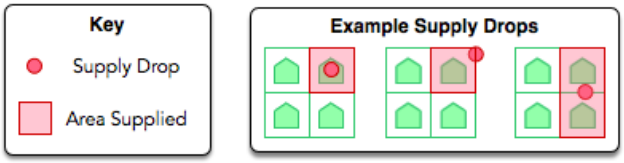
Army Game

HackerRank

Luke is daydreaming in Math class. He has a sheet of graph paper with n rows and m columns, and he imagines that there is an army base in each cell for a total of $n \cdot m$ bases. He wants to drop supplies at strategic points on the sheet, marking each drop point with a red dot. If a base contains at least one package inside or on top of its border fence, then it's considered to be supplied. For example:



Given n and m, what's the minimum number of packages that Luke must drop to supply all of his bases?

Example
$n = 2$
$m = 3$

Packages can be dropped at the corner between cells (0, 0), (0, 1), (1, 0) and (1, 1) to supply 4 bases. Another package can be dropped at a border between (0, 2) and (1, 2). This supplies all bases using 2 packages.

Function Description

Complete the *gameWithCells* function in the editor below.

gameWithCells has the following parameters:

- *int n:* the number of rows in the game
- *int m:* the number of columns in the game

Returns

- *int:* the minimum number of packages required

Input Format

Two space-separated integers describing the respective values of n and m.

Constraints

$0 < n, m \leq 1000$

Sample Input 0

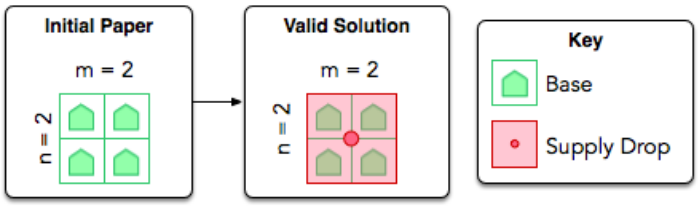
```
2 2
```

Sample Output 0

```
1
```

Explanation 0

Luke has four bases in a 2×2 grid. If he drops a single package where the walls of all four bases intersect, then those four cells can access the package:



Because he managed to supply all four bases with a single supply drop, we print 1 as our answer.