

$(\text{mod } N^2 + 1)$

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

You are given a positive integer N and a non-negative integer R .

You want to fill each cell of an $N \times N$ grid using each integer from 1 to N^2 exactly once while satisfying the following condition:

- For any 2×2 square, the remainder of the product of its four integers when divided by $N^2 + 1$ equals R .

Determine if it's possible to fill in numbers to satisfy the condition, and if so, output one example.

You have T test cases to solve.

Input

The input is given from Standard input in the following format, where case_i represents the i -th test case:

```
T
case1
case2
⋮
caseT
```

Each case is given in the following format:

```
N R
```

- $1 \leq T \leq 100$
- $1 \leq N \leq 50$
- $0 \leq R \leq N^2$
- All input values are integers

Output

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

For each test case, if it's impossible to fill in numbers to satisfy the condition, output **No**. Otherwise, output one solution in the following format:

```
Yes
P1,1 P1,2 ... P1,N
⋮
PN,1 PN,2 ... PN,N
```

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

You must meet the following conditions:

- For any i, j ($1 \leq i \leq N - 1, 1 \leq j \leq N - 1$), $P_{i,j} \times P_{i+1,j} \times P_{i,j+1} \times P_{i+1,j+1} \equiv R \pmod{N^2 + 1}$.

Example

standard input	standard output
3	Yes
2 4	1 2
3 3	3 4
4 2	No
	Yes
	7 4 10 13
	1 11 16 6
	5 9 12 8
	3 15 14 2