

A. Domino piling

time limit per test: 2 seconds

memory limit per test: 256 megabytes

You are given a rectangular board of $M \times N$ squares. Also you are given an unlimited number of standard domino pieces of 2×1 squares. You are allowed to rotate the pieces. You are asked to place as many dominoes as possible on the board so as to meet the following conditions:

1. Each domino completely covers two squares.
2. No two dominoes overlap.
3. Each domino lies entirely inside the board. It is allowed to touch the edges of the board.

Find the maximum number of dominoes, which can be placed under these restrictions.

Input

In a single line you are given two integers M and N — board sizes in squares ($1 \leq M \leq N \leq 16$).

Output

Output one number — the maximal number of dominoes, which can be placed.

Examples

input	Copy
2 4	
output	Copy
4	

input	Copy
3 3	
output	Copy
4	

→ Attention

The package for this problem was not updated by the problem writer or Codeforces administration after we've upgraded the judging servers. To adjust the time limit constraint, a solution execution time will be multiplied by 2. For example, if your solution works for 400 ms on judging servers, then the value 800 ms will be displayed and used to determine the verdict.

Codeforces Beta Round 47

Finished

Practice



→ Virtual participation

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 Language: GNU G++17 7.3.0

 Choose file: [Choose File](#) No file chosen

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- Announcement 
- Tutorial #1 
- Tutorial #2 (en) 

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