

CSCI 310, Data Structures, Summer 2009

Assignment 6 (30 points)

1. (5 points) Show directly, using the definition of “big O ”, that $2n^2 + 9n \in O(n^2)$.
2. (5 points) Show directly, using the definition of Ω , that $6n^3 - 12n \in \Omega(n^3)$.
3. (5 points) Show directly, using the definition of “*Little-o*”, that $4n \in o(n^2)$.
4. (5 points) Show directly, using the definition of Θ , that $n^3 + 17n^2 \in \Theta(n^3)$.
5. (5 points) Show that $7n^2 \notin o(n^2)$.
6. (5 points) Exercise 2.7 (a), parts (1), (2), (3), and (4) on pages 64 and 65.