Homework 8

Section 4.6 in Casella and Berger Book

Book problems: 4.36, 4.39 (WLOG, let i =1 and j=2. For $Cov(X_i,X_j)$, use that $X_1 + X_2 \sim$ $Bin(m, p_1+p_2)$ and find $Cov(X_1+X_2)$ using $Var(X_1+X_2)$.)

Using pdf in Example 4.6.1, find a) $f(x1,x2,x3)$, b) $f(x4$ given $x1,x2,x3)$, c) $P(X1<1/2,X2<1/2,X3<1/2)$, d) $P(X4<1/2$ given $X1=X2=X3=1/2)$.

Sections 4.7 and 3.6 in Casella and Berger Book

Book problems: 3.46, 4.63

Sections 5.1 and 5.2 in Casella and Berger Book

Book problems: 5.1, 5.3, 5.5, 5.8a, c (assume $\theta_1=0$ and use part a)