

Pondo Path Queries

time limit per test: 10 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

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Problem Statement

You are given a directed graph with n vertices and m edges with weights. You are also given Q queries each containing three integers u , v and k . For each query determine the shortest **walk** from u to v using at most k edges. NOTE: A walk is like a path but can repeat vertices.

Input Format

Your first line will contain three space-separated integers n , m and Q . Your next m lines will contain three integers each u , v and w representing an edge from u to v with weight w . Your next Q lines will contain three integers each u , v and k representing the start point, end point and max number of edges respectively.

Output Format

You should output one line for each query, representing the minimum distance from u to v after a walk of at most k in length. If it is not possible to reach in k edges or less, then output `NOT POSSIBLE`.

Constraints

- $1 \leq n, u, v \leq 100$
- $1 \leq m \leq n \cdot (n - 1)$
- $-100 \leq w \leq 100$
- $1 \leq k \leq 10^9$

YOU CAN HAVE EDGES BETWEEN THE SAME NODES

Sample Cases

Input 1

```
5 4 10
1 2 1
2 3 2
3 4 -2
4 5 3
1 2 0
1 2 10
1 3 1
1 3 2
1 5 4
5 5 4
5 4 4
5 3 4
5 2 4
5 1 4
```

Output 1

```
NOT POSSIBLE
1
NOT POSSIBLE
3
4
0
NOT POSSIBLE
NOT POSSIBLE
NOT POSSIBLE
NOT POSSIBLE
```

Input 2

```
2 2 10
1 2 1
2 1 -2
1 1 1
1 1 2
1 1 3
1 1 4
1 1 5
1 1 6
1 1 7
1 1 8
1 1 9
1 1 10
```

Output 2

```
0
-1
-1
-2
-2
-3
-3
-4
-4
-5
```

Template

```
n, m, q = map(int, input().split())
edges = [None] * m
for i in range(m):
    u, v, w = map(int, input().split())
    edges[i] = (u, v, w)

# print your output
```