

# Matrix Inversion

Input file:            **standard input**  
Output file:           **standard output**  
Time limit:            1 second  
Memory limit:         1024 megabytes

You have an  $N$  by  $N$  grid board, which is initially empty. You will write an integer to each cell, using each integer from 1 to  $N^2$  exactly once. Let  $M_{i,j}$  be the integer written on the cell in the  $i$ -th row from the top and the  $j$ -th column from the left.

Let's define sequences  $A$  and  $B$  as follows:

- $A = M_{1,1}, M_{1,2}, \dots, M_{1,N}, M_{2,1}, M_{2,2}, \dots, M_{2,N}, \dots, M_{N,N}$
- $B = M_{1,1}, M_{2,1}, \dots, M_{N,1}, M_{1,2}, M_{2,2}, \dots, M_{N,2}, \dots, M_{N,N}$

For example, when the board looks like this,

```
1 3 4
2 7 6
9 8 5
```

$A$  and  $B$  are defined as follows.

- $A = 1, 3, 4, 2, 7, 6, 9, 8, 5$
- $B = 1, 2, 9, 3, 7, 8, 4, 6, 5$

You are given integers  $N, X, Y$ . Find a way to fill in the cells so that the inversion numbers of  $A$  and  $B$  are  $X$  and  $Y$  respectively, or report that it is impossible to do so.

Note: an inversion number of a sequence  $C = c_1, c_2, \dots, c_{N \times N}$  is the number of pairs  $(i, j)$  s.t. both  $i < j$  and  $c_i > c_j$  are satisfied.

## Input

Input is given from Standard Input in the following format:

$N X Y$

Constraints:

- $2 \leq N \leq 300$
- $0 \leq X, Y \leq \frac{N^2(N^2-1)}{2}$

## Output

If there is no solution, print 'No'.

Otherwise, print the answer in the following format:

Yes

$M_{1,1} M_{1,2} \dots M_{1,N}$

$M_{2,1} M_{2,2} \dots M_{2,N}$

⋮

$M_{N,1} M_{N,2} \dots M_{N,N}$

If there are multiple solutions, you can print any of them.

## Example

standard input	standard output
3 8 13	Yes 1 3 4 2 7 6 9 8 5