# 769   Magic of David Copperfield

The well-known magician David Copperfield loves to show the following trick: a square with $N$ rows and $N$ columns of different pictures appears on a TV screen. Let us number all the pictures in the following order:

| 1 | 2 | $\ldots$ | $N$ |
|---|---|---|---|
| $\vdots$ | $\vdots$ | $\ddots$ | $\vdots$ |
| $N * (N - 1) + 1$ | $N * (N - 1) + 2$ | $\ldots$ | $N * N$ |

Each member of the audience is asked to put a finger on the upper left picture (i.e., picture number one) and The Magic begins: the magician tells the audience to move the finger $k_1$ times through the pictures (each move is a shift of the finger to the adjacent picture up, down, left or right provided that there is a picture to move to), then with a slight movement of his hand he removes some of the pictures with an exclamation "*You are not there!*", and ... it is true - your finger is not pointing to any of the pictures removed. Then again, he tells the audience to make $k_2$ moves, and so on. At the end he removes all the pictures but one and smiling triumphantly declares, "*I've caught you*" (applause).

Just now, David is trying to repeat this trick. Unfortunately, he had a hard day before, and you know how hard to conjure with a headache. You have to write a program that will help David to make his trick.

## Input

The input begins with a single positive integer on a line by itself indicating the number of the cases following, each of them as described below. This line is followed by a blank line, and there is also a blank line between two consecutive inputs.

Each test case consists of a single integer number number $N$ ($2 \leq N \leq 100$).

## Output

For each test case, the output must follow the description below. The outputs of two consecutive cases will be separated by a blank line.

Your program should write the following lines with numbers to the output file:

$k_1 \; x_{1,1} \; x_{1,2} \; \ldots \; x_{1,m_1}$
$k_2 \; x_{2,1} \; x_{2,2} \; \ldots \; x_{2,m_2}$
$\ldots$
$k_e \; x_{e,1} \; x_{e,2} \; \ldots \; x_{e,m_e}$

where $k_i$ is a number of moves the audience should make on the $i$-th turn ($2N \leq k \leq 10000$). All $k_i$ should be different (i.e. $k_i \neq k_j$ when $i \neq j$). $x_{i,1}, x_{i,2}, \ldots, x_{i,m_i}$ are the numbers of the pictures David should remove after the audience will make $k_i$ moves (the number of the pictures removed is arbitrary, but each picture should be listed only once, and at least one picture should be removed on each turn).

A description of the every next turn should begin with a new line. All numbers on each line should be separated by one or more spaces. After $e$ iterations, all pictures except one should be removed.

## Sample input

```
1

3
```

## Sample Output

```
8      4 6
13     9
10     7 1
7      8
11     3 5
```