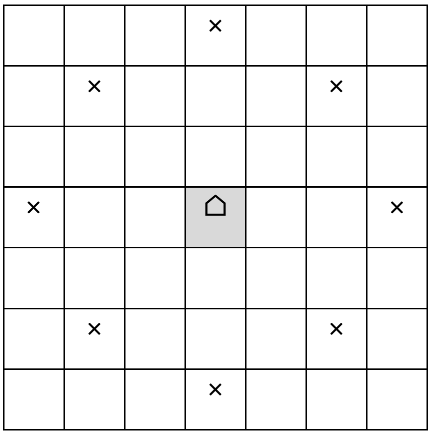


Let’s describe a new “chess” piece and call it “camel-tone”. The piece moves jumping: horizontally or vertically – over two chessboard squares, or diagonally – over one square. The picture shows a part of the board with a camel-tone, placed in the center and the positions (marked by x), where it can go with one move. Of course, it cannot go outside the playing board, which happens to be a big square, divided into ***N***×***N*** little squares. *In this task **N** is always divisible by 5*.

The camel-tone starts at the square in the top-left corner of the board. The game consists of making a sequence of moves on the board, visiting every square exactly once. Moreover, after N^2-1 moves the piece should be exactly one move away from its starting position. This is a so-called “camel-tonian cycle”!

Task

Write a program **camel** to find any possible way to play the game, or to report that the cycle is impossible.

Input

A single line is read from the standard input, containing only one integer ***N***.

Output

The program has to write to the standard output:

- one line with the message NO, if you establish that the cycle is impossible

or

- ***N*** lines, each containing ***N*** space separated numbers, which are the different positive integers between 1 and N^2 inclusive. The first number in the first line is 1. The output represents the playing board (***N***×***N*** squares), where integers indicate the consecutive occupied positions. See the example below.

Constraints

- ***N*** is divisible by 5
- 5 ≤ ***N*** ≤ 1000

Grading

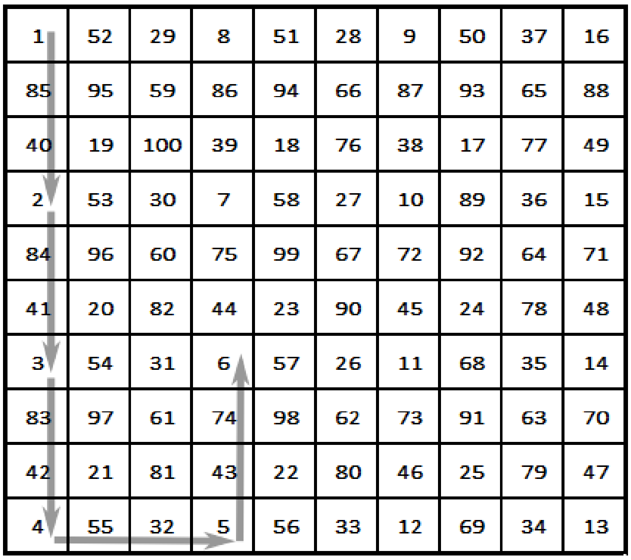
- There is a test with ***N*** = 5 that is worth 20% of the points for the task
- The remaining 16 tests are worth 5% of the points each.

Example

Sample Input	*Sample Output*

10	1 52 29 8 51 28 9 50 37 16
	85 95 59 86 94 66 87 93 65 88
	40 19 100 39 18 76 38 17 77 49
	2 53 30 7 58 27 10 89 36 15
	84 96 60 75 99 67 72 92 64 71
	41 20 82 44 23 90 45 24 78 48
	3 54 31 6 57 26 11 68 35 14
	83 97 61 74 98 62 73 91 63 70
	42 21 81 43 22 80 46 25 79 47
	4 55 32 5 56 33 12 69 34 13

Explanation: The camel-tone starts at the top left position (row:1, column:1), numbered 1. The second occupied position is (row:4, column:1), so it is numbered 2. The next position is (row:7, column: 1), and it is numbered 3, and so on. The final (hundredth) occupied position is (row:3, column:3), and it is at one move away from the starting position.



1	52	29	8	51	28	9	50	37	16
85	95	59	86	94	66	87	93	65	88
40	19	100	39	18	76	38	17	77	49
2	53	30	7	58	27	10	89	36	15
84	96	60	75	99	67	72	92	64	71
41	20	82	44	23	90	45	24	78	48
3	54	31	6	57	26	11	68	35	14
83	97	61	74	98	62	73	91	63	70
42	21	81	43	22	80	46	25	79	47
4	55	32	5	56	33	12	69	34	13