

## 9

Tiling  
6 points**Introduction**

Suppose we are tile artists that can make incredibly beautiful square tiles of any size.

The sizes of such tiles are measured in unit lengths. Let's say, we can make a tile of 3 units of size (3x3) or of 100 units of size (100x100).

There is no limit to the size of the tiles, as long as they are squared and have an integer size (1, 2, 3,...).

Now we want to cover the floor of a room using an exact amount of equal sized whole square tiles so that we do not have to cut any of the gorgeous tiles.



As you can see, for a given room we may have several possible solutions (in the picture  $S=2$  or  $S=1$ )

We are artists, so we want to concentrate on the beauty of the design, not in the maths.

How can you help us to calculate the size  $S$  of the square tiles that will exactly cover the floor using the minimum number of whole tiles, given the length  $L$  and width  $W$  of the room's floor?

**Input**

Two positive integers greater than 0 that represent the length  $L$  and width  $W$  of the floor of the room.

**Observation:** These numbers do not need to be in order.

**Output**

The size  $S$  of the square tiles that exactly cover the floor of the room with the minimum number of whole tiles.

### Example 1

Input

6

4

Output

2

### Example 2

Input

49

21

Output

7

### Example 3

Input

462

1071

Output

21