Problem F. Fruit on the Tree

Input file:	`stdin`
Output file:	`stdout`
Time limit:	2 seconds
Memory limit:	256 MB

"Triangoes", a new type of fruit, are in triangular shapes and taste like mangoes. However, nobody in the world has ever seen "triangoes" since they always grow implicitly on the tree and hide in the triangles. Formally, a "triango" tree is an acyclic undirected connected graph with weighted edges and a "triango" is a set of three vertices on the "triango" tree such that the lengths of the three simple paths between each pair of these three vertices satisfy the triangle inequality; that is to say, they form a triangle.

After a long expedition, **Suzukaze** has eventually found a "triango" tree in his house. He needs your help to count the number of "triangoes" on the "triango" tree. Can you help him?

Input

The first line contains an integer n ($1 \le n \le 10^5$), the number of vertices on the "triango" tree. The vertices on the "triango" tree are labeled from 1 to n.

In the following $n-1$ lines, each of the lines contains 3 integers u, v, w ($1 \le u, v \le n, u \ne v, 1 \le w \le 10^5$), which means that there is an undirected edge with weight w connecting vertex u and vertex v.

It's guaranteed that the input data is an acyclic undirected connected graph.

Output

Output an integer - the number of "triangoes" on the "triango" tree.

Examples

stdin	stdout
7 1 2 1 1 3 1 2 4 1 2 5 1 3 6 1 3 7 1	8