Problem E
Occult Square

A magic square is a square array of non-negative integers where the sums of the numbers on each row, each column, and both main diagonals are the same. An $N \times N$ occult square is a magic square with N rows and N columns with additional constraints:

- The integers in the square are between 0 and N, inclusive.

- For all $1 \leq i \leq N$, the number i appears at most i times in the square.

- There are at least two distinct **positive** integers in the square.

For example, the following is a 5×5 occult square, where the sums of the numbers on each row, each column, and both main diagonals are 7:

```
0 0 0 3 4
2 4 0 0 1
0 0 3 4 0
5 0 0 0 2
0 3 4 0 0
```

For a given prime number P, you are asked to construct a $P \times P$ occult square, or determine whether no such occult square exists.

Input

Input contains a prime number: P ($2 \leq P \leq 1000$) representing the number of rows and columns in the occult square.

Output

If there is no $P \times P$ occult square, simply output `-1` in a line. Otherwise, output P lines, each contains P integers representing an occult square. The jth integer on the ith line is the integer on the ith row and the jth column in the occult square. You may output any $P \times P$ occult square.

Sample Input #1

```
5
```

Sample Output #1

```
0 0 0 3 4
2 4 0 0 1
0 0 3 4 0
5 0 0 0 2
0 3 4 0 0
```

Explanation for the sample input/output #1

This is the example from the problem description.

Sample Input #2

```
2
```

Sample Output #2

```
-1
```

Explanation for the sample input/output #2

There is no 2×2 occult square.