Even or Odd Spanning Tree

Input file:	`standard input`
Output file:	`standard output`
Time limit:	2 seconds
Memory limit:	512 megabytes

Oddly, even I find it odd that even though this seems like a natural rule to consider, I haven't even been able to find a single example of it existing previously. The odd problem here and there even resembles it a little bit, but even so, none of them are quite the same. How odd. Or even.

— Sam Cappleman-Lynes

You are given an undirected graph with n vertices and m edges. Assume T is a spanning tree of this graph, and let's denote $\text{Cost}(T)$ as the total weights of all the edges in T. Please find T_1 and T_2 such that:

- $\text{Cost}(T_1)$ is even, and $\text{Cost}(T_1)$ is minimized.
- $\text{Cost}(T_2)$ is odd, and $\text{Cost}(T_2)$ is minimized.

Input

The first line contains a single integer T ($1 \le T \le 10^4$), the number of test cases. For each test case:

The first line contains two integers n and m ($2 \le n \le 2 \cdot 10^5$, $1 \le m \le 5 \cdot 10^5$), denoting the number of vertices and the number of edges.

Each of the following m lines contains three integers u_i, v_i and w_i ($1 \le u_i, v_i \le n$, $u_i \neq v_i$, $1 \le w_i \le 10^9$), describing an undirected edge.

It is guaranteed that the sum of all n is at most $2 \cdot 10^5$, and the sum of all m is at most $5 \cdot 10^5$.

Output

For each test case, output a single line containing two integers: $\text{Cost}(T_1)$ and $\text{Cost}(T_2)$. Note that if you can't find such a spanning tree, please print "`-1`" as the cost instead.

Example

standard input	standard output
3 2 1 1 2 5 3 1 1 3 1 4 4 1 2 1 1 3 1 1 4 1 2 4 2	-1 5 -1 -1 4 3