**Homework 9**

**Section 5.3 in Casella and Berger Book**

Book problems: 5.10 (use Stein's lemma for a), 5.11, 5.15, 5.17, 5.18a,b,c (use version of Sterling's formula given in 5.35b)

Additional Problem: Xi ~ iid N(mu, sigma^2). a) show that Cov(X1-Xbar,Xbar)=0; b) use (a) to show that xbar is independent of S^2.

**Section 5.4 in Casella and Berger Book**

Book problems: 5.21, 5.22, 5.24, 5.27