

John, Jill and Jeremy are planning their vacation trip. They would like to visit all planets in their planetary system. They are planning to use *Telejump* teleport system which was recently installed at all planets. There are n planets in the planetary system, numbered from 0 to $n - 1$. John, Jill and Jeremy are planning to start their journey from planet 0 and can finish it at any planet.

Telejump uses three types of tickets for their system. Ticket of the first type allows to travel from planet x to planet $x + 1$ (when $x + 1 \leq n - 1$) or to planet $x - 1$ (when $x - 1 \geq 0$). Ticket of the second type allows to travel from planet x to planet $x + 2$ (when $x + 2 \leq n - 1$) or to planet $x - 2$ (when $x - 2 \geq 0$). Finally, ticket of the third type allows to travel from planet x to planet $x + 3$ (when $x + 3 \leq n - 1$) or to planet $x - 3$ (when $x - 3 \geq 0$).

Friends have bought a tickets of the first type, b tickets of the second type and c tickets of the third type. Tickets are quite expensive, so they have bought the minimal number of tickets they need to visit all planets: $a + b + c = n - 1$. However, all three of friends collect used *Telejump* tickets, so they have bought at least 3 tickets of each type (yes, you can deduce from these facts that $n \geq 10$).

Now they would like to plan their trip.

Help John, Jill and Jeremy to choose in which order they should visit planets, so that they could visit each planet by using their tickets.

Input

The input file contains several test cases. The first line of the input file contains t — the number of test cases ($1 \leq t \leq 20$).

Each of the following t lines contains three integers each: a_i, b_i and c_i ($3 \leq a_i, b_i, c_i \leq 5000$). For such test case n_i is equal to $a_i + b_i + c_i + 1$.

Output

Output one line for each test case in the input. Each line must contain n_i integers separated by spaces: planet numbers in the order friends should visit them to use their tickets.

If there are several solutions, output any one. It is guaranteed that for each test case from the input file solution always exists.

Note for the Sample:

In the first example above there are 3 tickets of each type, therefore there are 10 planets numbered from 0 to 9. Friends start at planet 0. They use tickets of the first type for their jumps $1 \rightarrow 2$, $5 \rightarrow 4$, and $7 \rightarrow 8$, tickets of the second type for jumps $3 \rightarrow 1$, $4 \rightarrow 6$, and $9 \rightarrow 7$, and tickets of the third type for jumps $0 \rightarrow 3$, $2 \rightarrow 5$, and $6 \rightarrow 9$.

Sample Input

```
2
3 3 3
3 4 3
```

Sample Output

```
0 3 1 2 5 4 6 9 7 8
0 3 1 2 5 4 6 9 7 8 10
```