# 1690 Find a Minor

In a graph $G$, *contraction* of an edge $e$ with endpoints $u$, $v$ is the replacement of $u$ and $v$ with a single vertex such that edges incident to the new vertex are the edges other than $e$ that were incident with $u$ or $v$. The resulting graph has one less edge than $G$. A graph $H$ is a *minor* of a graph $G$ if a copy of $H$ can be obtained from $G$ via repeated edge deletion, edge contraction and isolated node deletion.

Minors play an important role in graph theory. For example, every non-planar graph contains either the graph $\mathbf{K}_{3,3}$ (i.e., the complete bipartite graph on two sets of three vertices) or the complete graph $\mathbf{K}_5$ as a graph minor.

Write a program to find a graph minor $\mathbf{K}_{n,m}$ or $\mathbf{K}_n$ in an ***undirected connected simple graph***.

## Input

The input consists of several test cases. The first line of each case contains an integers $V$ ($3 \leq V \leq 12$), the number of vertices in the graph, followed by a string in format '`K`$n$' or '`K`$n$`,`$m$' ($1 \leq n, m \leq V$), the graph minor you're finding. The following $V$ lines contain the adjacency matrix of the graph ('`1`' means directly connected, `0`' means not directly connected).

The diagonal elements of the matrix will always be '`0`', and the element in row $i$ column $j$ is always equal to the element in row $j$ column $i$. The last test case is followed by a single zero, which should not be processed.

## Output

For each test case, print the case number and the string '`Found`' or '`Not found`'.

## Sample Input

```
5 K2,2
0 1 1 1 1
1 0 0 0 0
1 0 0 0 0
1 0 0 0 0
1 0 0 0 0
4 K3
0 1 0 1
1 0 1 0
0 1 0 1
1 0 1 0
4 K2,2
0 1 0 1
1 0 1 1
0 1 0 1
1 1 1 0
5 K2,2
0 1 0 0 1
1 0 0 0 1
0 0 0 1 1
0 0 1 0 1
```

```
1 1 1 1 0
5 K4
0 1 0 1 1
1 0 1 1 0
0 1 0 1 1
1 1 1 0 1
1 0 1 1 0
0
```

## Sample Output

```
Case 1: Not found
Case 2: Found
Case 3: Found
Case 4: Not found
Case 5: Found
```