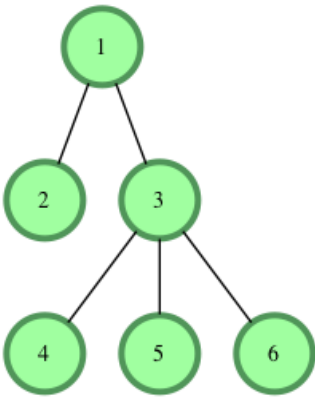


A pair of nodes,  $(a,b)$ , is a *similar pair* if the following conditions are true:

- 1. node  $a$  is the ancestor of node  $b$
- 2.  $abs(a - b) \leq k$

Given a tree where each node is labeled from  $1$  to  $n$ , find the number of similar pairs in the tree.

For example, given the following tree:



We have the following pairs of ancestors and dependents:

Pair	abs (a-b)	Pair	abs (a-b)
1,2	1	3,4	1
1,3	2	3,5	2
1,4	3	3,6	3
1,5	4		
1,6	5		

If  $k = 3$  for example, we have  $6$  pairs that are *similar*, where  $abs(a - b) \leq k$ .

## Function Description

Complete the *similarPair* function in the editor below. It should return an integer that represents the number of pairs meeting the criteria.

similarPair has the following parameter(s):

- $n$ : an integer that represents the number of nodes
- $k$ : an integer
- *edges*: a two dimensional array where each element consists of two integers that represent connected node numbers

## Input Format

The first line contains two space-separated integers  $n$  and  $k$ , the number of nodes and the similarity threshold.

Each of the next  $n - 1$  lines contains two space-separated integers defining an edge connecting nodes  $p[i]$  and  $c[i]$ , where node  $p[i]$  is the parent to node  $c[i]$ .

Constraints

- $1 \leq n \leq 10^5$
- $0 \leq k \leq n$
- $1 \leq p[i], c[i] \leq n$

Output Format

Print a single integer denoting the number of similar pairs in the tree.

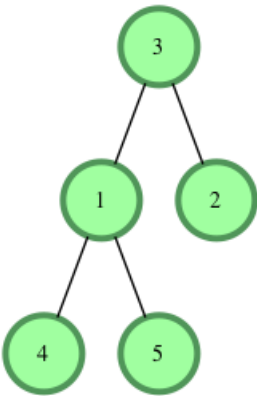
Sample Input

```
5 2
3 2
3 1
1 4
1 5
```

Sample Output

```
4
```

Explanation



The similar pairs are  $(3, 2)$ ,  $(3, 1)$ ,  $(3, 4)$ , and  $(3, 5)$ , so we print **4** as our answer. Observe that  $(1, 4)$  and  $(1, 5)$  are *not* similar pairs because they do not satisfy  $abs(a - b) \leq k$  for  $k = 2$ .