

## 413. Arithmetic Slices

An integer array is called arithmetic if it consists of **at least three elements** and if the difference between any two consecutive elements is the same.

- For example, `[1, 3, 5, 7, 9]`, `[7, 7, 7, 7]`, and `[3, -1, -5, -9]` are arithmetic sequences.

Given an integer array `nums`, return *the number of arithmetic subarrays* of `nums`.

A **subarray** is a contiguous subsequence of the array.

### Example 1:

Input: `nums = [1, 2, 3, 4]`

Output: 3

Explanation: We have 3 arithmetic slices in `nums`: `[1, 2, 3]`, `[2, 3, 4]` and `[1, 2, 3, 4]` itself.

### Example 2:

Input: `nums = [1]`

Output: 0

### Constraints:

- `1 <= nums.length <= 5000`
- `-1000 <= nums[i] <= 1000`

- ```
class Solution:
    def numberOfArithmeticSlices(self, nums: List[int]) -> int:
        if len(nums) < 3:
            return 0
        dp = [0] * len(nums)
        ans = 0
        for i in range(2, len(nums)):
            if nums[i] - nums[i-1] == nums[i-1] - nums[i-2]:
                dp[i] = dp[i-1] + 1
            ans = ans + dp[i]
        return ans
```