1630. Arithmetic Subarrays

Description

A sequence of numbers is called **arithmetic** if it consists of at least two elements, and the difference between every two consecutive elements is the same. More formally, a sequence `s` is arithmetic if and only if `s[i+1] - s[i] == s[1] - s[0]` for all valid `i`.

For example, these are **arithmetic** sequences:

```
1, 3, 5, 7, 9
7, 7, 7, 7
3, -1, -5, -9
```

The following sequence is not **arithmetic**:

```
1, 1, 2, 5, 7
```

You are given an array of `n` integers, `nums`, and two arrays of `m` integers each, `l` and `r`, representing the `m` range queries, where the `i`th query is the range `[l[i], r[i]]`. All the arrays are **0-indexed**.

Return *a list of* `boolean` *elements* `answer`, *where* `answer[i]` *is* `true` *if the subarray* `nums[l[i]], nums[l[i]+1], ... , nums[r[i]]` *can be* *rearranged* *to form an* **arithmetic** *sequence, and* `false` *otherwise.*

Example 1:

```
Input: nums = [4,6,5,9,3,7], l = [0,0,2], r = [2,3,5]
Output: [true,false,true]
Explanation:
In the 0 th query, the subarray is [4,6,5]. This can be rearranged as [6,5,4], which is an arithmetic sequence.
In the 1 st query, the subarray is [4,6,5,9]. This cannot be rearranged as an arithmetic sequence.
In the 2 nd query, the subarray is [5,9,3,7]. This can be rearranged as [3,5,7,9], which is an arithmetic sequence.
```

Example 2:

```
Input: nums = [-12,-9,-3,-12,-6,15,20,-25,-20,-15,-10], l = [0,1,6,4,8,7], r = [4,4,9,7,9,10]
Output: [false,true,false,false,true,true]
```

Constraints:

- `n == nums.length`
- `m == l.length`
- `m == r.length`
- `2 <= n <= 500`
- `1 <= m <= 500`
- `0 <= l[i] < r[i] < n`
- $-10^5 <= nums[i] <= 10^5$