Lab 8

While considering n = a.length and n >= 5.

We can see that in a worst case scenario :

The loop I will run n times.

And the k loop will run 5 times

Therefore the number of times the j loop will run is

$\sum_{i=0}^{n} \mathrm{i} = \mathrm{n}(\mathrm{n}+1)/2$

So as we know that the inner loop k will run 5 times.

So the number of times the code System.out.println(a[k]); will run is given as:

5 * $\sum_{i=0}^{n} \mathrm{i} = \mathrm{n}(\mathrm{n}+1)/2$

Therefore the time complexity if the code is:

O(n*n*5) = O(n^2).