# IOI Training Camp 2017 Practice Test 3

## King's Defense

Lil Cheejato's country is under attack and he employed a strategy to defend it. But he is a miser so he wants to do that very economically.
The country contains $N$ cities (numbered 1 through $N$) and $M$ roads between them (all roads are bidirectional). You can reach from any city to any other city, via country's road network. He wants to keep the minimum amount of roads required to keep the country connected and destroy the rest of them.
Obviously there is no fooling you all. The new road network will have to be a tree. So in order to maintain his strongholds he wants a certain subset of cities "S", possibly empty, to be the leaves of the tree. Each road has a cost of operation. Lil Cheejato wants to make a road network which has minimum total cost of operation and satisfies all the criteria. Compute the cost of operation of such a network.

### Input

First line contains 3 integers: $N$, $M$ and $K$. Denoting the number of cities, number of roads and the size of the subset $S$ respectively.
Next line has $K$ space separated integers denoting $S_i$'s.
Next $M$ lines follow $i$-th line has $u_i, v_i$ and $w_i$. The road connects city $u_i$ and $v_i$, and has a cost of operation $w_i$.

### Output

A single number the total cost of operation of the network.

### Constraints

- $1 \leq N \leq 10^5$
- $1 \leq M \leq 10^6$
- $0 \leq K \leq N$
- $0 \leq w_i \leq 10^9$

#### Sample Input 1

```
2 1 2
1 2
1 2 10
```

#### Sample Output 1

```
10
```

### Limits

Time: 2 seconds

Memory: 256 MB