

CSci 1302 Assignment 9
Due Monday, April 25th in class

Problem 1 (10 points). Prove each of the following, using the definitions of O , Ω , and Θ :

1. $3x^2 + 3x - 5$ is $O(x^3)$
2. $5x^2 + 5$ is $\Omega(x)$
3. $3x^2 - 7x + 100$ is $O(x^2)$
4. $\log_2 x + 3$ is $\Theta(\log_2 x)$
5. 55 is $O(1)$

Problem 2 (4 points). Exercises 11 and 13 p. 529.

Problem 3 (4 points). Exercise 17 p. 529.

Problem 4 (2 points). Exercises 35 and 36 p. 530.

Problem 5 (6 points). Exercises 3 and 5 p. 540.

Problem 6 (9 points). Exercises 10, 12, 16 p. 541.