Problem 2269: Find the K-Beauty of a Number

Problem Information

Difficulty: Easy
Acceptance Rate: 62.49%
Paid Only: No
Tags: Math, String, Sliding Window

Problem Description

The **k-beauty** of an integer `num` is defined as the number of **substrings** of `num` when it is read as a string that meet the following conditions:

* It has a length of `k`. * It is a divisor of `num`.

Given integers `num` and `k`, return _the k-beauty of_`num`.

Note:

* **Leading zeros** are allowed. * `0` is not a divisor of any value.

A **substring** is a contiguous sequence of characters in a string.

Example 1:

Input: num = 240, k = 2 **Output:** 2 **Explanation:** The following are the substrings of num of length k: - "24" from "**_24_** 0": 24 is a divisor of 240. - "40" from "2 _**40**_ ": 40 is a divisor of 240. Therefore, the k-beauty is 2.

Example 2:

Input: num = 430043, k = 2 **Output:** 2 **Explanation:** The following are the substrings of num of length k: - "43" from "_**43**_ 0043": 43 is a divisor of 430043. - "30" from "4 _**30**_ 043": 30 is not a divisor of 430043. - "00" from "43 _**00**_ 43": 0 is not a divisor of 430043. - "04" from "430 _**04**_ 3": 4 is not a divisor of 430043. - "43" from "4300 _**43**_ ": 43 is a divisor of 430043. Therefore, the k-beauty is 2.

Constraints:

* `1 <= num <= 109` * `1 <= k <= num.length` (taking `num` as a string)

Code Snippets

C++:

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

}
};
```

Java:

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

}
}
```

Python3:

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