

Problem C. Count the Permutations

Input file: *standard input*
 Output file: *standard output*
 Time limit: 1 second
 Memory limit: 1024 mebibytes

You are given an undirected tree T with N vertices numbered 1 through N . An edge between vertices u and v in T is denoted as $\{u, v\}$.

Let $P = (p_1, p_2, \dots, p_N)$ be a permutation of $(1, 2, \dots, N)$. A permutation is *fitting* when, for each edge $\{u, v\}$ of the tree T , the edge $\{p_u, p_v\}$ also belongs to the tree T .

Compute the number of fitting permutations among the $N!$ possible permutations. Since the answer may be very large, find it modulo 998 244 353.

Input

The first line of the input contains an integer N , the number of vertices in the tree T ($1 \leq N \leq 100\,000$).

The i -th of the following $N - 1$ lines contains two integers u_i and v_i which mean that there is an edge $\{u_i, v_i\}$ in the tree T ($1 \leq u_i, v_i \leq N$).

It is guaranteed that the given graph is a tree.

Output

Print a line with a single integer: the answer modulo 998 244 353.

Examples

<i>standard input</i>	<i>standard output</i>
4 1 3 4 1 2 1	6
4 3 4 1 2 2 3	2
6 6 4 1 3 4 5 2 3 4 3	8