

Stat 351 Fall 2006  
Assignment #9

Suppose that the number of calls per hour arriving at an answering service follows a Poisson process with  $\lambda = 4$ .

- (a) What is the probability that fewer than two calls come in the first hour?
- (b) Suppose that six calls arrive in the first hour. What is the probability that at least two calls will arrive in the second hour?
- (c) The person answering the phones waits until fifteen calls have arrived before going on a break. What is the expected amount of time that the person will wait?
- (d) Suppose that it is known that exactly eight calls arrived in the first two hours. What is the probability that exactly five of them arrived in the first hour?