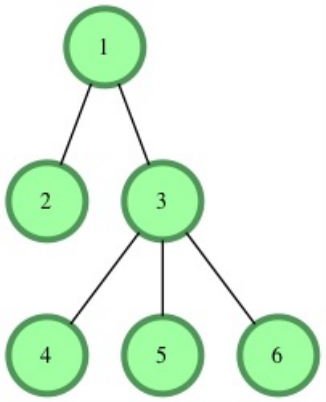
A pair of nodes, (a, b), is a *similar pair* if the following conditions are true:

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

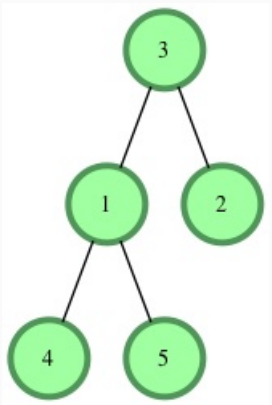
```
5 2
```

```
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 $k = 2$.