

# 306. Additive Number

## Description

An **additive number** is a string whose digits can form an **additive sequence**.

A valid **additive sequence** should contain **at least** three numbers. Except for the first two numbers, each subsequent number in the sequence must be the sum of the preceding two.

Given a string containing only digits, return `true` if it is an **additive number** or `false` otherwise.

**Note:** Numbers in the additive sequence **cannot** have leading zeros, so sequence `1, 2, 03` or `1, 02, 3` is invalid.

### Example 1:

**Input:** "112358"

**Output:** true

**Explanation:**

The digits can form an additive sequence: 1, 1, 2, 3, 5, 8.

$1 + 1 = 2$ ,  $1 + 2 = 3$ ,  $2 + 3 = 5$ ,  $3 + 5 = 8$

### Example 2:

**Input:** "199100199"

**Output:** true

**Explanation:**

The additive sequence is: 1, 99, 100, 199.

$1 + 99 = 100$ ,  $99 + 100 = 199$

### Constraints:

- `1 <= num.length <= 35`
- `num` consists only of digits.

**Follow up:** How would you handle overflow for very large input integers?

