

**Question - 1**
Time Complexity

SCORE: 5 points

Binary search involves taking a *sorted* array and then successively focussing our interest on half of the current array until we find (or don't find) the element we are looking for.

What is the complexity of this algorithm where N is the length of the original sorted array ?

- ☐ $O(N)$
- ☒ $O(\log N)$
- ☐ $O(N \log N)$
- ☐ $O(N/2)$

Question - 2
3 Sum Problem

SCORE: 20 points

Given an array of N integers, are there elements a, b, c in the array such that $a + b + c = 0$? Find the number of unique triplets in the array which gives the sum of zero.

Hint: be careful not to count duplicates.