

## Device from Alpha and Omega

“The device” is a time traveling machine created by H.G Tannhaus. The function of the time machine is to create a wormhole which opens portals 33 years into the past and future from the present time, allowing for time travel between the three points in time. The device use Cesium-137 (Cs-137) as a fuel.



One day Jonas Kahnwald found the device and he is going to fix the major mistakes in world history. After a little bit of research Jonas found  $N$  number of major time points (Time points are numbered 1 to  $N$ ) in world history. As a beginning he is going to fix  $G$  number of mistakes out of  $N$ . The issue is The Device needs Cesium-137 to time travel and it takes various amounts of Cesium-137 to travel between two time points.

Find and print the minimum Cesium-137 needed to travel all the  $G$  points.

Note : Jonas can start at any time point and traveling can be bidirectional.

### Input Format

The first line contains two space-separated integers,  $N$  (the number of time points that can travel) and  $G$  (the number of time points Jonas wants to travel), respectively.

The second line contains space-separated integers describing the time point for each in  $G$  time points.

Each line of the subsequent lines contains space-separated integers describing a time traveling road as  $T_i, t_i, A_i$  where  $A_i$  is the amount of Cesium-137 to travel between two time points.

### Constraints

$$2 \leq K \leq N \leq 10^5$$

$$1 \leq A_i \leq 10^3$$

### Sample Input 0

5 3  
1 3 4  
1 2 1  
2 3 2  
2 4 2  
3 5 3

### Sample Output 0

6

### Explanation 0

One of Jonas's optimal routes is 3->2->1->2->4 total amount of Cesium-137 =  $2+1+1+2=6$

Hint : Think time points are in a weighted undirected acyclic graph.

