2964. Number of Divisible Triplet Sums

Medium · ◇ Topics · ⊞ Companies · ♀ Hint

Given a **0-indexed** integer array `nums` and an integer `d`, return *the number of triplets* `(i, j, k)` *such that* `i < j < k` *and* `(nums[i] + nums[j] + nums[k]) % d == 0`.

Example 1:

```
Input: nums = [3,3,4,7,8], d = 5
Output: 3
Explanation: The triplets which are divisible by 5 are: (0, 1,
2), (0, 2, 4), (1, 2, 4).
It can be shown that no other triplet is divisible by 5.
Hence, the answer is 3.
```

Example 2:

```
Input: nums = [3,3,3,3], d = 3
Output: 4
Explanation: Any triplet chosen here has a sum of 9, which is
divisible by 3. Hence, the answer is the total number of
triplets which is 4.
```

Example 3:

```
Input: nums = [3,3,3,3], d = 6
Output: 0
Explanation: Any triplet chosen here has a sum of 9, which is
not divisible by 6. Hence, the answer is 0.
```

Constraints:

- `1 <= nums.length <= 1000`
- `1 <= nums[i] <= 10^9`
- `1 <= d <= 10^9`

Seen this question in a real interview before?   1/5

Yes   No

Accepted **2.5K** | Submissions **3.9K** | Acceptance Rate **64.8%**

◇ **Topics** ⌄

Array   Hash Table

⊞ **Companies** ⌄

0 - 3 months

Salesforce ④   Palantir Technologies ②

0 - 6 months

IBM ②

♀ **Hint 1** ⌄

Fix index `L` to be the leftmost element of a triplet.

♀ **Hint 2** ⌄

Starting from `L`, go forward and add the remainder of each element to a map.

♀ **Hint 3** ⌄

Now when you are at index `R`, consider `nums[L] + nums[R]` and calculate what the remainder of the third element should be.

♀ **Hint 4** ⌄

Then use the map to find the number of valid third elements between `L` and `R`.

💬 **Discussion (1)** ⌄