# Cut Tree

Given a tree *T* with *n* nodes, how many subtrees (*T'*) of *T* have at most *K* edges connected to (T - T')?

### Input Format

The first line contains two integers *n* and *K* followed by *n-1* lines each containing two integers a & b denoting that there's an edge between a & b.

### Constraints

1 <= K <= n <= 50
Every node is indicated by a distinct number from 1 to n.

### Output Format

A single integer which denotes the number of possible subtrees.

### Sample Input

```
3 1
2 1
2 3
```

### Sample Output

```
6
```

### Explanation

There are 2^3 possible sub-trees:

{} {1} {2} {3} {1, 2} {1, 3} {2, 3} {1, 2, 3}

But:
the sub-trees {2} and {1,3} are not valid. {2} isn't valid because it has 2 edges connecting to it's complement {1,3} whereas K = 1 in the sample test-case {1,3} isn't valid because, well, it's not a sub-tree. The nodes aren't connected.