

## Machining Parts

### Problem Description

Kaikai's factory is methodically producing a kind of magical parts, and the production process of the magical part is also magical. There are  $n$  workers in the factory and they are numbered from 1 to  $n$ . Some workers have two-way conveyor belts for parts. Ensure that there is no more than one conveyor belt between each two workers.

If worker  $x$  wants to produce a part of stage  $L$  ( $L > 1$ ), then **all** workers **directly** connected with worker  $x$  by the conveyor belts will need to produce a part that has been processed to stage  $L-1$  (but worker  $x$  himself **does not need to** produce parts with stage  $L-1$ ).

If worker  $x$  wants to produce a part of stage 1, **all** workers **directly** connected to worker  $x$  by the conveyor belts will need to provide worker  $x$  with a raw material.

Xuanxuan is worker No. 1. Now  $q$  orders are given. The  $i^{\text{th}}$  order indicates that the worker  $a_i$  wants to produce a part of stage  $L_i$ . Xuanxuan wants to know if he has to supply someone with raw materials for each work order. He knows you're smart enough to figure it out for him!

### Input

The first line contains three positive integers,  $n$ ,  $m$ , and  $q$ , representing the number of workers, the number of conveyor belts, and the number of work orders respectively.

For the next  $m$  lines, there are two positive integers  $u$  and  $v$  in each line, representing that there is a conveyor belt between worker  $u$  and worker  $v$ . It is ensured that  $u \neq v$ .

For the next  $q$  lines, there are two positive integers  $a$  and  $L$  in each line, representing that work  $a$  wants to produce a part of stage  $L$ .

### Output

There are  $q$  lines, and every line has a string of "Yes" or "No". If Xuanxuan, as worker 1, needs to supply raw materials when following order  $i$ , then output "Yes" in line  $i$ ; otherwise, output "No" in line  $i$ . Note that the output **do not contain** quotation marks.

### Sample Input 1

```
3 2 6
1 2
2 3
1 1
2 1
3 1
1 2
2 2
```

3 2

**Sample Output 1**

No  
Yes  
No  
Yes  
No  
Yes

**Sample Input 2**

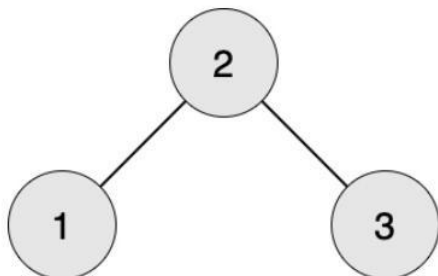
5 5 5  
1 2  
2 3  
3 4  
4 5  
1 5  
1 1  
1 2  
1 3  
1 4  
1 5

**Sample Output 2**

No  
Yes  
No  
Yes  
Yes

**Hint**

[Explanation of Sample 1]



Worker 1 wants to produce parts of stage 1, and worker 2 is required to provide raw materials.

Worker 2 wants to produce parts of stage 1, and worker 1 and 3 are required to provide raw materials.

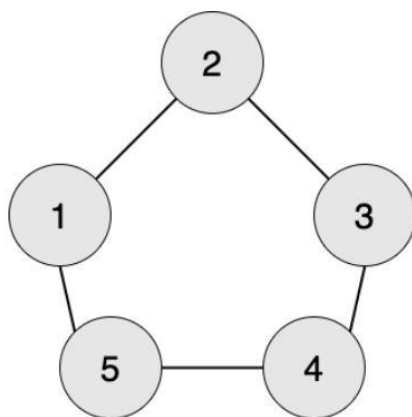
Worker 3 wants to produce parts of stage 1, and worker 2 is required to provide raw materials.

Worker 1 wants to produce parts of stage 2, and worker 2 is required to produce parts of stage 1, and worker 1 and 3 are required to produce raw materials.

Worker 2 wants to produce parts of stage 2, and worker 1 and 3 are required to produce parts of stage 1, and worker 2 is required to produce raw materials for both of them.

Worker 3 wants to produce parts of stage 2, and worker 2 is required to produce parts of stage 1, and worker 1 and 3 are required to produce raw materials.

**[Explanation of Sample 2]**



Worker 1 wants to produce parts of stage 1, and worker 2 and 5 are required to provide raw materials.

Worker 1 wants to produce parts of stage 2, and worker 2 and 5 are required to provide parts of stage 1, and workers 1, 3, and 4 are required to provide raw materials.

Worker 1 wants to produce parts of stage 3, and worker 2 and 5 are required to provide parts of stage 2, and workers 1, 3, and 4 are required to provide parts of stage 1, and workers 2, 3, 4, and 5 are required to provide raw materials.

Worker 1 wants to produce parts of stage 4, and worker 2 and 5 are required to provide parts of stage 3, and workers 1, 3, and 4 are required to provide parts of stage 2, and workers 2, 3, 4, and 5 are required to provide parts of stage 1, all workers should provide raw materials.

Worker 1 wants to produce parts of stage 5, and worker 2 and 5 are required to provide parts of stage 4, and workers 1, 3, and 4 are required to provide parts of stage 3, and workers 2, 3, 4, and 5 are required to provide parts of stage 2, and all workers should provide parts of stage 1, and all workers should provide raw materials.

**[Data Scale and Constraints]**

There are 20 test points in total.

$1 \leq u, v, a \leq n$ .

For test points 1~4,  $1 \leq n, m \leq 1000, q=3, L=1$ .

For test points 5~8,  $1 \leq n, m \leq 1000, q=3, 1 \leq L \leq 10$ .

For test points 9~12,  $1 \leq n, m, L \leq 1000, 1 \leq q \leq 100$ .

For test points 13~16,  $1 \leq n, m, L \leq 1000, 1 \leq q \leq 10^5$ .

For test points 17~20,  $1 \leq n, m, q \leq 10^5, 1 \leq L \leq 10^9$ .