

Problem 878: Nth Magical Number

Problem Information

Difficulty: Hard

Acceptance Rate: 36.20%

Paid Only: No

Tags: Math, Binary Search

Problem Description

A positive integer is _magical_ if it is divisible by either `a` or `b`.

Given the three integers `n`, `a`, and `b`, return the `nth` magical number. Since the answer may be very large, **return it modulo** $10^9 + 7$.

Example 1:

Input: n = 1, a = 2, b = 3 **Output:** 2

Example 2:

Input: n = 4, a = 2, b = 3 **Output:** 6

Constraints:

* `1 <= n <= 10^9` * `2 <= a, b <= 4 * 10^4`

Code Snippets

C++:

```
class Solution {
public:
    int nthMagicalNumber(int n, int a, int b) {
```

```
    }  
};
```

Java:

```
class Solution {  
public int nthMagicalNumber(int n, int a, int b) {  
  
}  
}
```

Python3:

```
class Solution:  
def nthMagicalNumber(self, n: int, a: int, b: int) -> int:
```