

Knight Circuit

Luis is a great chess player and as such, he likes to test any kind of game that he imagines with the chess pieces, he just created a game pretty interesting consisting in the moves of a knight over all the possible cell whenever he can in a matrix sized board $W \times H$, being in the position (x,y) of the matrix, the knight can move to $(x+2,y+1)$, $(x+1,y+2)$, $(x-2,y+1)$, $(x+2,y-1)$, $(x-1,y+2)$, $(x-1,y-2)$, $(x-2,y-1)$, $(x+1,y-2)$.

The knight can start from any cell in the matrix $W \times H$, the knight may never leave the matrix and it can step an arbitrarily number of times the same cell visited, however, you shouldn't count the repeated step.

Input details:

T as an integer representing the number of cases, then, in the next T lines, two integers W and H representing the width and the height of the matrix.

Output details:

A single number representing the number of cells visited by the knight in the matrix.

INPUT	OUTPUT
3	1
1 1	8
15 2	10000
100 100	

Constraints:

$1 \leq W \leq 100,000$

$1 \leq H \leq 100,000$