Bull Placement Goldman Sachs 01

Q1.

Problem Title

Party

Problem Statement

Mr. X's birthday is in next month. This time he is planning to invite N of his friends. He wants to distribute some chocolates to all of his friends after party. He went to a shop to buy a packet of chocolates. At chocolate shop, each packet is having different number of chocolates. He wants to buy such a packet which contains number of chocolates, which can be distributed equally among all of his friends. Help Mr. X to buy such a packet.

Input

First line contains T, number of test cases. Each test case contains two integers, N and M. where is N is number of friends and M is number number of chocolates in a packet.

Output

In each test case output "Yes" if he can buy that packet and "No" if he can't buy that packet.

Q2. Problem Title

JOSEPHUS_CIRCLE

Problem Statement

There are n people standing in a circle (numbered clockwise 1 to n) waiting to be executed. The counting begins at point 1 in the circle and proceeds around the circle in a fixed direction (clockwise). In each step, a certain number of people are skipped and the next person is executed. The elimination proceeds around the circle (which is becoming smaller and smaller as the executed people are removed), until only the last person remains, who is given freedom. Given the total number of persons n and a number k which indicates that k-1 persons are skipped and kth person is killed in circle. The task is to choose the

place in the initial circle so that you are the last one remaining and so survive. Consider if n = 5 and k = 2, then the safe position is 3. Firstly, the person at position 2 is killed, then person at position 4 is killed, then person at position 1 is killed. Finally, the person at position 5 is killed. So the person at position 3 survives.

Input

The first line of input contains a single integer T denoting the number of test cases. Then T test cases follow. The first and only line of each test case consists of two space separated positive integers denoting n and k.

Output

Corresponding to each test case, in a new line, print the safe position.