

# 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:**

$1 \leq k \leq 10^5$

## 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:
```