Worksheet – Recitation 4

Name:

Big O definition:

O(f(n)): A function g(n) is in O(f(n)) (“big O of f(n)”) if there exist constants c > 0 and N such that |g(n)| ≤ c |f(n)| for all n > N.

1-Calculate the Big O of the below functions- prove your answer

F(n) =

F(n) = n +

F(n) =

F(n) = 5nlgn + n2

Calculate the growth rate (based on n) for the below code (Assume system call takes O (1) to be executed)

int counter=0;

While (n>1)

{

For (int i=0; i < n; i++)

counter++;

n = n/2;

}

#####################################################

int counter =0;

for (i =0 ; i < n ; i++)

for (j =0 ; j < i ; j++)

counter++;