Change of Scenery

Every day Lea walks to the lab using the same route as it is the shortest way. This is efficient, but over time she has grown slightly bored of seeing the same buildings and trees and junctions every day. So she decides to look for different routes. Of course, she has a lot to do in the lab, and she does not want to sacrifice time. Thus the new way should be as short as the old one. Is there another way that differs from the old one in at least one junction or path?

Input

The first line of the input contains an integer t. t test cases follow, each of them separated by a blank line.

Each test case starts with an integer a line containing three integers N M and K, where N is the number of junctions, M is the number of streets and footpaths in Lea's city, and K is the number of junctions she passes every day

The next line contains K integers, the (1-based) indices of the junctions Lea passes every day. The first integer in this line will always be 1, the last integer will always be N. There is a shortest path from 1 to N along the K junctions given.

M lines follow. The i-th of those lines contains three integers a_i b_i c_i and describes a way from junction a_i to junction b_i of length c_i. Connections between junctions are always undirected.

Note that there may be multiple connections between the same two junctions. The shortest path given uses for every pair of successive junctions a and b a path of minimal length between a and b.

Output

For each test case, output one line containing "Case #i: x" where i is its number, starting at 1, and x is either "`yes`" if there is another way you can take without losing time or"`no`" otherwise.

Constraints

- $1 \leq t \leq 20$
- $1 \leq K \leq N \leq 10\,000$
- $0 \leq M \leq 1\,000\,000$
- $1 \leq a_i, b_i \leq N$ for all $1 \leq i \leq M$.
- $1 \leq c_i \leq 10\,000$ for all $1 \leq i \leq M$.
- If $N \geq 1000$ for some case then this is the only case. ($t = 1$)

Sample Input 1	Sample Output 1
2 3 3 3 1 2 3 1 2 1 2 3 2 1 3 3 4 5 2 1 4 1 2 2 2 4 1 1 3 1 3 4 2 1 4 2	Case #1: yes Case #2: no