

GCD!!!

You are given two number. Find out the Greatest Common Divisor or GCD. Let's see how we can determine GCD of two numbers.

$n = \min(m, n)$;

if $m=20$ and $n=5$, then $\min(m, n)=5$; Now there are only 5 from 1 to n , who is divisor of both (20 and 5). So $\gcd(20, 5)=5$.

Attention: Do not use any library function.

Input

Every line will contain two number m, n ($1 \leq m, n \leq 10^{18}$).

$m, n=0$ will terminate the programme.

Output

Print the GCD of two number.

Example

Input:

5 6

3 9

10 2

0 0

Output:

1

3

2