

Problem H. Around the World

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

In ICPCCamp, there are n cities and $(n-1)$ (bidirectional) roads between cities. The i -th road is between the a_i -th and b_i -th cities. It is guaranteed that cities are connected.

Recently, there are $2 \times c_i - 1$ new roads built between the a_i -th and b_i -th cities. Bobo soon comes up with an idea to travel around the world! He plans to start in city 1 and returns to city 1 after traveling along every road exactly once.

It is clear that Bobo has many plans to choose from. He would like to find out the number of different plans, modulo $(10^9 + 7)$.

Note that two plans A and B are considered different only if there exists an i where the i -th traveled road in plan A is different from the i -th road in plan B .

Input

The first line contains an integer n ($2 \leq n \leq 10^5$).

The i -th of the following $(n - 1)$ lines contains 3 integers a_i, b_i, c_i ($1 \leq a_i, b_i \leq n, c_i \geq 1, c_1 + c_2 + \dots + c_{n-1} \leq 10^6$).

Output

An integer denotes the number of plans modulo $(10^9 + 7)$.

Examples

standard input	standard output
3 1 2 1 2 3 1	4
3 1 2 1 1 3 2	144