Back to School '16: Cherry Tree

Time Limit: 2.0s **Memory Limit:** 64M

To celebrate the start of the school year, your school has planted a cherry tree in the front yard. However, this is no ordinary cherry tree. This cherry tree has N cherry patches, each with a specific number of cherries. It also has $N-1$ branches, each with a specific weight, connecting the patches to one another.

Yui is a big fan of cherry trees, but unfortunately does not have one of her own. She decides to make a single cut to the tree and take that part back home. She will only take home a portion that has at least C cherries and a total branch weight which is at most K.

Since patch 1 is always connected to the trunk of the tree, she will never take home a portion that has patch 1 (she isn't crazy enough to cut down the entire tree).

Since Yui isn't taking computer science this year, help her by writing a program to determine where to cut the tree!

Input Specification

The first line contains three space separated integers, N $(1 \leq N \leq 10\,000)$, C $(1 \leq C \leq 10^5)$ and K $(1 \leq K \leq 10^5)$, representing the number of patches on the tree, the number of cherries Yui wants, and the maximum weight she will take home.

The next line contains N space separated integers c_i $(1 \leq c_i \leq 10^5)$, representing the number of cherries on the i^{th} patch.

The next $N-1$ lines each contain three integers a_i, b_i $(1 \leq a_i, b_i \leq N)$ and k_i $(1 \leq k_i \leq 10^5)$, representing the two patches that the i^{th} branch connects as well as its weight.

Output Specification

Output one integer, indicating the number of possible unique cuts that Yui can make to fulfill her requirements.

Sample Input

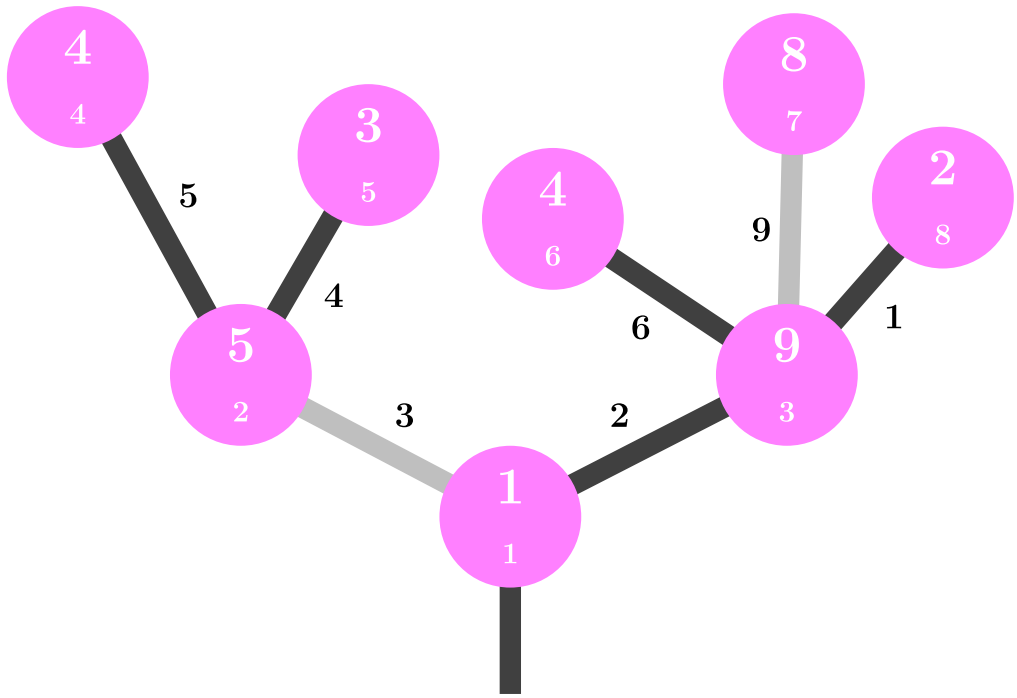
```
8 5 15
1 5 9 4 3 4 8 2
1 2 3
1 3 2
2 4 5
2 5 4
3 6 6
3 7 9
3 8 1
```

Sample Output

```
2
```

Explanation for Sample Input

Shown below is a visualization of the tree in the sample input:



The larger number on each patch represents the number of cherries on that patch.

In this case, the branch connecting patches 1 and 2 can be cut to obtain a portion with 12 cherries and a weight of 12. The branch connecting patches 3 and 7 can also be cut for 8 cherries and a weight of 9.