Problem B
Diameter of a Tree

Time limit: 1 second
Memory limit: 2048 megabytes

Problem Description

Given an undirected tree with n nodes, where each edge has a weight that can be negative, your task is to find the diameter of the tree. The diameter of a tree is defined as the length (sum of weights) of the longest path between any two nodes (which may be the same) in the tree.

Input Format

The first line contains a single integer n, the number of nodes in the tree. The next $n-1$ lines each contain three integers u, v, and w, representing an edge between nodes u and v with weight w.

Output Format

Print a single integer, the diameter of the tree.

Technical Specification

- $2 \leq n \leq 10^5$
- $1 \leq u, v \leq n$
- $-10^6 \leq w \leq 10^6$

Sample Input 1

```
5
1 2 10
2 3 5
2 4 -5
3 5 6
```

Sample Output 1

```
21
```