

Book Gift

Brembo is a generous child. Every week, he does a social work with his father in an orphanage. So, he need something to give for. Something useful for children in that orphanage. He then decided to give books to the orphanage.

He buys **N** books in the books store. All of the books are the same kind. But, one thing that matters is every week, the number of children in that orphanage is different. Brembo is wondering whether all children will get the book equally if at that time there are **M** children with the N books.

(This problem is intended for beginners)

Input

The first line of input is T, the number of test case. ($T \leq 20$)

The next T lines contains two integer, M and N that represent the number of children and the number of books. ($1 \leq M, N \leq 1000$)

Output

Output "YES" if all children will get the number of books equally. Else output "NO".

Example

Input:

```
4
2 6
10 12
150 1500
1 1
```

Output:

```
YES
NO
YES
YES
```