1) What is the asymptotic runtime of the algorithm shown below?

```
for i from 0 to n-1
   "Line 2"
   for j from 0 to n-1
     "Line 4"
   for k from 0 to n-1
     "Line 6"
```

2) Call your answer to the previous question $g(n)$. Justify your answer to the previous question by finding the constant multiple and point that it starts to apply: (Fill in the boxes; show and supporting work or derivation below)

$$f(n) \leq \boxed{} \cdot g(n) \text{ whenever } n \geq \boxed{}$$

3) In the pseudocode below, "`Search_Database(m)`" is the function of interest, and runs in $O(h(m))$ time. Everything else is trivial. What is the asymptotic growth rate of this algorithm? (Bonus Question)

```
for i from 0 to n-1
   "Search_Database(i)"
   for j from 0 to n-1
     "Return_Records(j)"
     for k from i to j
        "Do_stuff(i,j,k)"
```