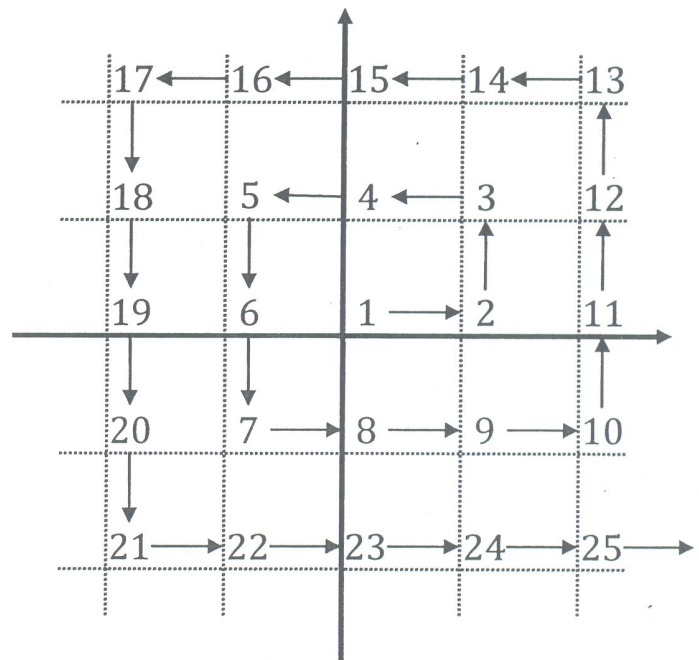


Problem A – Spiral

Little Long is a genius kid and loves special structural thing. These days, he is interested in spiral structure. He drew a Descartes plane and started to fill numbers at integer coordinates. He started at the origin of the plane and continuously filled numbers in counter-clockwise direction. The first 25 numbers are filled like the following figure.



He realized that he can not continue this process for very long because he was going out of paper very soon. Oh, déjà vu, he seemed to be the next and greater Fermat. He wondered which number would be filled at coordinate (x, y) . You should help him to figure it out.

Input

The first line of the input is a positive integer T denotes the number of test cases. Then T test cases follow. Each test case has two numbers x, y . The absolute values of all the numbers in the input do not exceed 100.

Output

For each test case, print the number filled at coordinate (x, y) .

Sample

Sample input	Output for sample input
3	1
0 0	7
-1 -1	24
1 -2	