

Data Structures H.W. 1

Asymptotic Boundaries

October 13, 2020

Problem 1 : show that $3n^2 + 25$ is $O(n^2)$.

Problem 2 : if $4n^3 + 7n^2 + 12$ is $O(n^3)$ find its corresponding n_0 and k according to the Big O notation formula.

problem 3 : show that $n\log(n) - 2n + 13$ is $\Omega(n\log(n))$.

problem 4 : show that $n^2 + 5n + 7$ is $\Theta(n^2)$.

problem 5 : show that $0.5n^2 - 3n$ is $\Theta(n^2)$.

problem 6 : show that $3n^2 + 8n\log(n)$ is $\Theta(n^2)$.