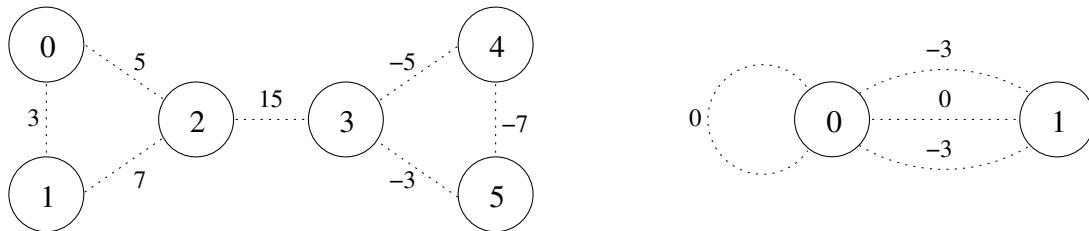


## Minimizing the cost of a graph

**P36054\_en**

Consider a connected, undirected multigraph  $G$  with labels at the edges. Define the cost of  $G$  as the sum of its labels. You must compute the minimum cost  $c$  that can be obtained after removing zero or more edges without disconnecting  $G$ . Among all the solutions that achieve cost  $c$ , you must also compute the minimum number of remaining edges  $m$ , and the maximum number of remaining edges  $M$ .

For instance, consider these two graphs:



The minimum possible cost of the first graph is 8, and there is just one way to achieve it, namely removing one of its seven edges: the 1-2 edge. Thus  $c = 8$ ,  $m = M = 6$ . As for the second graph, it is easy to see that  $c = -6$ ,  $m = 2$ , and  $M = 4$ .

### Input

Input is all integers, and consists of several descriptions of connected multigraphs. Every description starts with the number of vertices  $n$  and the number of edges  $e$ . Then follow  $e$  triples, one for every edge, with its two vertices and its label in this order. The vertices are numbered from 0 to  $n - 1$ . Assume  $0 \leq n \leq 10000$ .

### Output

For every given graph, output  $c$ ,  $m$  and  $M$  in one line.

#### Sample input 1

```
6 7
0 1 3    0 2 5    1 2 7    2 3 15
4 5 -7    3 4 -5    3 5 -3

2 4
1 0 0
0 0 0
0 1 -3
1 0 -3
```

#### Sample output 1

```
8 6 6
-6 2 4
```

### Problem information

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