

Name: _____

SS#: _____

Test 3

Instructions: Answer all seven problems, two on each answer sheet. Put the number of the problems you are doing at the top of the answer sheet.

All problems are worth the same amount.

1. In their landmark study, the Hostess corporation kept 100 College Park squirrels under strict surveillance. Interested in the average number of Twinkies these squirrels consumed last year, they reported a sample mean of 3.12 and a sample standard deviation of .27. Give a 98% confidence interval for the actual mean average of Twinkies consumed last year.
2. Jacob is doing a problem for his statistics homework. Part (a) asks for a standard error which he calculates successfully to be 4.53. Unfortunately, Jacob bought the book used from some dirty guy, so the question in part (b) is smudged. He can tell it asks for an error, but cannot tell for what percent confidence. The answer in the back says 9.29. What is the percent confidence (b) asks for?
3. Of 200 statistics instructors rounded up, 25 finally admitted (some after hours of torture) that they indeed know what a lemur is. Give a 94% confidence interval for the actual proportion of all statistics instructors who know what a lemur is.
4. Suppose we want to estimate the actual proportion of students who, if given the opportunity, would gather up all the statistics books up in a big pile and light them on fire (a Bore-B-Que). Though many hypothesize this proportion must be high, we actually have no idea what the real proportion is. How many people should we question if we want to determine a 95% error term which is less than .01?