All Contests > tp12-3d > Shortest path from source to destination

Shortest path from source to destination

| Problem | Submissions | Leaderboard |

Given a chess board, find the shortest distance (minimum number of steps) taken by a knight to reach given destination from given source.

If Result is not Possible Print "-1"

Input Format

Only single line contains integer **n**.

1. List Item

Constraints

- 0 < n < 100

Output Format

Output contains only single integer (Minimum number of steps required to reach given destination from given source).
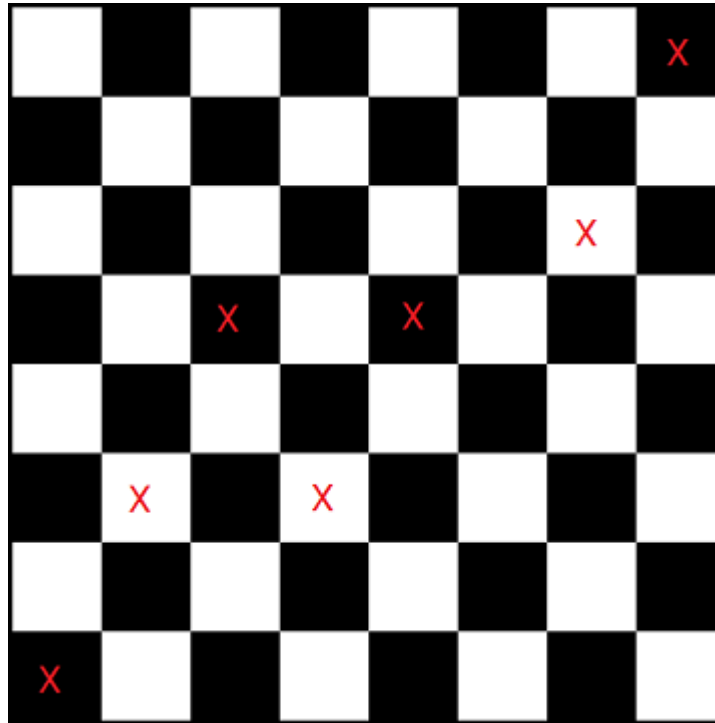
Sample Input 0

8

Sample Output 0

6

Explanation 0

n = 8 (8 * 8 board), source= (7,0), Destination= (0,7)

The knight's movement can be demonstrated in figure below

Contest ends in 2 hours

Submissions: 13
Max Score: 20

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More

Current Buffer (saved locally, editable)

Python 3

```
1  def check(x,y,n):
```

```
 2         if x>=0 and y>=0 and x<n and y<n:
 3             return 1
 4         else:
 5             return 0
 6  def f(n):
 7      l1=[-2,-1,1,2,-2,-1,1,2]
 8      l2=[-1,-2,-2,-1,1,2,2,1]
 9      visited=[[0 for  i in range(n)] for i in range(n)]
10      sx=n-1
11      sy=0
12      ex=0
13      ey=n-1
14      visited[sx][sy]=1
15      r=[]
16      c=[]
17      noj=[]
18      r.append(sx)
19      c.append(sy)
20      noj.append(0)
21      while r:
22          ir=r.pop(0)
23          ic=c.pop(0)
24          inoj=noj.pop(0)
25          if ir==ex and ic==ey:
26              return inoj
27          else:
28              for i in range(0,8):
29                  nr=ir+l1[i]
30                  nc=ic+l2[i]
31                  nnoj=inoj+1
32                  if check(nr,nc,n)==1 and visited[nr][nc]==0 :
33                      r.append(nr)
34                      c.append(nc)
35                      noj.append(nnoj)
36                      visited[nr][nc]=1
```

```
37
38        return -1
39   n=int(input())
40   print(f(n))
41
```

Line: 1 Col: 1

⬆ Upload Code as File　　☐ Test against custom input

Run Code　　Submit Code

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