

Problem 1015: Smallest Integer Divisible by K

Problem Information

Difficulty: Medium

Acceptance Rate: 46.76%

Paid Only: No

Tags: Hash Table, Math

Problem Description

Given a positive integer `k`, you need to find the **length** of the **smallest** positive integer `n` such that `n` is divisible by `k`, and `n` only contains the digit `1`.

Return _the**length** of _`n`. If there is no such `n`, return -1.

Note: `n` may not fit in a 64-bit signed integer.

Example 1:

Input: k = 1 **Output:** 1 **Explanation:** The smallest answer is n = 1, which has length 1.

Example 2:

Input: k = 2 **Output:** -1 **Explanation:** There is no such positive integer n divisible by 2.

Example 3:

Input: k = 3 **Output:** 3 **Explanation:** The smallest answer is n = 111, which has length 3.

Constraints:

* `1 <= k <= 10^5`

Code Snippets

C++:

```
class Solution {  
public:  
    int smallestRepunitDivByK(int k) {  
  
    }  
};
```

Java:

```
class Solution {  
    public int smallestRepunitDivByK(int k) {  
  
    }  
}
```

Python3:

```
class Solution:  
    def smallestRepunitDivByK(self, k: int) -> int:
```