Signed graph P38073_en

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 1

```
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 1

```
yes
no
```

Problem information

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