Problem WINNINGMOVE: Winning Move

Piled stones is a 2-player game that is played with several piles of stones, numbered $0, 1, \ldots, n-1$. To make a move, a player chooses three piles with numbers i , j , and k such that $i < j$, $j \leq k$, and pile i has at least one stone in it. The player then removes one stone from pile i , and adds one stone to piles j and k . Note that j may equal k, and that two stones are added for each stone removed. Players make moves alternately until it is no longer possible to make a valid move. This will always happen eventually, and the last player to have moved is then declared the winner. See first sample below for a description of an entire game.

You are said to have made a "winning move" in *Piled stones*, if after making that move, you can eventually win no matter what the opponent does. Note that a winning move does not necessarily end the game immediately, but if you make only winning moves, you will win eventually.

For this task, you will be given the piles within a game of *Piled stones*. You must find i , j , k with $i < j$ and $j \leq k$ such that removing one stone from pile i and adding one stone to piles j and k is a winning move. If there are multiple winning moves, you should choose one that minimizes i. If there is more than one of these, you should choose one that minimizes j. If there is still a tie, choose the one that minimizes k.

Input

The first line gives the number of test cases. Each testcase consists of one line. The first number on each line gives the number of piles (between 2 and 15), followed by the number of stones on each pile (at most 1 000). At least one pile (other than the last pile) will contain more than 0 stones.

Output

For each testcases, print i, j, k on one line for the winning move (as described above). If there is no winning move, print "Impossible" instead.

Sample Input 1

```
4
6 0 0 1 0 1 100
5 1000 1000 1000 1000 1000
5 2 1 1 1 5
15 14 301 391 410 511 681 58 259 981 81 5 42 251 401 120
```

Sample Output 1

```
2 4 5
Impossible
0 1 1
2 5 14
```