Background

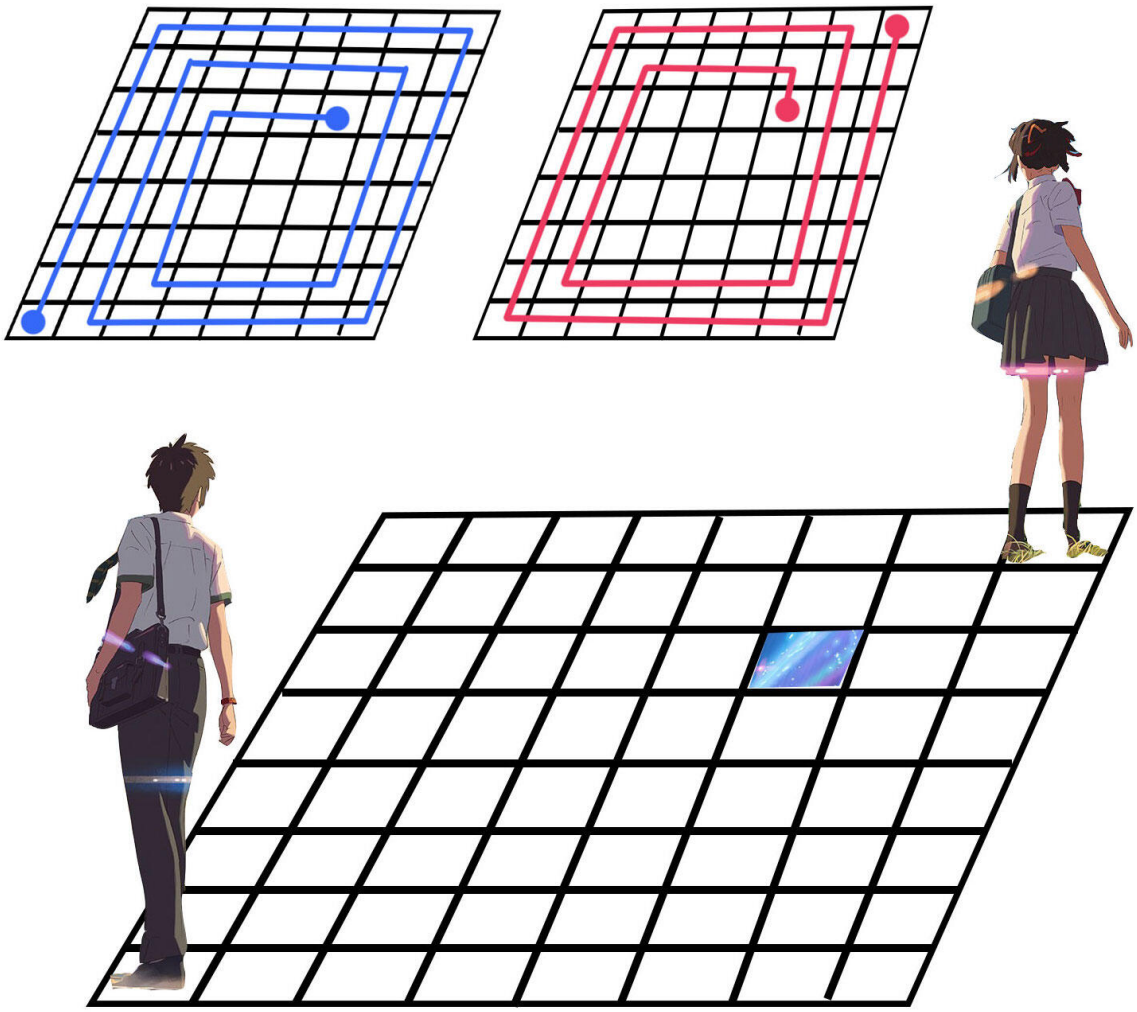
The protagonist of this problem is not the TA, but Taki and Sanya, which the TA likes very much.

Description

In a map of `n*n` squares, Taki and Sanya are located at the two coordinates: `(n, 1)` and `(1, n)`, respectively. They would like to meet at `(i, j)`.

`(i,j)` denotes the square at the `i` th row (counted from top to bottom) and the `j` th column (counted from left to right).

Their respective paths along the grid are spirals that rotate clockwise.



Input Form

Three integers `n, i, j` in one line, which represent the size and the coordinate of the meeting square, respectively.

Output Form

The number of steps Taki and Sanya take to meet, separated by white space.

Examples

Input：`3 2 3`

The desired output：`5 1`

Input：`8 3 6`

The desired output：`54 48`

Input Range

$1 \le n \le 1000000$