Find The Red Robot



So the WARHW has come to an end, and every office has received a mysterious Red Hat robot. Now, when the robot is started it asks for an input number (N) and then it starts taking N turns in the following manner:

- On the first turn, the robot goes 1 unit to the right.
- On the second turn, the robot goes 2 units up.
- On the third turn, the robot goes 3 units to the left.
- On the fourth turn, the robot goes 4 units down.
- On the fifth turn, the robot goes 5 units to the right.
- · And so on.

Assuming that the robot is initially standing at the origin (0,0) of the Cartesian Co-ordinate System, can you determine the position of the robot after N turns?

Input Format

The first line contains a single integer, T, denoting the number of test cases followed by T lines describing the test cases.

Each line contains a single integer - the value of **N**, for the corresponding test case.

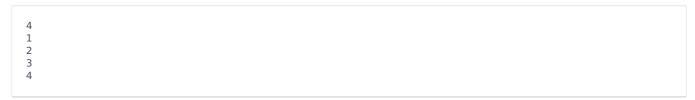
Constraints

 $1 \le \mathbf{7} \le 100$ $1 \le \mathbf{N} \le 10^9$

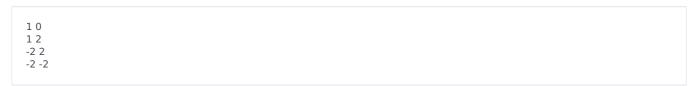
Output Format

For each test case output a single line, containing two integers - the coordinates of the robot after performing N turns.

Sample Input 0



Sample Output 0



Explanation 0

Initially, the robot is standing at the point (0,0).

- On the first turn, it moves 1 unit to the right, thus its new position becomes (1,0).
- On the second turn, it moves 2 units up, thus its new position becomes (1,2).
- On the third turn, it moves 3 units to the left, thus its new position becomes (-2, 2).

• On the fourth turn, it moves 4 units down, thus its new position becomes (-2, -2).