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C. Manhattan Permutations

time limit per test: 2 seconds memory limit per test: 256 megabytes input: standard input output: standard output

Let's call the *Manhattan value* of a permutation p the value of the expression $|p_1-1|+|p_2-2|+\ldots+|p_n-n|$.

For example, for the permutation [1,2,3], the Manhattan value is |1-1|+|2-2|+|3-3|=0, and for the permutation [3,1,2], the Manhattan value is |3-1|+|1-2|+|2-3|=2+1+1=4.

You are given integers n and k. Find a permutation p of length n such that its Manhattan value is equal to k, or determine that no such permutation exists.

 † A permutation of length n is an array consisting of n distinct integers from 1 to n in arbitrary order. For example, [2,3,1,5,4] is a permutation, but [1,2,2] is not a permutation (2 appears twice in the array), and [1,3,4] is also not a permutation (n=3 but there is 4 in the array).

Input

Each test consists of multiple test cases. The first line contains a single integer t ($1 \le t \le 10^4$) — the number of test cases. The description of the test cases follows.

The only line of each test case contains two integers n and k ($1 \leq n \leq 2 \cdot 10^5, 0 \leq k \leq 10^{12}$) — the length of the permutation and the required Manhattan value.

It is guaranteed that the sum of n over all test cases does not exceed $2 \cdot 10^5$.

Output

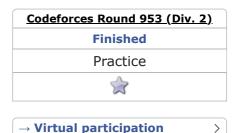
For each test case, if there is no suitable permutation, output "No". Otherwise, in the first line, output "Yes", and in the second line, output n distinct integers p_1, p_2, \ldots, p_n $(1 \le p_i \le n)$ — a suitable permutation.

If there are multiple solutions, output any of them.

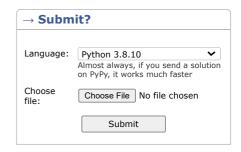
You can output the answer in any case (for example, the strings "yEs", "yes", "Yes", and "YES" will be recognized as a positive answer).

Example









→ Last submissions		
Submission	Time	Verdict
266032027	Jun/16/2024 13:35	Accepted
266028147	Jun/16/2024 13:26	Wrong answer on pretest 2
266022458	Jun/16/2024 13:14	Wrong answer on pretest 2





5 4 3 1 2 Yes 2 1 3 4 5

Note

In the first test case, the permutation [3,1,2] is suitable, its Manhattan value is |3-1|+|1-2|+|2-3|=2+1+1=4.

In the second test case, it can be proven that there is no permutation of length 4 with a Manhattan value of 5.

In the third test case, the permutation [1,2,3,4,5,6,7] is suitable, its Manhattan value is |1-1|+|2-2|+|3-3|+|4-4|+|5-5|+|6-6|+|7-7|=0.

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