Problem 1073: Adding Two Negabinary Numbers

Problem Information

Difficulty: Medium
Acceptance Rate: 37.39%
Paid Only: No
Tags: Array, Math

Problem Description

Given two numbers `arr1` and `arr2` in base **-2** , return the result of adding them together.

Each number is given in _array format_ : as an array of 0s and 1s, from most significant bit to least significant bit. For example, `arr = [1,1,0,1]` represents the number `(-2)^3 + (-2)^2 + (-2)^0 = -3`. A number `arr` in _array, format_ is also guaranteed to have no leading zeros: either `arr == [0]` or `arr[0] == 1`.

Return the result of adding `arr1` and `arr2` in the same format: as an array of 0s and 1s with no leading zeros.

Example 1:

Input: arr1 = [1,1,1,1,1], arr2 = [1,0,1] **Output:** [1,0,0,0,0] **Explanation:** arr1 represents 11, arr2 represents 5, the output represents 16.

Example 2:

Input: arr1 = [0], arr2 = [0] **Output:** [0]

Example 3:

Input: arr1 = [0], arr2 = [1] **Output:** [1]

Constraints:

* `1 <= arr1.length, arr2.length <= 1000` * `arr1[i]` and `arr2[i]` are `0` or `1` * `arr1` and `arr2` have no leading zeros

Code Snippets

C++:

```
class Solution {
public:
vector<int> addNegabinary(vector<int>& arr1, vector<int>& arr2) {

}
};
```

Java:

```
class Solution {
public int[] addNegabinary(int[] arr1, int[] arr2) {

}
}
```

Python3:

```
class Solution:
def addNegabinary(self, arr1: List[int], arr2: List[int]) -> List[int]:
```