Weird King

Abdul, the king in the North, is an abnormal person. He has a kingdom on n cities with m undirected roads joining them. Initially, for every pair of cities, there exists a path between them. Abdul likes to remove roads. When he removes a road, he gets pleasure equal to length of the removed road. Find the maximum pleasure Abdul can get, such that after even removing some roads, for every pair of cities, there exists a path between them.

Input

First line contains T, number of testcases. Second line contains n and m. M lines follow, each containing u,v and w, meaning there is an undirected edge between u and v, with weight w.

Output

Output T lines, each containing the answer to the testcase.

Constraints

1<=T<=10
1<=n<=100000
1<=m<=500000
1<=u,v<=n
1<=w<=10^9

Sample Input

2
3 3
1 2 3
2 3 1
3 1 2
2 1
1 2 5

Sample Output

3
0