

Prime Sum

The problem is quite simple. You're given a number N and a positive integer K . Tell if N can be represented as a sum of K prime numbers (not necessarily distinct).

Input Format

The first line contains a single integer T , denoting the number of test cases.
Each of the next T lines contains two positive integers, N & K , separated by a single space.

Output Format

For every test case, output "Yes" or "No" (without quotes).

Constraints

- $1 \leq T \leq 5000$
- $1 \leq N \leq 10^{12}$
- $1 \leq K \leq 10^{12}$

Sample Input

```
2
10 2
1 6
```

Sample Output

```
Yes
No
```

Explanation

In the first case, 10 can be written as $5 + 5$, and 5 is a prime number. In the second case, 1 cannot be represented as a sum of prime numbers, because there are no prime numbers less than 1.