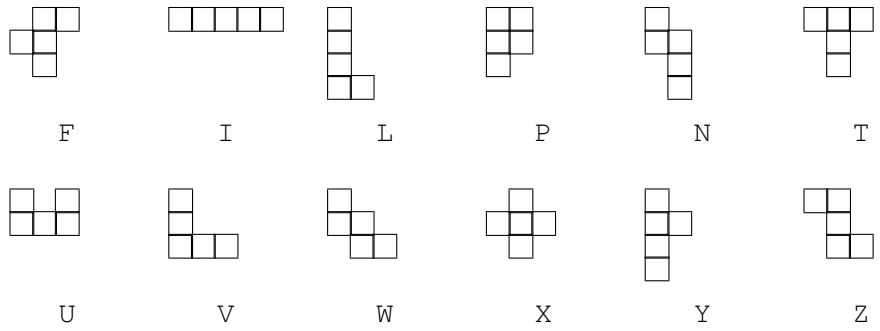
Problem

Puzzle: Pentominous

Time limit: 2 seconds

Little Cyan Fish has a rectangular grid with n rows and m columns. He wants to divide the grid into pentominoes. A pentomino is a region consisting of exactly five cells connected through shared edges.

There are twelve pentomino shapes, labeled `F`, `I`, `L`, `P`, `N`, `T`, `U`, `V`, `W`, `X`, `Y`, and `Z`, as shown below. A shape may be rotated or reflected.



Little Cyan Fish wants every cell to belong to exactly one pentomino. In addition, no two pentominoes of the same shape may share an edge, even if they have different orientations. Sharing only a corner is allowed.

Find a division satisfying these rules. If it is impossible, report that.

Input

There are multiple test cases. The first line of the input contains a single integer T ($1 \leq T$), indicating the number of test cases.

For each test case, the first line contains two integers n and m ($1 \leq n, m \leq 1000$), indicating the number of rows and columns, respectively. It is guaranteed that $n \times m$ is a multiple of 5.

It is guaranteed that the sum of $n \times m$ over all test cases does not exceed 10^6.

Output

For each test case, if no valid division exists, output a single line containing `No`. Otherwise, output a single line containing `Yes`, followed by n lines, each containing a string of length m consisting only of the twelve uppercase letters `FILPNTUVWXYZ`.

The letter in row i and column j must be the label of the pentomino containing that cell. Every maximal region of equal letters connected through shared edges must consist of exactly five cells and have the shape denoted by its letter.

The words `Yes` and `No` are case-insensitive. If there are multiple valid divisions, output any of them.

Sample Input 1

```
4
1 5
1 10
3 5
2 10
```

Sample Output 1

```
Yes
IIIII
No
Yes
LLLLT
LYTTT
YYYYT
Yes
LLLLNNNPPP
LIIIIINNPP
```