# Valid Path

Roger was having fun solving his problems until he found this one. As you know, an undirected connected graph with **N** nodes and **N-1** edges is called a tree. You are given an integer **'K'** and a tree consisting of **'N'** nodes. Each node **'i'** has a value **a(i)** associated with it.

We call a path **'P'** of tree valid if following conditions are satisfied:

- **P** has at least 2 nodes associated with it.
- **Max a(u) - Min a(u) >= K** (u belongs to the nodes present in the choosen P).

Your task is to count the number of Valid Paths.

## Input

The first line contains two space-separated integers **N** and **K**.

The second line contains **N** space-separated positive integers **a(1), a(2), ..., a(n).**

Then the next **n - 1** line each contains a pair of integers **u** and **v** denoting that there is an edge between u and v.

## Output

Print the number of Valid Paths.

## Example

**SAMPLE INPUT**
3 1
1 2 3
1 2
2 3

**SAMPLE OUTPUT**
3

## CONSTRAINTS

1 <= N <= 5000
1 <= u,v <= N
0 <= K <= 10^9
0 <= ai <= 10^9

Like Trees? Try the problems: **RTREE**, **RTREE3** as well