Luke is daydreaming in Math class. He has a sheet of graph paper with rows and columns, and he imagines that there is an army base in each cell for a total of 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:

Image

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

Example

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

Constraints

Sample Input 0

2 2

Sample Output 0

1

Explanation 0

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

Image

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

Submissions: 120

Max Score: 10

Difficulty: Easy

Rate This Challenge:

More

1

#!/bin/python3

2

3

Import math

4

Import os

5

Import random

6

Import re

7

Import sys

8

9

#

10

# Complete the ‘gameWithCells’ function below.

11

#

12

# The function is expected to return an INTEGER.

13

# The function accepts following parameters:

14

# 1. INTEGER n

15

# 2. INTEGER m

16

#

17

18

Def gameWithCells(n, m):

19

# Write your code here

20

Return (n//2 + n % 2)\*(m//2 + m % 2)

21

Total\_cells = math.ceil(n/2) \* math.ceil(m/2)

22

Return total\_cells

23

If \_\_name\_\_ == ‘\_\_main\_\_’:

24

Fptr = open(os.environ[‘OUTPUT\_PATH’], ‘w’)

25

26

First\_multiple\_input = input().rstrip().split()

27

28

N = int(first\_multiple\_input[0])

29

30

M = int(first\_multiple\_input[1])

31

32

Result = gameWithCells(n, m)

33

34

Fptr.write(str(result) + ‘\n’)

35

36

Fptr.close()

37

Line: 5 Col: 14

Run Code Submit CodeUpload Code as File

Test against custom input

Testcase 0

Congratulations, you passed the sample test case.

Click the Submit Code button to run your code against all the test cases.

Input (stdin)

2 2

Your Output (stdout)

1

Expected Output

1