Systems Programming and Operating Systems	**Assignment 2**
CS414, Summer 1996	**July 17, 1996; Due on July 25, 1996**

Problem 1 (20 points)
Prove that using semaphores, and using the assymetric policy for even and odd numbered philosphers that we discussed in class, we can avoid deadlock.

Problem 2 (20 points)
The solution to reader's and writer's problem we saw in the class does not prevent starvation either for the reader or for the writer. In other words, if a reader process is in the database already, it can let in any number of reader processes, while a writer process may starve. Implement a solution using monitors that will prevent this. Also, ensure in your solution that when a writer process finishes, it lets in a reader if there is one waiting, otherwise a waiting writer can get through.

Problem 3 (20 points)
Solve problem 6.7 from the textbook: (The sleeping-barber problem). Your solution should simulate the sleeping and waking up of the barber and the entering and leaving of the customers both into the waiting room from outside and between the waiting room and the barber's chair.