Problem G
Graph Coloring Problem

Time limit: 2 seconds
Memory limit: 1024 megabytes

Problem Description

You are given a connected, undirected simple graph of n vertices and m edges, and the vertices are numbered from 1 to n. The i-th edge connects vertex u_i and v_i and has a weight w_i.

For a given positive integer x, let $f(x)$ represent the minimum number of colors needed to color the vertices of the graph such that for every pair of distinct vertices u and v, at least one of the following condition holds:

- Vertex u and v are in different colors.
- There does not exist a simple path (a path without duplicate vertices and edges) from u to v such that the maximum edge along the path is lower or equal to x.

You are given q queries, each of which provides an integer k_i. Your task is to output the value of $f(k_i)$ for each query.

Input Format

The first line of the input contains two integers n, m, and q, denoting the number of vertices, the number of edges, and the number of queries, respectively.

The i-th of the following m lines contains three integers u_i, v_i, and w_i, denoting there is an edge with weight w_i connecting vertex u_i and v_i.

The i-th of the following q lines contains an integer k_i, denoting the query integer.

Output Format

For each query, print $f(k_i)$ in one line.

Technical Specification

- $2 \leq n \leq 3 \times 10^5$
- $n - 1 \leq m \leq \min(\frac{n(n-1)}{2}, 3 \times 10^5)$
- $1 \leq q \leq 3 \times 10^5$
- $1 \leq u_i, v_i \leq n$ for $i = 1, 2, \cdots, m$
- $1 \leq w_i \leq 10^9$ for $i = 1, 2, \cdots, m$
- $1 \leq k_i \leq 10^9$ for $i = 1, 2, \cdots, q$
- It is guaranteed that the input graph is simple and connected.

Sample Input 1

```
5 6 6
1 5 3
```

Sample Output 1

```
2
3
```

```
2 5 14
1 2 12
2 4 7
4 3 10
2 3 9
3
9
12
15
1
8
```

```
5
5
1
2
```

Sample Input 2

```
2 1 5
1 2 100
98
99
100
101
102
```

Sample Output 2

```
1
1
2
2
2
```