

## CSci 1302 Assignment 12

Due Friday, May 1st in class or in Elena's office (Sci 2325) any time

**Problem 1 (4 points).** Prove each of the following, using the definitions of  $O$ ,  $\Omega$ , and  $\Theta$ :

1.  $\log_2 x + 3$  is  $\Theta(\log_2 x)$
2.  $\log_2 x$  is  $\Omega(10)$

**Problem 2 (6 points).** Exercises 3 and 5 p. 540.

**Problem 3 (9 points).** Exercises 10, 12, 16 p. 541.

**Problem 4 (4 points).** Exercises 4, 5b, 6b p. 569.

**Problem 5 (9 points).** Exercises 2, 8, 19 p. 582-583.

**Problem 6 (6 points).** Exercises 17, 19, 22 p. 593.