

HELP SHELDON

Problem statement:

Dr. Sheldon Cooper builds a MVPD replication of himself which he calls a "Mobile Virtual Presence Device" (MVPD) that would go through all the hazards of life that he would otherwise have to

experience while he stays behind in a "secure, undisclosed location". Now the MVPD is initially standing at the origin of the Cartesian coordinate system, (0, 0). (More like Sheldon's spot (0, 0, 0, 0)). Then

the MVPD makes N turns:-

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

Given an integer N, find the position of Sheldon's MVPD so that he won't get lost somewhere.

Input Format

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

For each test case, a single line contains a single integer - the value of N.

Output format:

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

Constraints:

$1 \leq T \leq 100$.

$1 \leq N \leq 10^9$.

Sample input:

2

3

4

Output:

-2 2

-2 -2