Spiral

Input

There is unknown number of tests. Each of them consists of one line in which appear two integers: **n** ($0 < n <= 10^6$; n always odd) - size of the square matrix and **m** ($0 < m <= n^2$) - the number of the choosen cell.

Output

For each test print index of the row and index of the column of the choosen cell which is determined by **m**.

Example

Input:
7 28
5 13
1 1
5 1
5 5
3 9
Output:
7 4
5 1
1 1
3 3
2 2
3 3