

Problem 2310: Sum of Numbers With Units Digit K

Problem Information

Difficulty: Medium

Acceptance Rate: 27.73%

Paid Only: No

Tags: Math, Dynamic Programming, Greedy, Enumeration

Problem Description

Given two integers `num` and `k`, consider a set of positive integers with the following properties:

- * The units digit of each integer is `k`.
- * The sum of the integers is `num`.

Return `the minimum possible size of such a set, or -1 if no such set exists.`

Note:

- * The set can contain multiple instances of the same integer, and the sum of an empty set is considered `0`.
- * The **units digit** of a number is the rightmost digit of the number.

Example 1:

Input: `num = 58, k = 9` **Output:** `2` **Explanation:** One valid set is `[9,49]`, as the sum is 58 and each integer has a units digit of 9. Another valid set is `[19,39]`. It can be shown that 2 is the minimum possible size of a valid set.

Example 2:

Input: `num = 37, k = 2` **Output:** `-1` **Explanation:** It is not possible to obtain a sum of 37 using only integers that have a units digit of 2.

Example 3:

****Input:**** num = 0, k = 7 ****Output:**** 0 ****Explanation:**** The sum of an empty set is considered 0.

****Constraints:****

*`0 <= num <= 3000` *`0 <= k <= 9`

Code Snippets

C++:

```
class Solution {
public:
    int minimumNumbers(int num, int k) {

    }
};
```

Java:

```
class Solution {
    public int minimumNumbers(int num, int k) {

    }
}
```

Python3:

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