1.A) task one sorts the array from least to greatest

[1, 2, 3, 5, 6, 7, 8, 9].

1.B)

n(2 + 1 +1 +n+1+n(4) + 1)
n(6 + n + 4n)
n(6 + 5n)
5n^2 + 6n
Get rid of the constant and lower factors itll be n^2 which means the big O notation is O(n^2).

```
int i, temp;//                              (2
if(j < m) { //                              1
   for( i = j; i <=m; i ++ ){ //            1, n + 1, n
      if( a[i] < a[j] ) { //                1
         temp=a[i];
         a[i]=a[j];
         a[j]=temp;
         //                                 3
      }
   }//end of for

   j++; //                                  1)
   one(a, j, m); //                         n
```

the one method is O(n^2) because when it goes through the loop, its iterating through the array n times. After iterating through the array it's recursively called again which brings it back to the forloop until the condition is met. N times the call by n times the forloop has to go thru, which makes it n * n or n^2.

2.B)
The complexity of this algorithm is O(log n) because it searches half the size of the each time it is called.