Statistics 211
In-Class Assessments
Topic: Chapter 6
Date: Oct. 20, 2016

Consider doing inference on a population mean μ based on a random sample $X_1, X_2, \ldots, X_n$.

1. From a Bayesian perspective, we could estimate μ with a credible interval. What is the definition of a 95% credible interval for μ?

   (a) The interval between the 2.5th and 97.5th percentiles of the posterior distribution for μ.

   (b) The interval between the 2.5th and 97.5th percentiles of the sampling distribution of $\bar{x}$.

   answer: a

2. Suppose we compute a 95% credible interval for μ of $[a, b]$. Is the following statement true or false: The probability that $a < \mu < b$ equals 0.95.

   (a) True

   (b) False

   answer: a

3. Suppose we compute a 95% confidence interval for μ of $[c, d]$. Is the following statement true or false: The probability that $c < \mu < d$ equals 0.95.

   (a) True

   (b) False

   answer: b