Statistics 211
In-Class Assessments
Topic: Chapter 5
Date: Oct. 13, 2016

Consider a Binomial experiment, with n independent Bernoulli trials, each with probability p of success. Suppose we use the bootstrap to compute both a 95% confidence interval for p and a p-value for testing $H_0 : p = p_0$ vs. $H_a : p \neq p_0$.

1. If p_0 is contained in the 95% confidence interval, which one of the following statements would you expect to be true?
   (a) p-value < 0.05.
   (b) p-value > 0.05.
2. If p_0 is <u>not</u> contained in the 95% confidence interval, which one of the following statements would you expect to be true?
   (a) p-value < 0.05.
   (b) p-value > 0.05.
3. If p-value < 0.05, which one of the following statements would you expect to be true?
   (a) p_0 is contained in the 95% confidence interval.
   (b) p_0 is <u>not</u> contained in the 95% confidence interval.
4. If p-value > 0.05, which one of the following statements would you expect to be true?
   (a) p_0 is contained in the 95% confidence interval.
   (b) p_0 is <u>not</u> contained in the 95% confidence interval.