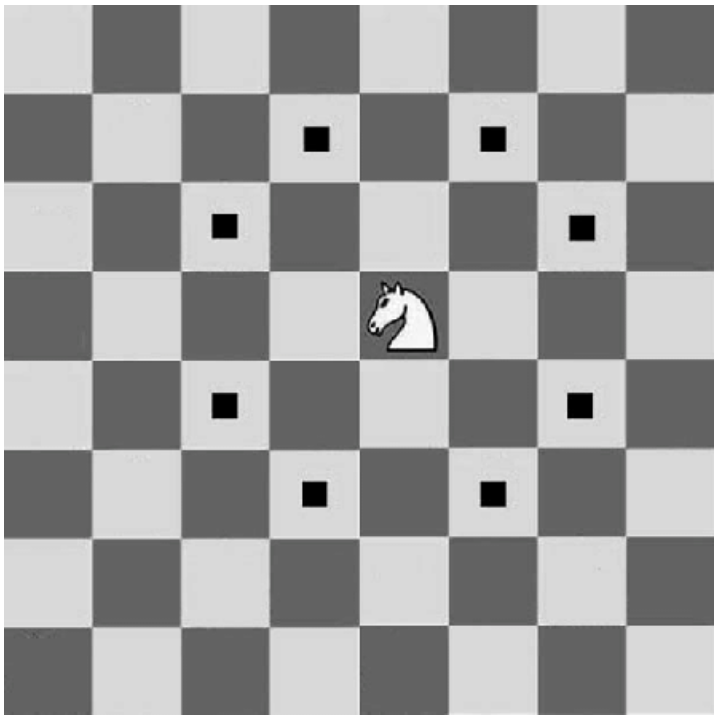
Knight Moves

HackerRank

Problem Statement

You will be given a chessboard of $N \times M$ size. You can move anywhere in the chessboard freely. You will be given two cells - the knight's cell K (K_i and K_j), and the queen's cell Q (Q_i and Q_j). You need to tell the minimum number of steps for the knight to attack the queen if the queen doesn't move.

A knight move in 8 directions. The directions are given below:



Input Format

- First line will contain T, the number of test cases.
- First line of each test case will contain N and M.
- Second line of each test case will contain K_i and K_j.
- Third line of each test case will contain Q_i and Q_j.

Constraints

1. $1 \leq T \leq 100$
2. $1 \leq N, M \leq 100$
3. $0 \leq Ki, Qi < N$
4. $0 \leq Kj, Qj < M$

Output Format

- Output the minimum number of steps for the knight to reach the queen. If you can't reach to queen, print -1.

Sample Input 0

```
4
8 8
0 0
7 7
5 6
0 1
0 1
4 4
0 0
0 1
2 2
0 0
0 1
```

Sample Output 0

```
6
0
3
-1
```

Explanation 0

For the first test case, one of the possible answer could be this way: