

2513. Minimize the Maximum of Two Arrays

Description

We have two arrays `arr1` and `arr2` which are initially empty. You need to add positive integers to them such that they satisfy all the following conditions:

- `arr1` contains `uniqueCnt1` **distinct** positive integers, each of which is **not divisible** by `divisor1`.
- `arr2` contains `uniqueCnt2` **distinct** positive integers, each of which is **not divisible** by `divisor2`.
- No** integer is present in both `arr1` and `arr2`.

Given `divisor1`, `divisor2`, `uniqueCnt1`, and `uniqueCnt2`, return *the minimum possible maximum integer that can be present in either array*.

Example 1:

Input: `divisor1 = 2, divisor2 = 7, uniqueCnt1 = 1, uniqueCnt2 = 3`
Output: `4`
Explanation:
We can distribute the first 4 natural numbers into `arr1` and `arr2`.
`arr1 = [1]` and `arr2 = [2,3,4]`.
We can see that both arrays satisfy all the conditions.
Since the maximum value is 4, we return it.

Example 2:

Input: `divisor1 = 3, divisor2 = 5, uniqueCnt1 = 2, uniqueCnt2 = 1`
Output: `3`
Explanation:
Here `arr1 = [1,2]`, and `arr2 = [3]` satisfy all conditions.
Since the maximum value is 3, we return it.

Example 3:

Input: `divisor1 = 2, divisor2 = 4, uniqueCnt1 = 8, uniqueCnt2 = 2`
Output: `15`
Explanation:
Here, the final possible arrays can be `arr1 = [1,3,5,7,9,11,13,15]`, and `arr2 = [2,6]`.
It can be shown that it is not possible to obtain a lower maximum satisfying all conditions.

Constraints:

- $2 \leq \text{divisor1}, \text{divisor2} \leq 10^5$
- $1 \leq \text{uniqueCnt1}, \text{uniqueCnt2} < 10^9$
- $2 \leq \text{uniqueCnt1} + \text{uniqueCnt2} \leq 10^9$

