All the problems are from Casella and Berger.

1. Consider the situation described in Problem 8.5, page 386. Suppose \( \nu = 1 \).
   (a.) Obtain the Wald test of
   \[ H_0 : \theta = 1 \text{ versus } H_1 : \theta \neq 1. \]
   Find the rejection region with an approximate level of \( \alpha \).
   (b.) Obtain the score test of
   \[ H_0 : \theta = 1 \text{ versus } H_1 : \theta \neq 1. \]
   Find the rejection region with an approximate level of \( \alpha \).

2. Let \( X_1, \ldots, X_n \) have a Poisson(\( \theta \)) distribution. Answer Parts (a.) and (b.) as in Problem 1.
   (c.) Obtain the likelihood ratio test of
   \[ H_0 : \theta = 1 \text{ versus } H_1 : \theta \neq 1. \]
   Find the rejection region with an approximate level of \( \alpha \).


5. Let \( X_1, \ldots, X_n \) have a Normal(\( \theta,1 \)) distribution. Consider the problem of testing
   \[ H_0 : \theta \leq 0 \text{ versus } H_1 : \theta < 0. \]
   Suppose that \( \theta \) has a Normal(0,1) prior distribution. Using the loss function that is zero when a correct decision is made and one when an error is made, obtain the Bayes procedure.