size of subtree

given a tree with size n and rooted at 0 show size of all subtree (size of subtree A is number of node that A occupy)

input:

first line get n (n \leq 5e5) next n-1 lines get list of bi-direction edge

output:

have n line show size of all subtree

input 1:

5

0 1

2 0

3 1

1 4

output 1:

5 3 1 1 1

input 2:

5

4 0

3 2

1 2

4 1

output 2:

5 3 2 1 4

input 3:

4

0 1

0 2

3 0

output 3:

4 1 1 1