0,6,5][7,8,3]] -  $f(n) = 13 + 9 = 22$   
[[2,4,1][7,6,5][8,0,3]] - Already visited Node!

---

Node Chosen for Level 13 - [[4,6,1][7,2,3][5,8,0]]

Generated Nodes :

---

[[4,6,1][7,2,0][5,8,3]] - Already visited Node!  
[[4,6,1][7,2,3][5,0,8]] -  $f(n) = 13 + 11 = 24$

---

Node Chosen for Level 14 - [[2,4,3][7,5,0][8,1,6]]

Generated Nodes :

---

[[2,4,0][7,5,3][8,1,6]] - Already visited Node!  
[[2,4,3][7,0,5][8,1,6]] -  $f(n) = 14 + 10 = 24$   
[[2,4,3][7,5,6][8,1,0]] -  $f(n) = 14 + 8 = 22$

---

Node Chosen for Level 11 - [[4,6,2][7,5,1][8,3,0]]

Generated Nodes :

---

[[4,6,2][7,5,0][8,3,1]] - Already visited Node!

$[[4,6,2][7,5,1][8,0,3]] - f(n) = 11 + 11 = 22$

---

Node Chosen for Level 11 -  $[[4,5,0][7,2,6][8,3,1]]$

Generated Nodes :

---

$[[4,0,5][7,2,6][8,3,1]] - f(n) = 11 + 13 = 24$   
 $[[4,5,6][7,2,0][8,3,1]] - \text{Already visited Node!}$

---

Node Chosen for Level 11 -  $[[4,5,6][7,2,1][8,3,0]]$

Generated Nodes :

---

$[[4,5,6][7,2,0][8,3,1]] - \text{Already visited Node!}$   
 $[[4,5,6][7,2,1][8,0,3]] - \text{Already visited Node!}$

---

Node Chosen for Level 11 -  $[[4,5,6][7,3,2][8,1,0]]$

Generated Nodes :

---

$[[4,5,6][7,3,0][8,1,2]] - f(n) = 11 + 13 = 24$   
 $[[4,5,6][7,3,2][8,0,1]] - \text{Already visited Node!}$

---

Node Chosen for Level 11 -  $[[4,5,6][7,3,2][0,8,1]]$

Generated Nodes :

---

$[[4,5,6][0,3,2][7,8,1]] - f(n) = 11 + 11 = 22$   
 $[[4,5,6][7,3,2][8,0,1]] - \text{Already visited Node!}$

---

Node Chosen for Level 11 -  $[[7,2,0][5,6,1][8,4,3]]$

Generated Nodes :

---

$[[7,0,2][5,6,1][8,4,3]] - \text{Already visited Node!}$   
 $[[7,2,1][5,6,0][8,4,3]] - f(n) = 11 + 11 = 22$

---

Node Chosen for Level 11 -  $[[7,6,2][5,1,3][8,4,0]]$

Generated Nodes :

---

$[[7,6,2][5,1,0][8,4,3]] - \text{Already visited Node!}$   
 $[[7,6,2][5,1,3][8,0,4]] - \text{Already visited Node!}$

---

Node Chosen for Level 11 -  $[[0,6,2][7,5,1][8,4,3]]$

Generated Nodes :

---

$[[6,0,2][7,5,1][8,4,3]] - f(n) = 11 + 13 = 24$   
 $[[7,6,2][0,5,1][8,4,3]] - \text{Already visited Node!}$

---

Node Chosen for Level 14 -  $[[2,4,1][0,8,6][7,5,3]]$

Generated Nodes :

---

$[[0,4,1][2,8,6][7,5,3]] - f(n) = 14 + 10 = 24$   
 $[[2,4,1][8,0,6][7,5,3]] - f(n) = 14 + 10 = 24$   
 $[[2,4,1][7,8,6][0,5,3]] - \text{Already visited Node!}$

---

Node Chosen for Level 14 -  $[[2,4,1][0,6,3][7,5,8]]$

Generated Nodes :

---

$[[0,4,1][2,6,3][7,5,8]] - f(n) = 14 + 10 = 24$   
 $[[2,4,1][6,0,3][7,5,8]] - f(n) = 14 + 10 = 24$   
 $[[2,4,1][7,6,3][0,5,8]] - \text{Already visited Node!}$

---

Node Chosen for Level 13 -  $[[4,6,1][7,5,3][8,2,0]]$

Generated Nodes :

---

$[[4,6,1][7,5,0][8,2,3]] - \text{Already visited Node!}$   
 $[[4,6,1][7,5,3][8,0,2]] - f(n) = 13 + 11 = 24$

---

Node Chosen for Level 13 -  $[[4,5,0][7,1,6][8,2,3]]$

Generated Nodes :

---

$[[4,0,5][7,1,6][8,2,3]] - f(n) = 13 + 11 = 24$   
 $[[4,5,6][7,1,0][8,2,3]] - \text{Already visited Node!}$

---

Node Chosen for Level 13 -  $[[4,5,6][7,1,3][8,2,0]]$

Generated Nodes :

---

$[[4,5,6][7,1,0][8,2,3]] - \text{Already visited Node!}$   
 $[[4,5,6][7,1,3][8,0,2]] - f(n) = 13 + 11 = 24$

---

Node Chosen for Level 13 -  $[[4,5,6][7,2,1][0,8,3]]$

Generated Nodes :

---

$[[4,5,6][0,2,1][7,8,3]] - f(n) = 13 + 9 = 22$   
 $[[4,5,6][7,2,1][8,0,3]] - \text{Already visited Node!}$

---

Node Chosen for Level 14 -  $[[1,0,2][7,6,4][5,8,3]]$

Generated Nodes :

---

$[[1,2,0][7,6,4][5,8,3]] - f(n) = 14 + 8 = 22$   
 $[[0,1,2][7,6,4][5,8,3]] - \text{Already visited Node!}$   
 $[[1,6,2][7,0,4][5,8,3]] - f(n) = 14 + 10 = 24$

---

Node Chosen for Level 14 -  $[[4,2,6][0,8,1][7,5,3]]$

Generated Nodes :

---

$[[0,2,6][4,8,1][7,5,3]] - f(n) = 14 + 8 = 22$   
 $[[4,2,6][8,0,1][7,5,3]] - f(n) = 14 + 10 = 24$   
 $[[4,2,6][7,8,1][0,5,3]] - \text{Already visited Node!}$

---

Node Chosen for Level 12 -  $[[7,0,2][4,6,1][5,8,3]]$

Generated Nodes :

---

$[[7,2,0][4,6,1][5,8,3]] - f(n) = 12 + 10 = 22$   
 $[[0,7,2][4,6,1][5,8,3]] - f(n) = 12 + 12 = 24$   
 $[[7,6,2][4,0,1][5,8,3]] - \text{Already visited Node!}$

---

Node Chosen for Level 12 -  $[[7,6,2][4,1,0][5,8,3]]$

Generated Nodes :

---

$[[7,6,0][4,1,2][5,8,3]] - f(n) = 12 + 12 = 24$   
 $[[7,6,2][4,0,1][5,8,3]] - \text{Already visited Node!}$   
 $[[7,6,2][4,1,3][5,8,0]] - f(n) = 12 + 10 = 22$

---

Node Chosen for Level 13 -  $[[7,1,0][5,4,3][8,2,6]]$

Generated Nodes :

---

$[[7,0,1][5,4,3][8,2,6]] - \text{Already visited Node!}$   
 $[[7,1,3][5,4,0][8,2,6]] - f(n) = 13 + 9 = 22$

---

Node Chosen for Level 13 -  $[[0,4,1][7,5,3][8,2,6]]$

Generated Nodes :

---

$[[4,0,1][7,5,3][8,2,6]] - f(n) = 13 + 9 = 22$   
 $[[7,4,1][0,5,3][8,2,6]] - \text{Already visited Node!}$

---

Node Chosen for Level 15 -  $[[0,1,2][7,5,3][8,4,6]]$

Generated Nodes :

---

$[[1,0,2][7,5,3][8,4,6]] - f(n) = 15 + 7 = 22$   
 $[[7,1,2][0,5,3][8,4,6]] - \text{Already visited Node!}$

---

Node Chosen for Level 15 -  $[[1,5,2][7,4,3][8,6,0]]$

Generated Nodes :

---

$[[1,5,2][7,4,0][8,6,3]] - \text{Already visited Node!}$   
 $[[1,5,2][7,4,3][8,0,6]] - f(n) = 15 + 7 = 22$

---

Node Chosen for Level 15 -  $[[1,5,2][7,6,4][0,8,3]]$

Generated Nodes :

-----  
[[1,5,2][0,6,4][7,8,3]] -  $f(n) = 15 + 7 = 22$   
[[1,5,2][7,6,4][8,0,3]] - Already visited Node!  
-----

Node Chosen for Level 15 - [[2,1,0][7,4,3][8,5,6]]

Generated Nodes :

-----  
[[2,0,1][7,4,3][8,5,6]] - Already visited Node!  
[[2,1,3][7,4,0][8,5,6]] -  $f(n) = 15 + 7 = 22$   
-----

Node Chosen for Level 15 - [[0,2,1][7,4,3][8,5,6]]

Generated Nodes :

-----  
[[2,0,1][7,4,3][8,5,6]] - Already visited Node!  
[[7,2,1][0,4,3][8,5,6]] -  $f(n) = 15 + 9 = 24$   
-----

Node Chosen for Level 14 - [[4,0,1][7,2,3][5,8,6]]

Generated Nodes :

-----  
[[4,1,0][7,2,3][5,8,6]] -  $f(n) = 14 + 8 = 22$   
[[0,4,1][7,2,3][5,8,6]] - Already visited Node!  
[[4,2,1][7,0,3][5,8,6]] -  $f(n) = 14 + 8 = 22$   
-----

Node Chosen for Level 16 - [[1,0,2][7,4,3][5,8,6]]

Generated Nodes :

-----  
[[1,2,0][7,4,3][5,8,6]] -  $f(n) = 16 + 6 = 22$   
[[0,1,2][7,4,3][5,8,6]] - Already visited Node!  
[[1,4,2][7,0,3][5,8,6]] -  $f(n) = 16 + 8 = 24$   
-----

Node Chosen for Level 16 - [[1,2,4][7,5,3][8,0,6]]

Generated Nodes :

-----  
[[1,2,4][7,0,3][8,5,6]] -  $f(n) = 16 + 8 = 24$   
[[1,2,4][7,5,3][8,6,0]] - Already visited Node!  
[[1,2,4][7,5,3][0,8,6]] -  $f(n) = 16 + 6 = 22$   
-----

Node Chosen for Level 16 - [[4,2,6][0,1,3][7,5,8]]

Generated Nodes :

-----  
[[0,2,6][4,1,3][7,5,8]] -  $f(n) = 16 + 6 = 22$   
[[4,2,6][1,0,3][7,5,8]] -  $f(n) = 16 + 6 = 22$   
[[4,2,6][7,1,3][0,5,8]] - Already visited Node!  
-----

Node Chosen for Level 17 -  $[[4,1,0][2,5,3][7,8,6]]$

Generated Nodes :

-----  
 $[[4,0,1][2,5,3][7,8,6]]$  - Already visited Node!  
 $[[4,1,3][2,5,0][7,8,6]]$  -  $f(n) = 17 + 5 = 22$   
-----

Node Chosen for Level 17 -  $[[2,1,0][5,4,3][7,8,6]]$

Generated Nodes :

-----  
 $[[2,0,1][5,4,3][7,8,6]]$  - Already visited Node!  
 $[[2,1,3][5,4,0][7,8,6]]$  -  $f(n) = 17 + 5 = 22$   
-----

Node Chosen for Level 17 -  $[[0,2,1][5,4,3][7,8,6]]$

Generated Nodes :

-----  
 $[[2,0,1][5,4,3][7,8,6]]$  - Already visited Node!  
 $[[5,2,1][0,4,3][7,8,6]]$  -  $f(n) = 17 + 7 = 24$   
-----

Node Chosen for Level 8 -  $[[2,5,4][0,7,6][8,3,1]]$

Generated Nodes :

-----  
 $[[0,5,4][2,7,6][8,3,1]]$  - Already visited Node!  
 $[[2,5,4][7,0,6][8,3,1]]$  -  $f(n) = 8 + 14 = 22$   
 $[[2,5,4][8,7,6][0,3,1]]$  -  $f(n) = 8 + 16 = 24$   
-----

Node Chosen for Level 11 -  $[[7,4,1][6,2,3][5,8,0]]$

Generated Nodes :

-----  
 $[[7,4,1][6,2,0][5,8,3]]$  - Already visited Node!  
 $[[7,4,1][6,2,3][5,0,8]]$  -  $f(n) = 11 + 13 = 24$   
-----

Node Chosen for Level 12 -  $[[2,0,6][7,1,4][5,8,3]]$

Generated Nodes :

-----  
 $[[2,6,0][7,1,4][5,8,3]]$  - Already visited Node!  
 $[[0,2,6][7,1,4][5,8,3]]$  -  $f(n) = 12 + 10 = 22$   
 $[[2,1,6][7,0,4][5,8,3]]$  -  $f(n) = 12 + 10 = 22$   
-----

Node Chosen for Level 12 -  $[[2,5,4][7,1,3][8,0,6]]$

Generated Nodes :

-----  
 $[[2,5,4][7,0,3][8,1,6]]$  -  $f(n) = 12 + 12 = 24$   
 $[[2,5,4][7,1,3][8,6,0]]$  - Already visited Node!  
 $[[2,5,4][7,1,3][0,8,6]]$  -  $f(n) = 12 + 10 = 22$   
-----

Node Chosen for Level 12 – [[2,5,4][0,6,1][7,8,3]]

Generated Nodes :

-----  
[[0,5,4][2,6,1][7,8,3]] –  $f(n) = 12 + 12 = 24$   
[[2,5,4][6,0,1][7,8,3]] –  $f(n) = 12 + 12 = 24$   
[[2,5,4][7,6,1][0,8,3]] – Already visited Node!

-----  
Node Chosen for Level 13 – [[7,4,3][5,2,6][8,1,0]]

Generated Nodes :

-----  
[[7,4,3][5,2,0][8,1,6]] – Already visited Node!  
[[7,4,3][5,2,6][8,0,1]] –  $f(n) = 13 + 11 = 24$

-----  
Node Chosen for Level 15 – [[2,4,3][7,1,6][5,8,0]]

Generated Nodes :

-----  
[[2,4,3][7,1,0][5,8,6]] – Already visited Node!  
[[2,4,3][7,1,6][5,0,8]] –  $f(n) = 15 + 9 = 24$

-----  
Node Chosen for Level 15 – [[7,4,3][1,2,6][5,8,0]]

Generated Nodes :

-----  
[[7,4,3][1,2,0][5,8,6]] – Already visited Node!  
[[7,4,3][1,2,6][5,0,8]] –  $f(n) = 15 + 9 = 24$

-----  
Node Chosen for Level 11 – [[0,4,6][7,5,3][8,1,2]]

Generated Nodes :

-----  
[[4,0,6][7,5,3][8,1,2]] –  $f(n) = 11 + 11 = 22$   
[[7,4,6][0,5,3][8,1,2]] – Already visited Node!

-----  
Node Chosen for Level 11 – [[4,3,6][7,0,2][5,8,1]]

Generated Nodes :

-----  
[[4,0,6][7,3,2][5,8,1]] – Already visited Node!  
[[4,3,6][7,2,0][5,8,1]] –  $f(n) = 11 + 11 = 22$   
[[4,3,6][0,7,2][5,8,1]] –  $f(n) = 11 + 13 = 24$   
[[4,3,6][7,8,2][5,0,1]] –  $f(n) = 11 + 13 = 24$

-----  
Node Chosen for Level 11 – [[7,2,0][5,6,3][8,1,4]]

Generated Nodes :

-----  
[[7,0,2][5,6,3][8,1,4]] – Already visited Node!  
[[7,2,3][5,6,0][8,1,4]] –  $f(n) = 11 + 11 = 22$   
-----

Node Chosen for Level 11 – [[0,6,2][7,5,3][8,1,4]]

Generated Nodes :

-----  
[[6,0,2][7,5,3][8,1,4]] –  $f(n) = 11 + 13 = 24$   
[[7,6,2][0,5,3][8,1,4]] – Already visited Node!  
-----

Node Chosen for Level 11 – [[7,6,2][5,1,3][8,4,0]]

Generated Nodes :

-----  
[[7,6,2][5,1,0][8,4,3]] – Already visited Node!  
[[7,6,2][5,1,3][8,0,4]] – Already visited Node!  
-----

Node Chosen for Level 11 – [[7,6,2][5,1,3][0,8,4]]

Generated Nodes :

-----  
[[7,6,2][0,1,3][5,8,4]] –  $f(n) = 11 + 13 = 24$   
[[7,6,2][5,1,3][8,0,4]] – Already visited Node!  
-----

Node Chosen for Level 12 – [[4,0,1][7,5,2][8,6,3]]

Generated Nodes :

-----  
[[4,1,0][7,5,2][8,6,3]] –  $f(n) = 12 + 10 = 22$   
[[0,4,1][7,5,2][8,6,3]] – Already visited Node!  
[[4,5,1][7,0,2][8,6,3]] –  $f(n) = 12 + 12 = 24$   
-----

Node Chosen for Level 13 – [[7,1,2][6,4,3][5,8,0]]

Generated Nodes :

-----  
[[7,1,2][6,4,0][5,8,3]] – Already visited Node!  
[[7,1,2][6,4,3][5,0,8]] –  $f(n) = 13 + 11 = 24$   
-----

Node Chosen for Level 13 – [[0,1,4][7,5,6][8,2,3]]

Generated Nodes :

-----  
[[1,0,4][7,5,6][8,2,3]] –  $f(n) = 13 + 9 = 22$   
[[7,1,4][0,5,6][8,2,3]] – Already visited Node!  
-----

Node Chosen for Level 13 – [[7,1,4][5,2,6][0,8,3]]

Generated Nodes :

-----  
[[7,1,4][0,2,6][5,8,3]] –  $f(n) = 13 + 11 = 24$   
[[7,1,4][5,2,6][8,0,3]] – Already visited Node!  
-----

Node Chosen for Level 14 – [[2,4,1][0,6,5][7,8,3]]



Generated Nodes :

---

$[[0,4,1][2,6,5][7,8,3]] - f(n) = 14 + 10 = 24$   
 $[[2,4,1][6,0,5][7,8,3]] - f(n) = 14 + 10 = 24$   
 $[[2,4,1][7,6,5][0,8,3]] - \text{Already visited Node!}$

---

Node Chosen for Level 15 -  $[[2,4,3][7,5,6][8,1,0]]$

Generated Nodes :

---

$[[2,4,3][7,5,0][8,1,6]] - \text{Already visited Node!}$   
 $[[2,4,3][7,5,6][8,0,1]] - f(n) = 15 + 9 = 24$

---

Node Chosen for Level 12 -  $[[4,6,2][7,5,1][8,0,3]]$

Generated Nodes :

---

$[[4,6,2][7,0,1][8,5,3]] - f(n) = 12 + 12 = 24$   
 $[[4,6,2][7,5,1][8,3,0]] - \text{Already visited Node!}$   
 $[[4,6,2][7,5,1][0,8,3]] - f(n) = 12 + 10 = 22$

---

Node Chosen for Level 12 -  $[[4,5,6][0,3,2][7,8,1]]$

Generated Nodes :

---

$[[0,5,6][4,3,2][7,8,1]] - f(n) = 12 + 10 = 22$   
 $[[4,5,6][3,0,2][7,8,1]] - f(n) = 12 + 12 = 24$   
 $[[4,5,6][7,3,2][0,8,1]] - \text{Already visited Node!}$

---

Node Chosen for Level 12 -  $[[7,2,1][5,6,0][8,4,3]]$

Generated Nodes :

---

$[[7,2,0][5,6,1][8,4,3]] - \text{Already visited Node!}$   
 $[[7,2,1][5,0,6][8,4,3]] - f(n) = 12 + 10 = 22$   
 $[[7,2,1][5,6,3][8,4,0]] - f(n) = 12 + 10 = 22$

---

Node Chosen for Level 14 -  $[[4,5,6][0,2,1][7,8,3]]$

Generated Nodes :

---

$[[0,5,6][4,2,1][7,8,3]] - f(n) = 14 + 8 = 22$   
 $[[4,5,6][2,0,1][7,8,3]] - f(n) = 14 + 10 = 24$   
 $[[4,5,6][7,2,1][0,8,3]] - \text{Already visited Node!}$

---

Node Chosen for Level 15 -  $[[1,2,0][7,6,4][5,8,3]]$

Generated Nodes :

---

$[[1,0,2][7,6,4][5,8,3]] - \text{Already visited Node!}$   
 $[[1,2,4][7,6,0][5,8,3]] - f(n) = 15 + 9 = 24$

---

Node Chosen for Level 15 -  $[[0,2,6][4,8,1][7,5,3]]$

Generated Nodes :

-----  
 $[[2,0,6][4,8,1][7,5,3]] - f(n) = 15 + 9 = 24$   
 $[[4,2,6][0,8,1][7,5,3]] - \text{Already visited Node!}$   
-----

Node Chosen for Level 13 -  $[[7,2,0][4,6,1][5,8,3]]$

Generated Nodes :

-----  
 $[[7,0,2][4,6,1][5,8,3]] - \text{Already visited Node!}$   
 $[[7,2,1][4,6,0][5,8,3]] - f(n) = 13 + 9 = 22$   
-----

Node Chosen for Level 13 -  $[[7,6,2][4,1,3][5,8,0]]$

Generated Nodes :

-----  
 $[[7,6,2][4,1,0][5,8,3]] - \text{Already visited Node!}$   
 $[[7,6,2][4,1,3][5,0,8]] - f(n) = 13 + 11 = 24$   
-----

Node Chosen for Level 14 -  $[[7,1,3][5,4,0][8,2,6]]$

Generated Nodes :

-----  
 $[[7,1,0][5,4,3][8,2,6]] - \text{Already visited Node!}$   
 $[[7,1,3][5,0,4][8,2,6]] - f(n) = 14 + 10 = 24$   
 $[[7,1,3][5,4,6][8,2,0]] - f(n) = 14 + 8 = 22$   
-----

Node Chosen for Level 14 -  $[[4,0,1][7,5,3][8,2,6]]$

Generated Nodes :

-----  
 $[[4,1,0][7,5,3][8,2,6]] - f(n) = 14 + 8 = 22$   
 $[[0,4,1][7,5,3][8,2,6]] - \text{Already visited Node!}$   
 $[[4,5,1][7,0,3][8,2,6]] - f(n) = 14 + 10 = 24$   
-----

Node Chosen for Level 16 -  $[[1,0,2][7,5,3][8,4,6]]$

Generated Nodes :

-----  
 $[[1,2,0][7,5,3][8,4,6]] - f(n) = 16 + 6 = 22$   
 $[[0,1,2][7,5,3][8,4,6]] - \text{Already visited Node!}$   
 $[[1,5,2][7,0,3][8,4,6]] - f(n) = 16 + 8 = 24$   
-----

Node Chosen for Level 16 -  $[[1,5,2][7,4,3][8,0,6]]$

Generated Nodes :

-----  
 $[[1,5,2][7,0,3][8,4,6]] - f(n) = 16 + 8 = 24$   
 $[[1,5,2][7,4,3][8,6,0]] - \text{Already visited Node!}$   
 $[[1,5,2][7,4,3][0,8,6]] - f(n) = 16 + 6 = 22$   
-----

---

Node Chosen for Level 16 – [[1,5,2][0,6,4][7,8,3]]

Generated Nodes :

---

[[0,5,2][1,6,4][7,8,3]] –  $f(n) = 16 + 8 = 24$   
[[1,5,2][6,0,4][7,8,3]] –  $f(n) = 16 + 8 = 24$   
[[1,5,2][7,6,4][0,8,3]] – Already visited Node!

---

Node Chosen for Level 16 – [[2,1,3][7,4,0][8,5,6]]

Generated Nodes :

---

[[2,1,0][7,4,3][8,5,6]] – Already visited Node!  
[[2,1,3][7,0,4][8,5,6]] –  $f(n) = 16 + 8 = 24$   
[[2,1,3][7,4,6][8,5,0]] –  $f(n) = 16 + 6 = 22$

---

Node Chosen for Level 15 – [[4,1,0][7,2,3][5,8,6]]

Generated Nodes :

---

[[4,0,1][7,2,3][5,8,6]] – Already visited Node!  
[[4,1,3][7,2,0][5,8,6]] –  $f(n) = 15 + 7 = 22$

---

Node Chosen for Level 15 – [[4,2,1][7,0,3][5,8,6]]

Generated Nodes :

---

[[4,0,1][7,2,3][5,8,6]] – Already visited Node!  
[[4,2,1][7,3,0][5,8,6]] –  $f(n) = 15 + 9 = 24$   
[[4,2,1][0,7,3][5,8,6]] –  $f(n) = 15 + 9 = 24$   
[[4,2,1][7,8,3][5,0,6]] –  $f(n) = 15 + 9 = 24$

---

Node Chosen for Level 17 – [[1,2,0][7,4,3][5,8,6]]

Generated Nodes :

---

[[1,0,2][7,4,3][5,8,6]] – Already visited Node!  
[[1,2,3][7,4,0][5,8,6]] –  $f(n) = 17 + 5 = 22$

---

Node Chosen for Level 17 – [[1,2,4][7,5,3][0,8,6]]

Generated Nodes :

---

[[1,2,4][0,5,3][7,8,6]] –  $f(n) = 17 + 5 = 22$   
[[1,2,4][7,5,3][8,0,6]] – Already visited Node!

---

Node Chosen for Level 17 – [[0,2,6][4,1,3][7,5,8]]

Generated Nodes :

---

[[2,0,6][4,1,3][7,5,8]] –  $f(n) = 17 + 7 = 24$

[[4,2,6][0,1,3][7,5,8]] - Already visited Node!

---

Node Chosen for Level 17 - [[4,2,6][1,0,3][7,5,8]]

Generated Nodes :

---

[[4,0,6][1,2,3][7,5,8]] -  $f(n) = 17 + 7 = 24$   
[[4,2,6][1,3,0][7,5,8]] -  $f(n) = 17 + 7 = 24$   
[[4,2,6][0,1,3][7,5,8]] - Already visited Node!  
[[4,2,6][1,5,3][7,0,8]] -  $f(n) = 17 + 5 = 22$

---

Node Chosen for Level 18 - [[4,1,3][2,5,0][7,8,6]]

Generated Nodes :

---

[[4,1,0][2,5,3][7,8,6]] - Already visited Node!  
[[4,1,3][2,0,5][7,8,6]] -  $f(n) = 18 + 6 = 24$   
[[4,1,3][2,5,6][7,8,0]] -  $f(n) = 18 + 4 = 22$

---

Node Chosen for Level 18 - [[2,1,3][5,4,0][7,8,6]]

Generated Nodes :

---

[[2,1,0][5,4,3][7,8,6]] - Already visited Node!  
[[2,1,3][5,0,4][7,8,6]] -  $f(n) = 18 + 6 = 24$   
[[2,1,3][5,4,6][7,8,0]] -  $f(n) = 18 + 4 = 22$

---

Node Chosen for Level 9 - [[2,5,4][7,0,6][8,3,1]]

Generated Nodes :

---

[[2,0,4][7,5,6][8,3,1]] -  $f(n) = 9 + 13 = 22$   
[[2,5,4][7,6,0][8,3,1]] -  $f(n) = 9 + 15 = 24$   
[[2,5,4][0,7,6][8,3,1]] - Already visited Node!  
[[2,5,4][7,3,6][8,0,1]] -  $f(n) = 9 + 13 = 22$

---

Node Chosen for Level 13 - [[0,2,6][7,1,4][5,8,3]]

Generated Nodes :

---

[[2,0,6][7,1,4][5,8,3]] - Already visited Node!  
[[7,2,6][0,1,4][5,8,3]] -  $f(n) = 13 + 11 = 24$

---

Node Chosen for Level 13 - [[2,1,6][7,0,4][5,8,3]]

Generated Nodes :

---

[[2,0,6][7,1,4][5,8,3]] - Already visited Node!  
[[2,1,6][7,4,0][5,8,3]] - Already visited Node!  
[[2,1,6][0,7,4][5,8,3]] -  $f(n) = 13 + 11 = 24$   
[[2,1,6][7,8,4][5,0,3]] -  $f(n) = 13 + 11 = 24$

---

Node Chosen for Level 13 – [[2,5,4][7,1,3][0,8,6]]

Generated Nodes :

-----  
[[2,5,4][0,1,3][7,8,6]] –  $f(n) = 13 + 9 = 22$   
[[2,5,4][7,1,3][8,0,6]] – Already visited Node!  
-----

Node Chosen for Level 12 – [[4,0,6][7,5,3][8,1,2]]

Generated Nodes :

-----  
[[4,6,0][7,5,3][8,1,2]] –  $f(n) = 12 + 12 = 24$   
[[0,4,6][7,5,3][8,1,2]] – Already visited Node!  
[[4,5,6][7,0,3][8,1,2]] –  $f(n) = 12 + 12 = 24$   
-----

Node Chosen for Level 12 – [[4,3,6][7,2,0][5,8,1]]

Generated Nodes :

-----  
[[4,3,0][7,2,6][5,8,1]] –  $f(n) = 12 + 10 = 22$   
[[4,3,6][7,0,2][5,8,1]] – Already visited Node!  
[[4,3,6][7,2,1][5,8,0]] –  $f(n) = 12 + 10 = 22$   
-----

Node Chosen for Level 12 – [[7,2,3][5,6,0][8,1,4]]

Generated Nodes :

-----  
[[7,2,0][5,6,3][8,1,4]] – Already visited Node!  
[[7,2,3][5,0,6][8,1,4]] –  $f(n) = 12 + 10 = 22$   
[[7,2,3][5,6,4][8,1,0]] –  $f(n) = 12 + 10 = 22$   
-----

Node Chosen for Level 13 – [[4,1,0][7,5,2][8,6,3]]

Generated Nodes :

-----  
[[4,0,1][7,5,2][8,6,3]] – Already visited Node!  
[[4,1,2][7,5,0][8,6,3]] –  $f(n) = 13 + 9 = 22$   
-----

Node Chosen for Level 14 – [[1,0,4][7,5,6][8,2,3]]

Generated Nodes :

-----  
[[1,4,0][7,5,6][8,2,3]] –  $f(n) = 14 + 8 = 22$   
[[0,1,4][7,5,6][8,2,3]] – Already visited Node!  
[[1,5,4][7,0,6][8,2,3]] –  $f(n) = 14 + 10 = 24$   
-----

Node Chosen for Level 13 – [[4,6,2][7,5,1][0,8,3]]

Generated Nodes :

-----  
[[4,6,2][0,5,1][7,8,3]] –  $f(n) = 13 + 9 = 22$   
[[4,6,2][7,5,1][8,0,3]] – Already visited Node!  
-----

---

Node Chosen for Level 13 -  $[[0,5,6][4,3,2][7,8,1]]$

Generated Nodes :

---

$[[5,0,6][4,3,2][7,8,1]] - f(n) = 13 + 11 = 24$   
 $[[4,5,6][0,3,2][7,8,1]] - \text{Already visited Node!}$

---

Node Chosen for Level 13 -  $[[7,2,1][5,0,6][8,4,3]]$

Generated Nodes :

---

$[[7,0,1][5,2,6][8,4,3]] - f(n) = 13 + 11 = 24$   
 $[[7,2,1][5,6,0][8,4,3]] - \text{Already visited Node!}$   
 $[[7,2,1][0,5,6][8,4,3]] - f(n) = 13 + 9 = 22$   
 $[[7,2,1][5,4,6][8,0,3]] - f(n) = 13 + 9 = 22$

---

Node Chosen for Level 13 -  $[[7,2,1][5,6,3][8,4,0]]$

Generated Nodes :

---

$[[7,2,1][5,6,0][8,4,3]] - \text{Already visited Node!}$   
 $[[7,2,1][5,6,3][8,0,4]] - f(n) = 13 + 11 = 24$

---

Node Chosen for Level 15 -  $[[0,5,6][4,2,1][7,8,3]]$

Generated Nodes :

---

$[[5,0,6][4,2,1][7,8,3]] - f(n) = 15 + 9 = 24$   
 $[[4,5,6][0,2,1][7,8,3]] - \text{Already visited Node!}$

---

Node Chosen for Level 14 -  $[[7,2,1][4,6,0][5,8,3]]$

Generated Nodes :

---

$[[7,2,0][4,6,1][5,8,3]] - \text{Already visited Node!}$   
 $[[7,2,1][4,0,6][5,8,3]] - \text{Already visited Node!}$   
 $[[7,2,1][4,6,3][5,8,0]] - f(n) = 14 + 8 = 22$

---

Node Chosen for Level 15 -  $[[7,1,3][5,4,6][8,2,0]]$

Generated Nodes :

---

$[[7,1,3][5,4,0][8,2,6]] - \text{Already visited Node!}$   
 $[[7,1,3][5,4,6][8,0,2]] - f(n) = 15 + 9 = 24$

---

Node Chosen for Level 15 -  $[[4,1,0][7,5,3][8,2,6]]$

Generated Nodes :

---

$[[4,0,1][7,5,3][8,2,6]] - \text{Already visited Node!}$   
 $[[4,1,3][7,5,0][8,2,6]] - f(n) = 15 + 7 = 22$

---

Node Chosen for Level 17 -  $[[1,2,0][7,5,3][8,4,6]]$

Generated Nodes :

---

$[[1,0,2][7,5,3][8,4,6]]$  - Already visited Node!  
 $[[1,2,3][7,5,0][8,4,6]]$  -  $f(n) = 17 + 5 = 22$

---

Node Chosen for Level 17 -  $[[1,5,2][7,4,3][0,8,6]]$

Generated Nodes :

---

$[[1,5,2][0,4,3][7,8,6]]$  -  $f(n) = 17 + 5 = 22$   
 $[[1,5,2][7,4,3][8,0,6]]$  - Already visited Node!

---

Node Chosen for Level 17 -  $[[2,1,3][7,4,6][8,5,0]]$

Generated Nodes :

---

$[[2,1,3][7,4,0][8,5,6]]$  - Already visited Node!  
 $[[2,1,3][7,4,6][8,0,5]]$  -  $f(n) = 17 + 7 = 24$

---

Node Chosen for Level 16 -  $[[4,1,3][7,2,0][5,8,6]]$

Generated Nodes :

---

$[[4,1,0][7,2,3][5,8,6]]$  - Already visited Node!  
 $[[4,1,3][7,0,2][5,8,6]]$  -  $f(n) = 16 + 8 = 24$   
 $[[4,1,3][7,2,6][5,8,0]]$  -  $f(n) = 16 + 6 = 22$

---

Node Chosen for Level 18 -  $[[1,2,3][7,4,0][5,8,6]]$

Generated Nodes :

---

$[[1,2,0][7,4,3][5,8,6]]$  - Already visited Node!  
 $[[1,2,3][7,0,4][5,8,6]]$  -  $f(n) = 18 + 6 = 24$   
 $[[1,2,3][7,4,6][5,8,0]]$  -  $f(n) = 18 + 4 = 22$

---

Node Chosen for Level 18 -  $[[1,2,4][0,5,3][7,8,6]]$

Generated Nodes :

---

$[[0,2,4][1,5,3][7,8,6]]$  -  $f(n) = 18 + 6 = 24$   
 $[[1,2,4][5,0,3][7,8,6]]$  -  $f(n) = 18 + 6 = 24$   
 $[[1,2,4][7,5,3][0,8,6]]$  - Already visited Node!

---

Node Chosen for Level 18 -  $[[4,2,6][1,5,3][7,0,8]]$

Generated Nodes :

---

$[[4,2,6][1,0,3][7,5,8]]$  - Already visited Node!  
 $[[4,2,6][1,5,3][7,8,0]]$  -  $f(n) = 18 + 4 = 22$

$[[4,2,6][1,5,3][0,7,8]] - f(n) = 18 + 6 = 24$

---

Node Chosen for Level 19 -  $[[4,1,3][2,5,6][7,8,0]]$

Generated Nodes :

---

$[[4,1,3][2,5,0][7,8,6]] - \text{Already visited Node!}$

$[[4,1,3][2,5,6][7,0,8]] - f(n) = 19 + 5 = 24$

---

Node Chosen for Level 19 -  $[[2,1,3][5,4,6][7,8,0]]$

Generated Nodes :

---

$[[2,1,3][5,4,0][7,8,6]] - \text{Already visited Node!}$

$[[2,1,3][5,4,6][7,0,8]] - f(n) = 19 + 5 = 24$

---

Node Chosen for Level 10 -  $[[2,0,4][7,5,6][8,3,1]]$

Generated Nodes :

---

$[[2,4,0][7,5,6][8,3,1]] - f(n) = 10 + 12 = 22$

$[[0,2,4][7,5,6][8,3,1]] - f(n) = 10 + 12 = 22$

$[[2,5,4][7,0,6][8,3,1]] - \text{Already visited Node!}$

---

Node Chosen for Level 10 -  $[[2,5,4][7,3,6][8,0,1]]$

Generated Nodes :

---

$[[2,5,4][7,0,6][8,3,1]] - \text{Already visited Node!}$

$[[2,5,4][7,3,6][8,1,0]] - f(n) = 10 + 12 = 22$

$[[2,5,4][7,3,6][0,8,1]] - f(n) = 10 + 12 = 22$

---

Node Chosen for Level 14 -  $[[2,5,4][0,1,3][7,8,6]]$

Generated Nodes :

---

$[[0,5,4][2,1,3][7,8,6]] - f(n) = 14 + 10 = 24$

$[[2,5,4][1,0,3][7,8,6]] - f(n) = 14 + 8 = 22$

$[[2,5,4][7,1,3][0,8,6]] - \text{Already visited Node!}$

---

Node Chosen for Level 13 -  $[[4,3,0][7,2,6][5,8,1]]$

Generated Nodes :

---

$[[4,0,3][7,2,6][5,8,1]] - f(n) = 13 + 9 = 22$

$[[4,3,6][7,2,0][5,8,1]] - \text{Already visited Node!}$

---

Node Chosen for Level 13 -  $[[4,3,6][7,2,1][5,8,0]]$

Generated Nodes :

---

$[[4,3,6][7,2,0][5,8,1]] - \text{Already visited Node!}$



$[[4,3,6][7,2,1][5,0,8]] - f(n) = 13 + 11 = 24$

---

Node Chosen for Level 13 -  $[[7,2,3][5,0,6][8,1,4]]$

Generated Nodes :

---

$[[7,0,3][5,2,6][8,1,4]] - f(n) = 13 + 11 = 24$   
 $[[7,2,3][5,6,0][8,1,4]] - \text{Already visited Node!}$   
 $[[7,2,3][0,5,6][8,1,4]] - f(n) = 13 + 9 = 22$   
 $[[7,2,3][5,1,6][8,0,4]] - f(n) = 13 + 9 = 22$

---

Node Chosen for Level 13 -  $[[7,2,3][5,6,4][8,1,0]]$

Generated Nodes :

---

$[[7,2,3][5,6,0][8,1,4]] - \text{Already visited Node!}$   
 $[[7,2,3][5,6,4][8,0,1]] - f(n) = 13 + 11 = 24$

---

Node Chosen for Level 14 -  $[[4,1,2][7,5,0][8,6,3]]$

Generated Nodes :

---

$[[4,1,0][7,5,2][8,6,3]] - \text{Already visited Node!}$   
 $[[4,1,2][7,0,5][8,6,3]] - f(n) = 14 + 10 = 24$   
 $[[4,1,2][7,5,3][8,6,0]] - f(n) = 14 + 8 = 22$

---

Node Chosen for Level 15 -  $[[1,4,0][7,5,6][8,2,3]]$

Generated Nodes :

---

$[[1,0,4][7,5,6][8,2,3]] - \text{Already visited Node!}$   
 $[[1,4,6][7,5,0][8,2,3]] - f(n) = 15 + 9 = 24$

---

Node Chosen for Level 14 -  $[[4,6,2][0,5,1][7,8,3]]$

Generated Nodes :

---

$[[0,6,2][4,5,1][7,8,3]] - f(n) = 14 + 8 = 22$   
 $[[4,6,2][5,0,1][7,8,3]] - f(n) = 14 + 10 = 24$   
 $[[4,6,2][7,5,1][0,8,3]] - \text{Already visited Node!}$

---

Node Chosen for Level 14 -  $[[7,2,1][0,5,6][8,4,3]]$

Generated Nodes :

---

$[[0,2,1][7,5,6][8,4,3]] - f(n) = 14 + 8 = 22$   
 $[[7,2,1][5,0,6][8,4,3]] - \text{Already visited Node!}$   
 $[[7,2,1][8,5,6][0,4,3]] - f(n) = 14 + 10 = 24$

---

Node Chosen for Level 14 -  $[[7,2,1][5,4,6][8,0,3]]$

Generated Nodes :

-----  
[[7,2,1][5,0,6][8,4,3]] - Already visited Node!  
[[7,2,1][5,4,6][8,3,0]] -  $f(n) = 14 + 10 = 24$   
[[7,2,1][5,4,6][0,8,3]] - Already visited Node!  
-----

Node Chosen for Level 15 - [[7,2,1][4,6,3][5,8,0]]

Generated Nodes :

-----  
[[7,2,1][4,6,0][5,8,3]] - Already visited Node!  
[[7,2,1][4,6,3][5,0,8]] -  $f(n) = 15 + 9 = 24$   
-----

Node Chosen for Level 16 - [[4,1,3][7,5,0][8,2,6]]

Generated Nodes :

-----  
[[4,1,0][7,5,3][8,2,6]] - Already visited Node!  
[[4,1,3][7,0,5][8,2,6]] -  $f(n) = 16 + 8 = 24$   
[[4,1,3][7,5,6][8,2,0]] -  $f(n) = 16 + 6 = 22$   
-----

Node Chosen for Level 18 - [[1,2,3][7,5,0][8,4,6]]

Generated Nodes :

-----  
[[1,2,0][7,5,3][8,4,6]] - Already visited Node!  
[[1,2,3][7,0,5][8,4,6]] -  $f(n) = 18 + 6 = 24$   
[[1,2,3][7,5,6][8,4,0]] -  $f(n) = 18 + 4 = 22$   
-----

Node Chosen for Level 18 - [[1,5,2][0,4,3][7,8,6]]

Generated Nodes :

-----  
[[0,5,2][1,4,3][7,8,6]] -  $f(n) = 18 + 6 = 24$   
[[1,5,2][4,0,3][7,8,6]] -  $f(n) = 18 + 4 = 22$   
[[1,5,2][7,4,3][0,8,6]] - Already visited Node!  
-----

Node Chosen for Level 17 - [[4,1,3][7,2,6][5,8,0]]

Generated Nodes :

-----  
[[4,1,3][7,2,0][5,8,6]] - Already visited Node!  
[[4,1,3][7,2,6][5,0,8]] -  $f(n) = 17 + 7 = 24$   
-----

Node Chosen for Level 19 - [[1,2,3][7,4,6][5,8,0]]

Generated Nodes :

-----  
[[1,2,3][7,4,0][5,8,6]] - Already visited Node!  
[[1,2,3][7,4,6][5,0,8]] -  $f(n) = 19 + 5 = 24$   
-----

Node Chosen for Level 19 - [[4,2,6][1,5,3][7,8,0]]

Generated Nodes :

-----  
[[4,2,6][1,5,0][7,8,3]] -  $f(n) = 19 + 5 = 24$   
[[4,2,6][1,5,3][7,0,8]] - Already visited Node!

-----  
Node Chosen for Level 11 - [[2,4,0][7,5,6][8,3,1]]

Generated Nodes :

-----  
[[2,0,4][7,5,6][8,3,1]] - Already visited Node!  
[[2,4,6][7,5,0][8,3,1]] -  $f(n) = 11 + 13 = 24$

-----  
Node Chosen for Level 11 - [[0,2,4][7,5,6][8,3,1]]

Generated Nodes :

-----  
[[2,0,4][7,5,6][8,3,1]] - Already visited Node!  
[[7,2,4][0,5,6][8,3,1]] -  $f(n) = 11 + 13 = 24$

-----  
Node Chosen for Level 11 - [[2,5,4][7,3,6][8,1,0]]

Generated Nodes :

-----  
[[2,5,4][7,3,0][8,1,6]] -  $f(n) = 11 + 13 = 24$   
[[2,5,4][7,3,6][8,0,1]] - Already visited Node!

-----  
Node Chosen for Level 11 - [[2,5,4][7,3,6][0,8,1]]

Generated Nodes :

-----  
[[2,5,4][0,3,6][7,8,1]] -  $f(n) = 11 + 11 = 22$   
[[2,5,4][7,3,6][8,0,1]] - Already visited Node!

-----  
Node Chosen for Level 15 - [[2,5,4][1,0,3][7,8,6]]

Generated Nodes :

-----  
[[2,0,4][1,5,3][7,8,6]] -  $f(n) = 15 + 7 = 22$   
[[2,5,4][1,3,0][7,8,6]] -  $f(n) = 15 + 9 = 24$   
[[2,5,4][0,1,3][7,8,6]] - Already visited Node!  
[[2,5,4][1,8,3][7,0,6]] -  $f(n) = 15 + 9 = 24$

-----  
Node Chosen for Level 14 - [[4,0,3][7,2,6][5,8,1]]

Generated Nodes :

-----  
[[4,3,0][7,2,6][5,8,1]] - Already visited Node!  
[[0,4,3][7,2,6][5,8,1]] -  $f(n) = 14 + 10 = 24$   
[[4,2,3][7,0,6][5,8,1]] -  $f(n) = 14 + 8 = 22$

-----  
Node Chosen for Level 14 - [[7,2,3][0,5,6][8,1,4]]

Generated Nodes :

-----  
[[0,2,3][7,5,6][8,1,4]] -  $f(n) = 14 + 8 = 22$   
[[7,2,3][5,0,6][8,1,4]] - Already visited Node!  
[[7,2,3][8,5,6][0,1,4]] -  $f(n) = 14 + 10 = 24$   
-----

Node Chosen for Level 14 - [[7,2,3][5,1,6][8,0,4]]

Generated Nodes :

-----  
[[7,2,3][5,0,6][8,1,4]] - Already visited Node!  
[[7,2,3][5,1,6][8,4,0]] -  $f(n) = 14 + 8 = 22$   
[[7,2,3][5,1,6][0,8,4]] -  $f(n) = 14 + 8 = 22$   
-----

Node Chosen for Level 15 - [[4,1,2][7,5,3][8,6,0]]

Generated Nodes :

-----  
[[4,1,2][7,5,0][8,6,3]] - Already visited Node!  
[[4,1,2][7,5,3][8,0,6]] -  $f(n) = 15 + 7 = 22$   
-----

Node Chosen for Level 15 - [[0,6,2][4,5,1][7,8,3]]

Generated Nodes :

-----  
[[6,0,2][4,5,1][7,8,3]] -  $f(n) = 15 + 9 = 24$   
[[4,6,2][0,5,1][7,8,3]] - Already visited Node!  
-----

Node Chosen for Level 15 - [[0,2,1][7,5,6][8,4,3]]

Generated Nodes :

-----  
[[2,0,1][7,5,6][8,4,3]] -  $f(n) = 15 + 9 = 24$   
[[7,2,1][0,5,6][8,4,3]] - Already visited Node!  
-----

Node Chosen for Level 17 - [[4,1,3][7,5,6][8,2,0]]

Generated Nodes :

-----  
[[4,1,3][7,5,0][8,2,6]] - Already visited Node!  
[[4,1,3][7,5,6][8,0,2]] -  $f(n) = 17 + 7 = 24$   
-----

Node Chosen for Level 19 - [[1,2,3][7,5,6][8,4,0]]

Generated Nodes :

-----  
[[1,2,3][7,5,0][8,4,6]] - Already visited Node!  
[[1,2,3][7,5,6][8,0,4]] -  $f(n) = 19 + 5 = 24$   
-----

Node Chosen for Level 19 - [[1,5,2][4,0,3][7,8,6]]

Generated Nodes :

-----  
[[1,0,2][4,5,3][7,8,6]] -  $f(n) = 19 + 3 = 22$   
[[1,5,2][4,3,0][7,8,6]] -  $f(n) = 19 + 5 = 24$   
[[1,5,2][0,4,3][7,8,6]] - Already visited Node!  
[[1,5,2][4,8,3][7,0,6]] -  $f(n) = 19 + 5 = 24$   
-----

Node Chosen for Level 12 - [[2,5,4][0,3,6][7,8,1]]

Generated Nodes :

-----  
[[0,5,4][2,3,6][7,8,1]] -  $f(n) = 12 + 12 = 24$   
[[2,5,4][3,0,6][7,8,1]] -  $f(n) = 12 + 12 = 24$   
[[2,5,4][7,3,6][0,8,1]] - Already visited Node!  
-----

Node Chosen for Level 16 - [[2,0,4][1,5,3][7,8,6]]

Generated Nodes :

-----  
[[2,4,0][1,5,3][7,8,6]] -  $f(n) = 16 + 6 = 22$   
[[0,2,4][1,5,3][7,8,6]] -  $f(n) = 16 + 6 = 22$   
[[2,5,4][1,0,3][7,8,6]] - Already visited Node!  
-----

Node Chosen for Level 15 - [[4,2,3][7,0,6][5,8,1]]

Generated Nodes :

-----  
[[4,0,3][7,2,6][5,8,1]] - Already visited Node!  
[[4,2,3][7,6,0][5,8,1]] -  $f(n) = 15 + 9 = 24$   
[[4,2,3][0,7,6][5,8,1]] -  $f(n) = 15 + 9 = 24$   
[[4,2,3][7,8,6][5,0,1]] -  $f(n) = 15 + 9 = 24$   
-----

Node Chosen for Level 15 - [[0,2,3][7,5,6][8,1,4]]

Generated Nodes :

-----  
[[2,0,3][7,5,6][8,1,4]] -  $f(n) = 15 + 9 = 24$   
[[7,2,3][0,5,6][8,1,4]] - Already visited Node!  
-----

Node Chosen for Level 15 - [[7,2,3][5,1,6][8,4,0]]

Generated Nodes :

-----  
[[7,2,3][5,1,0][8,4,6]] -  $f(n) = 15 + 9 = 24$   
[[7,2,3][5,1,6][8,0,4]] - Already visited Node!  
-----

Node Chosen for Level 15 - [[7,2,3][5,1,6][0,8,4]]

Generated Nodes :

-----  
[[7,2,3][0,1,6][5,8,4]] -  $f(n) = 15 + 9 = 24$   
[[7,2,3][5,1,6][8,0,4]] - Already visited Node!  
-----

Node Chosen for Level 16 – [[4,1,2][7,5,3][8,0,6]]

Generated Nodes :

-----  
[[4,1,2][7,0,3][8,5,6]] –  $f(n) = 16 + 8 = 24$   
[[4,1,2][7,5,3][8,6,0]] – Already visited Node!  
[[4,1,2][7,5,3][0,8,6]] –  $f(n) = 16 + 6 = 22$   
-----

Node Chosen for Level 20 – [[1,0,2][4,5,3][7,8,6]]

Generated Nodes :

-----  
[[1,2,0][4,5,3][7,8,6]] –  $f(n) = 20 + 2 = 22$   
[[0,1,2][4,5,3][7,8,6]] –  $f(n) = 20 + 4 = 24$   
[[1,5,2][4,0,3][7,8,6]] – Already visited Node!  
-----

Node Chosen for Level 17 – [[2,4,0][1,5,3][7,8,6]]

Generated Nodes :

-----  
[[2,0,4][1,5,3][7,8,6]] – Already visited Node!  
[[2,4,3][1,5,0][7,8,6]] –  $f(n) = 17 + 5 = 22$   
-----

Node Chosen for Level 17 – [[0,2,4][1,5,3][7,8,6]]

Generated Nodes :

-----  
[[2,0,4][1,5,3][7,8,6]] – Already visited Node!  
[[1,2,4][0,5,3][7,8,6]] – Already visited Node!  
-----

Node Chosen for Level 17 – [[4,1,2][7,5,3][0,8,6]]

Generated Nodes :

-----  
[[4,1,2][0,5,3][7,8,6]] –  $f(n) = 17 + 5 = 22$   
[[4,1,2][7,5,3][8,0,6]] – Already visited Node!  
-----

Node Chosen for Level 21 – [[1,2,0][4,5,3][7,8,6]]

Generated Nodes :

-----  
[[1,0,2][4,5,3][7,8,6]] – Already visited Node!  
[[1,2,3][4,5,0][7,8,6]] –  $f(n) = 21 + 1 = 22$   
-----

Node Chosen for Level 18 – [[2,4,3][1,5,0][7,8,6]]

Generated Nodes :

-----  
[[2,4,0][1,5,3][7,8,6]] – Already visited Node!  
[[2,4,3][1,0,5][7,8,6]] –  $f(n) = 18 + 6 = 24$   
[[2,4,3][1,5,6][7,8,0]] –  $f(n) = 18 + 4 = 22$   
-----

Node Chosen for Level 18 -  $[[4,1,2][0,5,3][7,8,6]]$

Generated Nodes :

-----  
 $[[0,1,2][4,5,3][7,8,6]] - f(n) = 18 + 4 = 22$   
 $[[4,1,2][5,0,3][7,8,6]] - f(n) = 18 + 6 = 24$   
 $[[4,1,2][7,5,3][0,8,6]] - \text{Already visited Node!}$   
-----

Node Chosen for Level 22 -  $[[1,2,3][4,5,0][7,8,6]]$

Generated Nodes :

-----  
 $[[1,2,0][4,5,3][7,8,6]] - \text{Already visited Node!}$   
 $[[1,2,3][4,0,5][7,8,6]] - f(n) = 22 + 2 = 24$   
 $[[1,2,3][4,5,6][7,8,0]] - f(n) = 22 + 0 = 22$   
-----

Node Chosen for Level 19 -  $[[2,4,3][1,5,6][7,8,0]]$

Generated Nodes :

-----  
 $[[2,4,3][1,5,0][7,8,6]] - \text{Already visited Node!}$   
 $[[2,4,3][1,5,6][7,0,8]] - f(n) = 19 + 5 = 24$   
-----

Node Chosen for Level 19 -  $[[0,1,2][4,5,3][7,8,6]]$

Generated Nodes :

-----  
 $[[1,0,2][4,5,3][7,8,6]] - \text{Already visited Node!}$   
 $[[4,1,2][0,5,3][7,8,6]] - \text{Already visited Node!}$   
-----

Node Chosen for Level 23 -  $[[1,2,3][4,5,6][7,8,0]]$

The goal path found...

-----  
 $[[7,2,4][5,0,6][8,3,1]]$   
 $[[7,0,4][5,2,6][8,3,1]]$   
 $[[7,2,4][5,6,0][8,3,1]]$   
 $[[7,4,0][5,2,6][8,3,1]]$   
 $[[7,2,0][5,6,4][8,3,1]]$   
 $[[7,2,4][5,6,1][8,3,0]]$   
 $[[7,2,4][5,6,1][8,0,3]]$   
 $[[7,2,4][5,6,1][0,8,3]]$   
 $[[0,7,4][5,2,6][8,3,1]]$   
 $[[7,4,6][5,2,0][8,3,1]]$   
 $[[7,0,2][5,6,4][8,3,1]]$   
 $[[7,2,4][5,0,1][8,6,3]]$   
 $[[7,2,4][0,6,1][5,8,3]]$   
 $[[7,4,6][5,2,1][8,3,0]]$   
 $[[7,2,4][5,1,0][8,6,3]]$   
 $[[7,2,4][0,5,1][8,6,3]]$   
 $[[0,2,4][7,6,1][5,8,3]]$   
 $[[7,4,6][5,2,1][8,0,3]]$   
 $[[7,2,0][5,1,4][8,6,3]]$

[[7,2,4][5,1,3][8,6,0]]  
[[0,2,4][7,5,1][8,6,3]]  
[[7,4,6][5,2,1][0,8,3]]  
[[7,2,4][5,1,3][8,0,6]]  
[[7,2,4][5,1,3][0,8,6]]  
[[5,7,4][0,2,6][8,3,1]]  
[[7,4,6][5,0,2][8,3,1]]  
[[0,7,2][5,6,4][8,3,1]]  
[[7,6,2][5,0,4][8,3,1]]  
[[7,0,4][5,2,1][8,6,3]]  
[[7,2,4][6,0,1][5,8,3]]  
[[7,2,4][8,5,1][0,6,3]]  
[[2,0,4][7,6,1][5,8,3]]  
[[7,4,6][5,0,1][8,2,3]]  
[[7,0,2][5,1,4][8,6,3]]  
[[2,0,4][7,5,1][8,6,3]]  
[[7,4,6][0,2,1][5,8,3]]  
[[7,2,4][5,0,3][8,1,6]]  
[[7,2,4][0,1,3][5,8,6]]  
[[7,0,6][5,4,2][8,3,1]]  
[[7,4,6][0,5,2][8,3,1]]  
[[7,4,6][5,3,2][8,0,1]]  
[[7,6,2][5,4,0][8,3,1]]  
[[7,6,2][0,5,4][8,3,1]]  
[[7,6,2][5,3,4][8,0,1]]  
[[7,4,0][5,2,1][8,6,3]]  
[[7,2,4][6,1,0][5,8,3]]  
[[2,4,0][7,6,1][5,8,3]]  
[[7,0,6][5,4,1][8,2,3]]  
[[7,4,6][5,1,0][8,2,3]]  
[[7,4,6][0,5,1][8,2,3]]  
[[7,1,2][5,0,4][8,6,3]]  
[[2,4,0][7,5,1][8,6,3]]  
[[0,4,6][7,2,1][5,8,3]]  
[[7,2,4][0,5,3][8,1,6]]  
[[0,2,4][7,1,3][5,8,6]]  
[[7,2,4][1,0,3][5,8,6]]  
[[0,4,6][7,5,2][8,3,1]]  
[[7,4,6][5,3,2][8,1,0]]  
[[7,4,6][5,3,2][0,8,1]]  
[[7,6,2][5,4,1][8,3,0]]  
[[0,6,2][7,5,4][8,3,1]]  
[[7,6,2][5,3,4][8,1,0]]  
[[7,6,2][5,3,4][0,8,1]]  
[[7,4,1][5,2,0][8,6,3]]  
[[7,2,0][6,1,4][5,8,3]]  
[[7,2,4][6,1,3][5,8,0]]  
[[2,4,1][7,6,0][5,8,3]]  
[[7,4,0][5,1,6][8,2,3]]  
[[7,4,6][5,1,3][8,2,0]]  
[[0,4,6][7,5,1][8,2,3]]  
[[7,1,2][5,4,0][8,6,3]]



[[7,1,2][0,5,4][8,6,3]]  
[[7,1,2][5,6,4][8,0,3]]  
[[2,4,1][7,5,0][8,6,3]]  
[[4,0,6][7,2,1][5,8,3]]  
[[0,2,4][7,5,3][8,1,6]]  
[[4,0,6][7,5,2][8,3,1]]  
[[7,6,2][5,4,1][8,0,3]]  
[[7,4,1][5,2,3][8,6,0]]  
[[2,4,1][7,0,6][5,8,3]]  
[[2,4,1][7,6,3][5,8,0]]  
[[4,0,6][7,5,1][8,2,3]]  
[[7,1,2][5,4,3][8,6,0]]  
[[0,1,2][7,5,4][8,6,3]]  
[[7,1,2][5,6,4][0,8,3]]  
[[2,4,1][7,5,3][8,6,0]]  
[[4,2,6][7,0,1][5,8,3]]  
[[7,6,2][5,4,1][0,8,3]]  
[[7,4,1][5,2,3][8,0,6]]  
[[2,0,1][7,4,6][5,8,3]]  
[[7,1,2][5,4,3][8,0,6]]  
[[1,0,2][7,5,4][8,6,3]]  
[[2,4,1][7,5,3][8,0,6]]  
[[4,2,6][7,1,0][5,8,3]]  
[[7,4,1][5,2,3][0,8,6]]  
[[2,1,0][7,4,6][5,8,3]]  
[[0,2,1][7,4,6][5,8,3]]  
[[7,1,2][5,4,3][0,8,6]]  
[[1,2,0][7,5,4][8,6,3]]  
[[2,4,1][7,5,3][0,8,6]]  
[[4,2,0][7,1,6][5,8,3]]  
[[4,2,6][7,1,3][5,8,0]]  
[[2,4,1][0,5,3][7,8,6]]  
[[5,7,4][2,0,6][8,3,1]]  
[[5,7,4][8,2,6][0,3,1]]  
[[5,7,2][0,6,4][8,3,1]]  
[[0,7,4][5,2,1][8,6,3]]  
[[7,0,4][6,2,1][5,8,3]]  
[[7,2,4][6,8,1][5,0,3]]  
[[7,2,4][8,5,1][6,0,3]]  
[[2,6,4][7,0,1][5,8,3]]  
[[0,7,2][5,1,4][8,6,3]]  
[[2,5,4][7,0,1][8,6,3]]  
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The number of nodes that are expanded are : 425