

## Problem H

### Bottles Arrangement

#### Description

Hunan cuisine is really wonderful! But if you don't like spicy food, you will feel terrible since it can be hard for you to find any food without hot pepper here. Big Fan is a student from the north who was not fit to the spicy food in Changsha. He became thinner and thinner because eating little food and maintained his life mostly by drinking water. One day, he found that the wine in Hunan is pretty good, such as Jiugui, Liuyang River, Shaoyang Daqu and so on. He got addicted to it and became an alcoholic, leading a depressed life.

Now  $N$  days have passed and he is sobered. He is surprised to find that there are exactly  $N \times M$  bottles around him. Another amazing fact is that there are  $N$  bottles with height 1 and  $N$  bottles with height 2 ...  $N$  bottles with height  $M$ . Now he is interested in playing with these bottles. He wants to arrange all these bottles in a rectangle with  $M$  rows and  $N$  columns which satisfied:

- ◆ In any column, there are no bottles with same height;
- ◆ In any row, the height difference between any two adjacent bottles is no more than 1.

He defined a strange function  $Y$  which equals the maximum value of the total height of any single row. He is addicted in arranging these rubbish bottles to find the minimal  $Y$ . You know that he cannot solve it with his poor IQ. You are his friend and can't endure his decadence any more. So you decide to help him solve this problem and then bring him back to study.

#### Input

There are several test cases. For each case, the input contains one line with two integers  $M$  and  $N$  ( $1 < M \leq 10000$ ,  $3 \leq N < 2 \times M$ , It is guaranteed that  $N$  is always odd).

The input will finish with the end of file.

#### Output

For each test case, print the minimal  $Y$  in single line.

## Sample Input

3 3  
3 5

## Sample Output

8  
11

## Hint

For the first case the solution is:

1 2 3  
2 1 1  
3 3 2