CSci 3501 Assignment 2
Due Friday, September 12 in class

Problem 1 (6 points). Prove the following:

- $n! \in \omega(2^n)$

- $n! \in o(n^n)$

Problem 2 (6 points). Exercise 3-4 p. 59 parts d, e. You have to either prove the claim or give a counterexample.

Problem 3 (6 points). Exercise 2.1-2 p. 21. Write the pseudocode for the procedure (minor differences in pseudocode notations, such as adding brackets, are OK). **Additionally,** please write the loop invariant for the new procedure and show that it holds.