

# Equally Dividing

Input file:            **standard input**  
Output file:           **standard output**  
Time limit:            2 seconds  
Memory limit:         1024 megabytes

Given two integers  $N$  and  $M$ . You have to fill each cell of an  $N \times M$  grid with an integer from 1 to  $NM$ , each appearing exactly once.

A valid filling is defined as a **fair filling** if it satisfies the following conditions:

- Every integer from 1 to  $NM$  is written exactly once in one of the cells.
- The sum of the  $M$  integers written in each row is the same for all rows.

Determine if such a **fair filling** exists, and if it does, provide one example of it.

You will be given  $T$  test cases, and you need to provide a solution for each test case.

## Input

The input is given from Standard input in the following format, where  $\text{case}_i$  represents the  $i$ -th test case:

```
T
case1
case2
⋮
caseT
```

Each test case is in the following format:

```
N M
```

- All values in the input are integers.
- $1 \leq T \leq 10^4$
- $1 \leq N, M$
- $1 \leq NM \leq 3 \times 10^5$
- For each input file, the sum of  $NM$  over all test cases does not exceed  $5 \times 10^5$ .

## Output

Output the answers to each test case in order, line-separated.

For each test case, if a **fair filling** does not exist, output No.

Otherwise, output one example of **fair filling** in the following format:

```
Yes
S1,1 S1,2 ... S1,M
S2,1 S2,2 ... S2,M
⋮
SN,1 SN,2 ... SN,M
```

Here,  $S_{i,j}$  represents the integer which is written in the square which is  $i$ -th from the top and  $j$ -th from the left.

## Example

standard input	standard output
2	Yes
2 2	1 4
10 1	2 3
	No

## Note

- For the first test case, the sum of the  $M$  integers written in each row is  $5 = 1 + 4 = 2 + 3$ .
- For the second test case, it can be proved that a **fair filling** does not exist.