

ST 506 Sampling Animal Populations  
Homework Set 7 Due October 16, 2008

Q1. A short intense crab fishery removes 7510 legal size crabs (and no illegal size crabs). We had also nondestructively sampled the fishery before and after the catch and obtained a ratio of 0.22 legal size crabs ( $SE= 0.04$ ) before the harvest and 0.08 ( $SE=0.02$ ) after the harvest. Calculate the population size estimate of crabs (with SE) and the number of legal size crabs before the harvest. Also present the assumptions.

Q2. Use the regression method described in class to analyze the catch and effort data given in Table 14.11 on page 325 of the text to obtain an estimate of the population size. (Ignore the temperature data). What are the assumptions of this model?