Problem

While playing a mental math game, you realize that the number *k* is mathematically beautiful.

You then realize that the number *x* can be mathematically beautiful if it is represented as a sum of a sequence where each element is a power of k and all the numbers in the sequence are different.

Task

Your task is to determine whether the number is mathematically beautiful.

Input format

- The first line contains *T* denoting the number of test cases.
- The next T lines contain x and k denoting the numbers.

Output Format

For each test case, output *"YES"* if x is "mathematically beautiful" and *"NO"* otherwise.

Constraints

$T <= 1000$

$(1 <= x <= 10^{18})$

$(2 <= k <= 9)$

Sample Input	Sample Output
2 91 3 17 5	YES NO

Time Limit: 2

Memory Limit: 256

Source Limit: