

C. Duff in the Army

time limit per test: 4 seconds
memory limit per test: 512 megabytes
input: standard input
output: standard output

Recently Duff has been a soldier in the army. Malek is her commander.

Their country, Andarz Gu has n cities (numbered from 1 to n) and $n - 1$ bidirectional roads. Each road connects two different cities. There exist a unique path between any two cities.

There are also m people living in Andarz Gu (numbered from 1 to m). Each person has an ID number. ID number of i -th person is i and he/she lives in city number c_i . Note that there may be more than one person in a city, also there may be no people living in the city.

Malek loves to order. That's why he asks Duff to answer to q queries. In each query, he gives her numbers v , u and a .

To answer a query:

Assume there are x people living in the cities lying on the path from city v to city u . Assume these people's IDs are p_1, p_2, \dots, p_x in increasing order.

If $k = \min(x, a)$, then Duff should tell Malek numbers k, p_1, p_2, \dots, p_k in this order. In other words, Malek wants to know a minimums on that path (or less, if there are less than a people).

Duff is very busy at the moment, so she asked you to help her and answer the queries.

Input

The first line of input contains three integers, n , m and q ($1 \leq n, m, q \leq 10^5$).

The next $n - 1$ lines contain the roads. Each line contains two integers v and u , endpoints of a road ($1 \leq v, u \leq n$, $v \neq u$).

Next line contains m integers c_1, c_2, \dots, c_m separated by spaces ($1 \leq c_i \leq n$ for each $1 \leq i \leq m$).

Next q lines contain the queries. Each of them contains three integers, v , u and a ($1 \leq v, u \leq n$ and $1 \leq a \leq 10$).

Output

For each query, print numbers k, p_1, p_2, \dots, p_k separated by spaces in one line.

Examples

input
5 4 5 1 3 1 2 1 4 4 5 2 1 4 3 4 5 6 1 5 2 5 5 10 2 3 3 5 3 1
output
1 3 2 2 3 0

3	1	2	4
1	2		

Note

Graph of Andarz Gu in the sample case is as follows (ID of people in each city are written next to them):