Description | Hints | Submissions | Discussions | Notes

Min Edge Weight

[illegible] Difficulty | 4 sec Time Limit | 512000KB Memory | 100 Score

80/80 XP | 30/30

Description

You are given a weighted tree of N nodes. $D(u,v)$ is defined as the minimum weight of edge in the simple path from u to v. Find the summation of $D(u,v)$ for all $1 \le u \le N$, $1 \le v \le N$, where $u < v$.

Input Format

The first line of input contains one integer T ($1 \le T \le 10^5$) — the number of test cases. Then T test cases follow.

The first line of each test case contains an integer N - the number of nodes in the tree ($1 \le N \le 10^5$).

The next $N-1$ line of each test case contains 3 space-separated integers u, v, w denoting that there is an edge between node u and node v of weight w. ($1 \le u,v \le N$), ($1 \le w \le 10^9$).

It is guaranteed that the sum of N over all test cases does not exceed 10^6.

Output Format

For each test case print the summation of $D(u,v)$ for all $1 \le u \le N$, $1 \le v \le N$, where $u < v$ in a new line.

Constraints

Sample Input 1

Copy

```
5
5
1 2 1
2 3 5
3 4 3
4 5 2
```

C++14 | 00:00:00 | 12 px

```
46      sort(edges.begin(),edges.end());
47      reverse(edges.begin(),edges.end());
48      lli ans=0;
49      for(auto e:edges){
50          int a=e.second.first;
51          int b=e.second.second;
52          a=rep(a);
53          b=rep(b);
```

Sample Tests | Manual Tests

Test Case 1

ACCEPTED

Input

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

Output

```
21
23
27
53
316
```

Desired Output

Console

ACCEPTED