

BACK

## Count Black Cells



DESCRIPTION

SOLUTIONS 5370

COMMENTS 49



CODEWRITING

SCORE: 300/300

Imagine a white rectangular grid of  $n$  rows and  $m$  columns divided into two parts by a diagonal line running from the upper left to the lower right corner. Now let's paint the grid in two colors according to the following rules:

- A cell is painted black if it has at least one point in common with the diagonal;
- Otherwise, a cell is painted white.

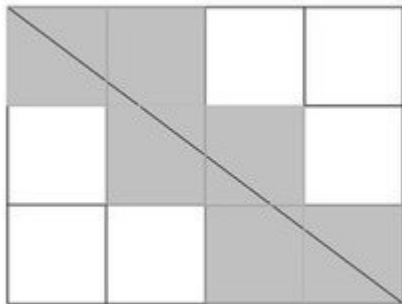
Count the number of cells painted black.

**Example**

- For  $n = 3$  and  $m = 4$ , the output should be

`countBlackCells(n, m) = 6`.

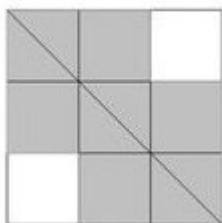
There are 6 cells that have at least one common point with the diagonal and therefore are painted black.



- For  $n = 3$  and  $m = 3$ , the output should be

`countBlackCells(n, m) = 7`.

7 cells have at least one common point with the diagonal and are painted black.

**Input/Output**