

Problem 9 : Linear equations

Problem

Given a set of m linear equations in n variables, you have to write a program which will tell whether the set of equations have any integral solutions or not.

Input

The input will consist of several test cases. Each case starts with two positive integers on a single line, n , the number of variables and m , the number of equations. The i th equation is of the form $\sum_{j=1}^n a_{ij}x_j = b_i$. This is followed by m lines. The i th line has $n + 1$ integers, giving the values of $a_{i1}, \dots, a_{in}, b_i$. The input is terminated by the case $n = 0, m = 0$. This case should not be processed. There is a blank line between two successive test cases. m and n will be atmost 9.

Output

For each case, print "Yes" if the given set of linear equations have an integral solution, otherwise print "No". The answer for each case must appear on a new line.

Sample Input

```
3 1
3 5 8 14

2 2
1 2 10
3 4 19

0 0
```

Sample Output

```
Yes
No
```