BFS results:

PathN-1:

['inc_long_0']

nodes_expanded: 1

max_queue_size: 2

Path_length:1

PathN-2:

['inc_long_90', 'dec_E']

nodes_expanded: 6

max_queue_size: 23

Path_length:2

PathN-3:

['inc_long_90', 'inc_long_90', 'dec_E']

nodes_expanded: 33

max_queue_size: 126

Path_length:3

PathN-4:

['dec_long_0', 'dec_long_90', 'inc_long_0', 'dec_long_90']

nodes_expanded: 136

max_queue_size: 541

Path_length:4

PathN-5:

['dec_E', 'dec_long_0', 'dec_E', 'inc_long_90', 'inc_E']

nodes_expanded: 242

max_queue_size: 962

Path_length:5

PathN-6:

['dec_long_0', 'dec_E', 'dec_long_90', 'dec_long_0', 'inc_E', 'dec_long_90']

nodes_expanded: 2904

max_queue_size: 11204

Path_length:6

PathN-6:

['dec_long_90', 'inc_E', 'dec_long_0', 'inc_long_90', 'inc_E', 'inc_long_90', 'dec_long_0']

nodes_expanded: 20255

max_queue_size: 77321

Path_length:7

PathN-7:

['dec_long_90', 'dec_long_0', 'inc_E', 'inc_E', 'inc_long_0', 'dec_E', 'dec_long_0', 'inc_long_90']

nodes_expanded: 102065

max_queue_size: 386913

Path_length:8

PathN-9:

 $['dec_E', 'dec_E', 'inc_long_0', 'inc_long_90', 'inc_E', 'inc_E', 'dec_long_0', 'dec_E', 'inc_long_90']$

nodes_expanded: 111948

max_queue_size: 424347

Path_length:9

A-STAR Results:

PathN-1:

['inc_long_0']

nodes_expanded:1

max_queue_size:2

path_length: 1

```
PathN-2:

['inc_long_90', 'dec_E']

nodes_expanded:2

max_queue_size:6

path_length: 2

PathN-3:

['inc_long_90', 'inc_long_90', 'dec_E']

nodes_expanded:3
```

max_queue_size:10

path_length: 3

PathN-4:

```
['dec_long_0', 'dec_long_90', 'inc_long_0', 'dec_long_90']

nodes_expanded:19

max_queue_size:77

path_length: 4
```

PathN-5:

```
['dec_E', 'dec_long_0', 'dec_E', 'inc_long_90', 'inc_E']
nodes_expanded:30
max_queue_size:118
path_length: 5
```

PathN-6:

```
['dec_long_0', 'dec_E', 'dec_long_90', 'dec_long_0', 'inc_E', 'dec_long_90']

nodes_expanded:34

max_queue_size:137

path_length: 6
```

```
PathN-7:
```

```
['dec_long_90', 'inc_E', 'dec_long_0', 'inc_long_90', 'inc_E', 'inc_long_90', 'dec_long_0']

nodes_expanded:17

max_queue_size:68

path_length: 7
```

PathN-8:

```
['dec_long_90', 'dec_long_0', 'inc_E', 'inc_long_90', 'inc_E', 'inc_long_0', 'dec_E', 'dec_long_0']

nodes_expanded:276

max_queue_size:1072

path_length: 8
```

PathN-9:

```
['dec_E', 'dec_E', 'inc_long_0', 'inc_long_90', 'inc_E', 'inc_E', 'dec_long_0', 'dec_E', 'inc_long_90']

nodes_expanded:890

max_queue_size:3487

path_length: 9
```

PathN-10:

```
['dec_long_0', 'inc_E', 'dec_long_0', 'dec_long_0', 'inc_E', 'dec_long_90', 'inc_E', 'dec_long_0', 'dec_long_0', 'dec_E']

nodes_expanded:110

max_queue_size:438

path_length: 10
```

RBFS results:

PathN-1:

['inc_long_0']

nodes expanded:1

Path_length:1

Max_elements in queue RBFS:5

```
PathN-2:
```

['inc_long_90', 'dec_E']

nodes expanded:2

Path_length:2

Max_elements in queue RBFS:10

PathN-3:

['inc_long_90', 'inc_long_90', 'dec_E']

nodes expanded:5

Path_length:3

Max_elements in queue RBFS:20

PathN-4:

['dec_long_0', 'dec_long_90', 'inc_long_0', 'dec_long_90']

nodes expanded:18

Path_length:4

Max_elements in queue RBFS:30

PathN-5:

['dec_E', 'dec_long_0', 'dec_E', 'inc_long_90', 'inc_E']

nodes expanded:51

Path_length:5

Max_elements in queue RBFS:30

PathN-6:

['dec_long_0', 'dec_E', 'dec_long_90', 'dec_long_0', 'inc_E', 'inc_long_0', 'dec_long_0', 'dec_long_90']

nodes expanded:87

Path_length:8

Max_elements in queue RBFS:50

PathN-7:

['dec_long_90', 'inc_E', 'dec_long_0', 'inc_long_0', 'inc_long_90', 'inc_E', 'inc_long_90', 'dec_long_0']

nodes expanded:183

Path_length:9

Max_elements in queue RBFS:55

PathN-8:

['dec_long_90', 'dec_long_0', 'inc_E', 'inc_E', 'inc_long_0', 'dec_E', 'dec_long_0', 'inc_long_90'] nodes expanded:2523

Path_length:8

Max_elements in queue RBFS:50

PathN-9:

['dec_E', 'dec_E', 'inc_long_0', 'inc_long_90', 'inc_E', 'dec_long_0', 'dec_E', 'inc_long_90'] nodes expanded:5849

Path_length:9

Max_elements in queue RBFS:60

PathN-10:

['dec_long_0', 'dec_long_0', 'dec_long_0']

nodes expanded:47541

Path length:26

Max_elements in queue RBFS:145