B: Delivering Goods
Red

You run a delivery company and must deploy a fleet of vehicles to deliver goods to clients. All of the goods and delivery trucks are initially located at your warehouse. The road network is given as a directed, weighted graph. One vertex is your warehouse and a subset of the remaining vertices are locations of clients who will be receiving a package from you today. The weight on an edge represents the driving time across that edge. You guarantee extremely fast shipping: the trucks start driving immediately at the start of the day and each client i will receive the package at time t_i where t_i is the driving time of a shortest path from the warehouse to their location.

What is the minimum number of trucks you have to deploy to ensure this guarantee is met? That is, what is the minimum number of trucks such that it is possible to give each truck a driving route so that every client i is visited by some truck at time t_i. Assume it takes no time to load the trucks with the appropriate goods at the start of the day, and it takes no time to drop goods off at a client once the truck arrives at the client. These goods are small enough that each truck can carry goods for as many clients as necessary.

Input

Input may consist of multiple cases. The first line of each test case consists of three numbers n, m, and c. Here n denotes the number of vertices in the road network ($2 <= n <= 10^3$), m denotes the number of edges ($1 <= m <= 10^5$), and c denotes the number of clients ($1 <= c <= 300, c < n$). The vertices are numbered 0 to $n - 1$. The warehouse is always at vertex 0. The second line consists of c distinct integers between 1 and $n - 1$ indicating the vertices where the clients reside.

The rest of the input for a case consists of m lines, each containing integers u,v where $0 <= u, v <= n - 1$ and l. This indicates there is a directed edge from u to v with length l. Each edge's length l satisfies $1 <= l <= 10^9$. It will always be possible to reach every client from the warehouse. There will be at most one edge from a vertex u to another vertex v, but there may be edges from both u to v and from v to u.

Following the last test case will be a line containing 0 0 0. There may be blank lines after each test case for readability.

Output

For each case, display the case number followed by the answer, formatted as in the sample. Output a single integer that is the minimum number of vehicles required to ensure each client i is visited at time t_i by some vehicle.

Explanation: In the first sample, one vehicle can follow the path (0,1,2) and the other can follow (0,3). In the second sample, the only solution is to use paths (0,1), (0,2), and (0,3). In the final sample, one vehicle can follow (0,1), another (0,4,6), and the last one (0,2,3,5,7).

Sample Input	Sample Output
4 5 3	Case 1: 2
1 2 3	Case 2: 3
0 1 1	Case 3: 3
0 3 1	
0 2 2	
1 2 1	
3 2 1	
4 5 3	
1 2 3	
0 1 1	
0 3 1	
0 2 1	
1 2 1	
3 2 1	
8 11 5	
1 3 4 6 7	
0 1 5	
0 4 1	
0 2 2	
0 6 6	
2 3 1	
2 6 3	
3 5 7	
4 1 5	
5 7 3	
6 5 6	
4 6 4	
0 0 0	