



INFO6205\_Fall2018\_Section...

30 minutes

## Question - 1

SCORE: 5 points

## Time complexity

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

SCORE: 20 points

## Binary Search

Implement Binary Search, given an array of ints in numerical order.