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)

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

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)”