

**Problem statement**[Send feedback](#)

You are given two integers ' $n$ ', and ' $m$ '.

Calculate ' $\text{gcd}(n,m)$ ', without using library functions.

**Note:**

The greatest common divisor (gcd) of two numbers ' $n$ ' and ' $m$ ' is the largest positive number that divides both ' $n$ ' and ' $m$ ' without leaving a remainder.

**Example:**

Input: ' $n$ ' = 6, ' $m$ ' = 4

Output: 2

Explanation:

Here,  $\text{gcd}(4,6) = 2$ , because 2 is the largest positive integer that divides both 4 and 6.

**Detailed explanation** ( Input/output format, Notes, Images )**Sample Input 1:**

9 6

**Sample Output 1:**

3

**Explanation of sample output 1:**

$\text{gcd}(6,9)$  is 3, as 3 is the largest positive integer that divides both 6 and 9.

**Sample Input 2:**

2 5

**Sample Output 2:**

1

**Expected Time Complexity:**

Try to solve this in  $O(\log(n))$

**Constraints:**

$0 \leq 'n' \leq 10^5$

Time Limit: 1 sec