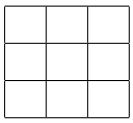
# Problem E. Blackboard

| | |
|---|---|
| Input file: | *standard input* |
| Output file: | *standard output* |
| Time limit: | 1 second |
| Memory limit: | 256 mebibytes |

At the math lesson teacher explained several regular ways to fill matrix $N \times N$ with sequential integers from 1 to $N^2$. First, he draws the empty matrix $N \times N$ (at the figure below $N = 3$).



Then he filled matrix with the sequential integers in four different ways, starting from leftmost upper cell:

(1)

| | | |
|---|---|---|
| 1 | 2 | 3 |
| 6 | 5 | 4 |
| 7 | 8 | 9 |

(2)

| | | |
|---|---|---|
| 1 | 6 | 7 |
| 2 | 5 | 8 |
| 3 | 4 | 9 |

(3)

| | | |
|---|---|---|
| 1 | 2 | 3 |
| 8 | 9 | 4 |
| 7 | 6 | 5 |

(4)

| | | |
|---|---|---|
| 1 | 8 | 7 |
| 2 | 9 | 6 |
| 3 | 4 | 5 |

Then he asked Vasya to fill the matrix $N \times N$ in similar ways. Vasya is too lazy to do it, so he asked you to write a program to do it.

## Input

Input consists of two integers $N$ ($1 \le N \le 100$) and $a$ ($1 \le a \le 4$), where $a$ defines the way to fill the matrix.

## Output

Print $N$ lines, each containing $N$ space-separated integers — the resulting matrix.

## Examples

| standard input | standard output |
|---|---|
| 3 1 | 1 2 3<br>6 5 4<br>7 8 9 |
| 3 2 | 1 6 7<br>2 5 8<br>3 4 9 |
| 3 3 | 1 2 3<br>8 9 4<br>7 6 5 |
| 3 4 | 1 8 7<br>2 9 6<br>3 4 5 |

## Note

Samples coincide with four matrices, presented by teacher.