constant mantifical t

Vinay Kankanang 1002210909 Punction Side summation

3 (c) = (c)

(50) = (0)7

function x=f(n)

$$X=1;$$

3 3 = (M)T (F 1. Find the runtime of the algorithm mathematically

[more 100p

It executed n times for each phase in (

outer loop.

-1. n execution for inner loop

Outer 100P

It Executed n times of from i=1 to i=n

. n Executions for outer loop

Total Execution =  $\sum_{i=1}^{n} \sum_{j=1}^{n} 1$ 

rantime of algorithm iso(n) . The total

blood noy hour 3) Find Polynomials that are upper and lower bounds on your curve from this specify a big-9 big-omega, and what big-thetail. of middisoph

Big-o-natation (upper bound)

O(n)-function does not grow faster

southan augdrateles mon reells Big - Omegg

Slower than Quadrate

Big-Theta O(n)-function grows asymptotically as n' if I modified the function to be

 $\alpha = f(n)$ 2=1;

y=1;

for i= lin

for j=1: n

x= x+1;

y= 4+1)

Vinny Karkanala The body one of the one about tomes and lower 4) will this increase how long it takes the y=i+j, actual time taken by the modified funding Will be slightly longer due to it of the open of the Complexity your result from first fun S) will it Effect your result trong the complexity.

It doesn't exfect much in the time complexity. Slower than Quadrate B19 - The 69 O(4) - function grows asymptotically as it if I modified the function to be 2=((1)) 1=1; 11=1 for i=1:0 a:1=1 204 x=x+1; 1- 1- R