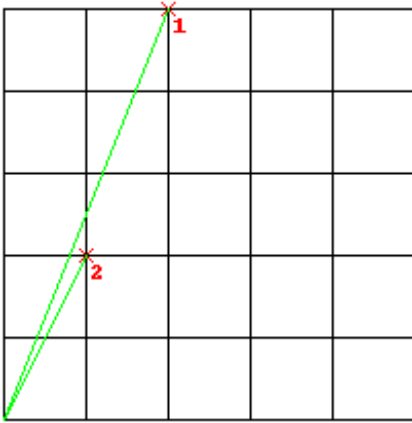


Grid points

There's a Cartesian lattice with $0 \leq x, y \leq n$. Given one point $(x_1, y_1 > 0)$ in this lattice rotating clockwise as little as possible around the origin find the next point (x_2, y_2) . The given and searched points mustn't have another point between the origin $(0, 0)$ and this point itself. x_1, y_1, x_2, y_2 are non-negative integers.



Score is source length.

Input

In the first line the number T ($T < 100$) of test cases.
Then T lines with the space-separated n ($1 \leq n \leq 50$), x_1 and y_1 .

Output

For each test case the space-separated x_2 and y_2 .

Example

Input:

```
3
1 1 1
5 3 2
50 48 49
```

Output:

```
1 0
5 3
49 50
```