Standard input

The first line will contain the number of nodes of the tree, N.

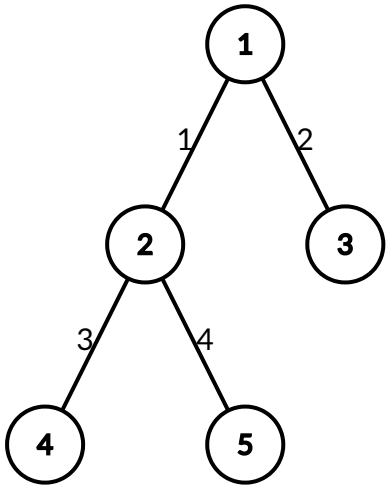
The next $N-1$ lines will contain the description of the edges of the tree, that is, the line $i+1$ will contain (in order) numbers A_i, B_i and W_i, meaning that there is an edge between nodes A_i and B_i with the label W_i between them.

Standard output

The output will only contain the desired sum.

Constraints and notes

- $2 \leq N \leq 10^5$
- $1 \leq W_i \leq 10^9$

Input	Output	Explanation
5 1 2 1 1 3 2 2 4 3 2 5 4	30	

We have the following distances:

$d(1,2) = 1; d(1,3) = 2;$
$d(1,4) = 3; d(1,5) = 4;$
$d(2,3) = 2; d(2,4) = 3;$
$d(2,5) = 4; d(3,4) = 3;$
$d(3,5) = 4; d(4,5) = 4$

The total sum is 30.