

# Greatest Common Divisor

Time Limit : 1 sec, Memory Limit : 131072 KB

## Greatest Common Divisor

Write a program which finds the greatest common divisor of two natural numbers  $a$  and  $b$

## Input

$a$  and  $b$  are given in a line sparated by a single space.

## Output

Output the greatest common divisor of  $a$  and  $b$ .

## Constrants

$1 \leq a, b \leq 10^9$

## Hint

You can use the following observation:

For integers  $x$  and  $y$ , if  $x \geq y$ , then  $\text{gcd}(x, y) = \text{gcd}(y, x \% y)$

## Sample Input 1

```
54 20
```

## Sample Output 1

```
2
```

## Sample Input 2

```
147 105
```

## Sample Output 2

```
21
```

Source: [https://onlinejudge.u-aizu.ac.jp/problems/ALDS1\\_1\\_B](https://onlinejudge.u-aizu.ac.jp/problems/ALDS1_1_B)