

## Problem C: Cleaning

Exciting news! You are developing a new robot to clean classrooms. Each classroom is shown as a grid with  $N$  rows and  $M$  columns.

The cleaning robot can start from any square in the grid and can face one of four directions: up, down, left, or right. The robot can move forward to the next square or make a 90-degree turn to change direction.

To save energy and battery life, we want the robot to make as few turns (การเลี้ยว) as possible while cleaning the whole classroom. For each classroom, your task is to find out the smallest number of turns the robot needs to clean every square in the grid. The robot cannot leave the boundaries of the classroom.

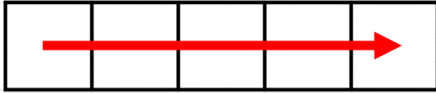
### Input:

Each line contains two integers,  $N$  and  $M$ , representing the number of rows and columns of a classroom. The input continues until the line "-1 -1" is encountered, which represents the end of the input and should not be processed.

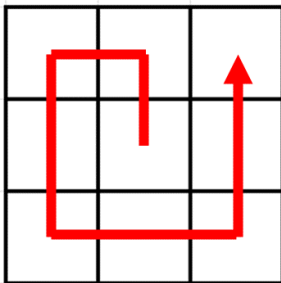
### Output:

For each classroom, output a single integer representing the minimal number of turns the robot needs to make to clean the entire grid.

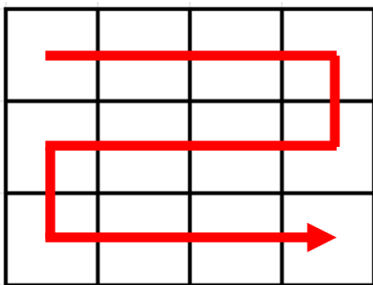
Sample Input	Sample Output
1 5 3 3 3 4 -1 -1	0 4 4

**Explanation:***Classroom #1:*

No turning is required to clean this 1 x 5 room.

*Classroom #2:*

This 3 x 3 room requires a minimum of 4 turns to clean.

*Classroom #3:*

This 3 x 4 room requires a minimum of 4 turns to clean.

**Constraints:**

- The number of test cases  $\leq 50,000$
- $1 \leq N, M \leq 1,000,000$