



Absolute Permutation

by [ma5termind](#)

Problem

Submissions

Leaderboard

Discussions

Editorial

We define P to be a permutation of the first N natural numbers in the range $[1, N]$. Let pos_i denote the position of i in permutation P (please use 1-based indexing).

P is considered to be an *absolute permutation* if $abs(pos_i - i) = K$ holds true for every $i \in [1, N]$.

Given N and K , print the lexicographically smallest absolute permutation, P ; if no absolute permutation exists, print -1 .

Input Format

The first line of input contains a single integer, T , denoting the number of test cases.

Each of the T subsequent lines contains 2 space-separated integers describing the respective N and K values for a test case.

Constraints

- $1 \leq T \leq 10$
- $1 \leq N \leq 10^5$
- $0 \leq K < N$

Output Format

On a new line for each test case, print the lexicographically smallest absolute permutation; if no absolute permutation exists, print -1 .

Sample Input

```
3
2 1
3 0
3 2
```

Sample Output

```
2 1
1 2 3
-1
```

Explanation

Test Case 0:

Position	1	2
Permutation	2	1
Absolute Difference	1	1

Test Case 1:

	HackerRank		
Position	1	2	3
Permutation	1	2	3
Absolute Difference	0	0	0

Test Case 2:

No absolute permutation exists, so we print -1 on a new line.

f t in

Submissions: [9350](#)

Max Score: 40

Difficulty: Medium

Rate This Challenge:

☆☆☆☆☆

[More](#)

Current Buffer (saved locally, editable)  

Java 7  

```

1 import java.io.*;
2 import java.util.*;
3 import java.text.*;
4 import java.math.*;
5 import java.util.regex.*;
6
7 public class Solution {
8
9     public static void main(String[] args) {
10         Scanner in = new Scanner(System.in);
11         int t = in.nextInt();
12         for(int a0 = 0; a0 < t; a0++){
13             int n = in.nextInt();
14             int k = in.nextInt();
15         }
16     }
17 }
18

```

Line: 1 Col: 1

 [Upload Code as File](#) ☐ Test against custom input

Run Code

Submit Code

Join us on IRC at [#hackerrank](#) on freenode for hugs or bugs.

[Contest Calendar](#) | [Blog](#) | [Scoring](#) | [Environment](#) | [FAQ](#) | [About Us](#) | [Support](#) | [Careers](#) | [Terms Of Service](#) | [Privacy Policy](#) | [Request a Feature](#)