Due Date: Monday, 2/8/2010 at beginning of class (hardcopy)

Problems:

1.2, 1.7, 1.8, 1.14 from Chapter 1.

2. Consider the queue to pick up food items in the canteen. You will find longer queues at specific counters serving more popular food items. The way this queue grows is based on the queue size where the arrival rate is proportional to the number of customers in the queue. The service rate is exponentially distributed with mean $\mu$. Assume that the queue is finite (with queue size=n, no more customers will be allowed to enter the queue). Find the average number of customers in the queue and the average waiting time for a customer.