Interstate

Time Limit: 1 Second
Memory Limit: 256 MB

Interstate highway system is a network that connects cities in different states in the United States. Different highways might have different speed limits (e.g. 60/65/70 mph). Under bad weather like heavy fog, interstates might be closed due to low visibility to ensure safety. In general, the decision is made based on the speed limit of the highway, so all interstates with speed limits above a certain criteria will be closed when the visibility reaches some threshold (assuming that the weather is the same across the country). As you are planning for traveling during the upcoming spring (or maybe fall?) break, you want to know if the number of cities you can travel to given the weather condition. You will be given a sequence of queries, each asking you to count the number of city you can visit from city x when interstates with speed limits above l are closed.

Input

The first line of input contains three integer n, m, and q ($2 \leq n \leq 10^5$, $n-1 \leq m \leq \min(\frac{n(n-1)}{2}, 10^5)$, $1 \leq q \leq 10^5$) - the number of cities, the number of interstates, and the number of queries.

The following m lines describe the interstates. Each line contains three integers u v k ($1 \leq u, v \leq n$, $1 \leq k \leq 10^9$), denoting an undirected highway between city u and city v with speed limit k. It is guaranteed that there are no self-loops or multiple edges, but the graph might be unconnected.

The last q lines describe the queries. You are forced to answer each query online, so instead of the actual values, we will give you two integers x' and l' ($0 \leq x' < n$, $0 \leq l' < 10^5$) on each line, and you can get the actual values by $x = (x' + lastans) \mod n + 1$ and $l = (l' + lastans) \mod 10^5 + 1$, where $lastans$ is the answer for the previous query, and $lastans = 0$ before the first query.

Output

For each query, output a single integer denoting the number of cities you can visit from city x.

Sample Inputs

```
5 5 2
1 2 1
2 3 2
3 4 3
4 5 4
3 5 5
0 2
0 99999
```

Sample Outputs

```
4
5
```

Note

The queries are:

- $x = 1, l = 3$
- $x = 5, l = 4$