Is it a Tree?

Mine is playing a game with Tatsumi, where one person sketches some branches and knots and the other determines whether the sketch is of a tree or not. After playing this for a few hours, they've gotten bored and have decided to make the game more abstract. Now, instead of drawing pictures of trees, the couple fill in a $4 \cdot 4$ adjacency matrix with either `0` or `1`.

Their adjacency matrix stores the relationship between any two knots u and v. Specifically, if $adj[u][v] = 1$, then there is a branch connecting $u \to v$. Since branches are undirected, a branch from $u \to v$ implies a branch from $v \to u$. In this way, the adjacency matrix is symmetrical in that $adj[u][v] = adj[v][u]$.

An adjacency matrix representing **a tree has exactly one path between any pair of** u **and** v, and hence has **1 less branches than it has knots**. Any less and the tree would be disconnected (a forest), and any more and a cycle would exist.

You've decided to join in the fun. Given a $4 \cdot 4$ adjacency matrix, can you determine whether it represents a tree or not?

Input Specification

An adjacency matrix, represented by 4 lines, each containing 4 space-separated integers, either `0` or `1`.

Output Specification

`Yes` if the given adjacency matrix represents a tree, or `No` otherwise.

Tips

If you are unfamiliar with the definition of a tree, this Wikipedia article might help.

Sample Input 1

```
0 0 0 1
0 0 0 1
0 0 0 1
1 1 1 0
```

Sample Output 1

```
Yes
```

Sample Input 2

```
0 1 0 1
1 0 0 1
0 0 0 1
1 1 1 0
```

Sample Output 2

```
No
```

Explanation of Output for Sample Input 2

Between Sample 1 and Sample 2 there is a difference of one branch: $0 \longleftrightarrow 1$. This branch creates a cycle, and therefore the number of knots is the same as the number of branches. Hence, it is not a tree.