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## Signed graph

P38073\_en

Dinovè Concurs de Programació de la UPC - Semifinal (2021-06-23)

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An undirected graph is signed if each edge has a positive or negative sign. A signed graph is called balanced if the product of all signs around every cycle is positive.

Given a signed graph, can you tell if it is balanced or not?

### Input

Input consists of several cases, each one with the number of vertices  $n$ , followed by the number of edges  $m$ , followed by  $m$  triples  $x y s$  to indicate an edge between  $x$  and  $y$  with sign  $s \in \{-1, 1\}$ . Assume  $1 \leq n \leq 10^5$ ,  $0 \leq m \leq 5n$ , that vertices are numbered between 0 and  $n - 1$ ,  $x \neq y$ , and that there is no more than one edge between  $x$  and  $y$ .

### Output

For every graph, print "yes" if it is balanced; otherwise print "no".

#### Sample input

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

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

#### Sample output

```
yes
no
```

### Problem information

Author : Conrado Martínez

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