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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<sup>†</sup>  $p$  the value of the expression  $|p_1 - 1| + |p_2 - 2| + \dots + |p_n - n|$ .

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.

<sup>†</sup>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  $t$  ( $1 \leq t \leq 10^4$ ) — 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  $p_1, p_2, \dots, p_n$  ( $1 \leq p_i \leq n$ ) — 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**

input	Copy
8 3 4 4 5 7 0 1 1000000000000 8 14 112 777 5 12 5 2	
output	Copy
Yes 3 1 2 No Yes 1 2 3 4 5 6 7 No Yes 8 2 3 4 5 6 1 7 No Yes	

**Codeforces Round 953 (Div. 2)**

Finished

Practice



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You can clone this contest to a mashup.

Clone Contest

→ Submit?

Language: Python 3.8.10 ▾  
Almost always, if you send a solution on PyPy, it works much faster

Choose file: Choose File No file chosen

Submit

→ Last submissions

Submission	Time	Verdict
<a href="#">266032027</a>	Jun/16/2024 13:35	Accepted
<a href="#">266028147</a>	Jun/16/2024 13:26	Wrong answer on pretest 2
<a href="#">266022458</a>	Jun/16/2024 13:14	Wrong answer on pretest 2

→ Problem tags

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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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