Homework 8 – STAT 5430

Due Monday, April 28 by midnight in gradescope;

1. Suppose there is one observation X with pdf $f(x) = 2\theta(1 - 2x) + 2x$ for $x \in [0, 1]$, $\theta \in [0, 1]$. Find the Bayes test for $H_0 : \theta \leq 0.4$ vs. $H_1 : \theta > 0.4$ with respect to the uniform prior on $[0, 1]$.

2. Problem 9.13, Casella and Berger (2nd Edition)

3. Problem 9.16, Casella and Berger (2nd Edition)

4. Problem 9.11, Casella and Berger (2nd Edition)