Problem 3

1) The binary search that would be done would achieve O(logN) because of the nature of how binary search works. Referring to the setup code here:

**if**(i==a[mid])

{

found=mid;

**return** found;

}

**else** **if**(i<a[mid])

{

//binary search on left half

}

**else**

{

//binary search on right half

}

When recursively running through binary search, the array will be continuously divided in half which results in a log base 2, until the mid array element is the number that is being search for. Therefore this results in a O(logN).