# Problem 1003.Slipper

Gi is a naughty child. He often does some strange things. Therefore, his father decides to play a game with him.

Gi's father is a senior magician, he teleports Gi and Gi's Slipper into a labyrinth. To simplify this problem, we regard the labyrinth as a tree with $n$ nodes, rooted at node $1$. Gi is initially at node $s$, and his Slipper is at node $t$. In the tree, going through any edge between two nodes costs $w$ unit of power.

Gi is also a little magician! He can use his magic to teleport to any other node, if the depth difference between these two nodes equals to $k$. That is, if two nodes $u, v$ satisfying that $|dep_u - dep_v| = k$, then Gi can teleport from $u$ to $v$ or from $v$ to $u$. But each time when he uses magic he needs to consume $p$ unit of power. Note that he can use his magic any times.

Gi want to take his slipper with minimum unit of power.

## Input

Each test contains multiple test cases. The first line contains the number of test cases $(1 \le T \le 5)$. Description of the test cases follows.

The first line contains an integer $n$ --- The number of nodes in the tree. $2 \le n \le 10^6$

The following $n-1$ lines contains 3 integers $u, v, w$ that means there is an edge between nodes $u$ and $v$. Going through this edge costs $w$ unit of power. $1 \le u, v \le n, 1 \le w \le 10^6$

The next line will contain two separated integers $k, p$. $1 \le k \le \max_{u \subseteq V}\left(dep_u\right), 0 \le p \le 10^6$

The last line contains two positive integers $s, t$, denoting the positions of Gi and slipper. $1 \le s \le n, 1 \le t \le n$. It is guaranteed the $s \ne t$.

## Output

For each test case:

Print an integer in a line --- the minimum unit of power Gi needs.

## Example Input

```
1
6
6 1 2
3 5 2
2 4 6
5 2 2
5 6 20
3 8
6 5
```

## Example Output

```
12
```

## Hint

Example1: Gi can go from node 6 to node 1 using 2 units of power. Then he teleports from node 1 to node 2 using 8 units of power. Finally, he goes from node 2 to node 5 using 2 units of power.
$Total\ cost = 2 + 8 + 2 = 12$