Diameter

All submissions
Best submissions

Points: 100 (partial)
Time limit: 0.5s
Memory limit: 64M
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Tags
Graphs
Difficulty
Easy

A tree structure consisted of **N** nodes is given. Nodes are numbered **from 0 to N-1**. The length of a path between two edges is the sum of the lengths of all the edges between them. Find the length of the longest path in the tree.

Input

- Read from the standard input
- **N** is read from the first line
- From each of the next **N - 1** lines an edge is given as 3 numbers separated by spaces
  - The first two numbers are the numbers of the nodes that the edge connects
  - The third number is the length of the edge

Output

- Print to the standard output
- Print a number on a single line
  - The length of the longest path between nodes in the tree

Constraints

- **1** <= **N** < **50 000**

Sample test

Input

```
5
3 4 3
0 3 4
0 2 6
1 4 9
```

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Output

```
22
```

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Input

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```
11
2 7 2
1 7 6
5 1 8
2 8 6
8 6 9
10 5 5
9 1 9
0 10 15
3 1 21
6 4 3
```

Output

```
54
```

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Input

```
16
2 3 92
5 2 10
14 3 42
2 4 26
14 12 50
4 6 93
9 6 24
15 14 9
0 2 95
8 0 90
0 13 60
9 10 59
1 0 66
11 12 7
7 10 35
```

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Output

```
428
```

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Comments

There are no comments at the moment.