

## Bonus Question 😊

### Problem #1: Binary Search

Given an integer array `nums`, *return* the number of triplets chosen from the array that can make triangles if we take them as side lengths of a triangle.

Example 1:

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

Output: 3

Explanation: Valid combinations are:

2,3,4 (using the first 2)

2,3,4 (using the second 2)

2,2,3

Example 2:

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

Output: 4

Constraints:

1 <= `nums.length` <= 1000

0 <= `nums[i]` <= 1000

```
/**
 * @param {number[]} nums
 * @return {number}
 */
cibst triangleNumber = (nums) => {
};
```

## Problem #2: Frequency Counter Pattern

Given an integer array `nums` of length `n` where all the integers of `nums` are in the range `[1, n]` and each integer appears once or twice, *return* an array of all the integers that appears twice.

You must write an algorithm that runs in  $O(n)$  time and uses only constant extra space.

Example 1:

Input: `nums = [4,3,2,7,8,2,3,1]`

Output: `[2,3]`

Example 2:

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

Output: `[1]`

Example 3:

Input: `nums = [1]`

Output: `[]`

Constraints:

`n == nums.length`

`1 <= n <= 105`

`1 <= nums[i] <= n`

Each element in `nums` appears once or twice.

```
/**
 * @param {number[]} nums
 * @return {number[]}
 */
const findDuplicates = (nums) => {
};
```