Problem G
Find Iotas

Time Limit: 2 seconds

You are given a positive integer N and a nonnegative integer X.

Determine whether there exists a sequence $A = (A_1, A_2, \ldots, A_{2N})$ of length $2N$ satisfying all of the following conditions.

- Each integer from 1 to N appears in A exactly twice.
- The sequence $(1, 2, \ldots, N)$ occurs exactly X times as a subsequence of A. In other words, there are exactly X ways to choose indices $1 \leq i_1 < i_2 < \cdots < i_N \leq 2N$ such that $A_{i_j} = j$ $(1 \leq j \leq N)$.

If such a sequence exists, output one. If multiple such sequences exist, output any one of them.

Input

The input consists of multiple test cases in the following format.

T
case_1
case_2
$\vdots$
case_T

Each test case is given in the following format.

N X

The first line contains an integer T $(1 \leq T \leq 2 \times 10^5)$, the number of test cases.

For each test case, you are given a positive integer N $(1 \leq N \leq 2 \times 10^5)$ and a nonnegative integer X $(0 \leq X \leq 10^{18})$.

The sum of N over all test cases does not exceed 2×10^5.

Output

For each test case, if there is no sequence satisfying the conditions, print `No` on a single line.

Otherwise, print `Yes` on the first line, and print $2N$ integers $A_1, A_2, \ldots, A_{2N}$ representing a sequence satisfying the conditions on the second line.

If there are multiple valid sequences, you may output any of them.

Sample Input	Sample Output
3 2 3 50 1000000000000000000 4 0	Yes 1 2 1 2 No Yes 4 4 3 3 2 2 1 1