

## Hasan and Modi-fied India.

After the ban of 500 and 1000 currency notes, all the people in Delhi were upset and went to the PMO to protest. The PM asked them to go to the bank for the new currency notes. In search for new currency notes, they left their homes but left behind their old currency notes at home. Now, Hasan a smart engineer figured this out and decided to make use of their carelessness and collect the currency notes to stand up against Donald Trump in the next presidential election.

The houses of the people are numbered from 1 ... N and you are given the count of the currency notes in the houses. Also it is not possible to visit all houses from all houses. You are given M roads with house U , V meaning that you can go to city U from V and from V to U. Also all houses that can visit each other directly or indirectly via a combination of roads are counted as one Ward. Your task is to count the maximum notes that Hasan can get from any ward.

Input :

The first line contains an integer t denoting the number of test cases.

The first line of each test case contains two integers : N, M .

N = Number of houses

M = Number of roads

The next line contains N integers signifying the the number of old currency notes.

A[1] , A[2] , .... , A[N]

A[i] = number of notes in house number i .

Then M lines follow, each with two integers U , V meaning you can go from house U to house V and vice versa.

Output :

Output consists of a single integer denoting the maximum notes you can get from any ward.

Sample Input :

```
1
8 5
100 200 300 100 200 500 1000 200
1 3
3 7
2 4
5 6
5 8
```

Output : 1400

Explanation.

Houses 1 , 3 and 7 are connected by roads so they form a ward.

Houses 2 and 4 are connected by road so they form another ward.

Also houses 5 6 and 8 are connected by roads and they too form a ward.

The maximum number of notes that Hasan can get is from ward 1. ( 100 + 300 + 1000 ) = 1400 .