Statistical Computing HW 8

Mario Ibanez

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Question 1

Suppose that y is a single observation from a binomial distribution with parameters n and p.

a) Find the MLE of p.

b) Assume the prior distribution of p is Beta(a, b) with $0 < p < 1$. Find the Bayes estimator of p.

Question 2

Suppose that $x_1, ... x_n$ is a random sample from a normal distribution $N(\theta, \sigma^2)$, where σ^2 is known.

a) Find the MLE of θ.

b) Assume the prior distribution of θ is $N(\theta_0, \sigma_0^2)$. Find the Bayes estimator of θ.