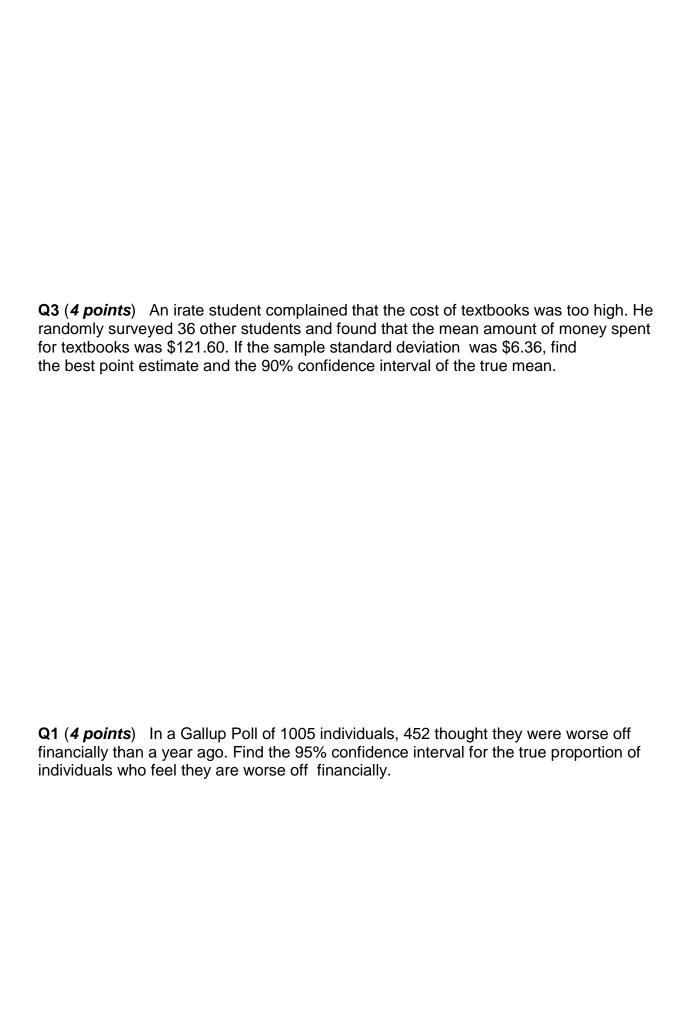**First Name:**

Last Name:

ID Number:

Prince Sultan University
STAT 271
First Examination
Second Semester 2013/2014, Term 132
Thursday, 27th February 2014
Dr. Mohammed Kaouache

Time Allowed: 60 minutes

Question	Max points	Student's Points
1	4	
2	4	
3	4	
4	4	
5	4	
Total	20	

Q1 (***4 points***) A study of 415 kindergarten students showed that they have seen on average 5000 hours of television.

a) If the standard deviation of the population is 900, find the 95% confidence level of the mean for all students.

b) Give an interpretation of the confidence interval in a)

Q2 (***4 points***) The average cost of owning and operating an automobile is $8121 per 15,000 miles including fixed and variable costs. A random survey of 40 automobile owners revealed an average cost of $8350 with a population standard deviation of $750. Is there sufficient evidence to conclude that the average is different from $8121? Use a apha= 0.01.

Q3 (*4 points*)   An irate student complained that the cost of textbooks was too high. He randomly surveyed 36 other students and found that the mean amount of money spent for textbooks was $121.60. If the sample standard deviation was $6.36, find the best point estimate and the 90% confidence interval of the true mean.

Q1 (*4 points*)   In a Gallup Poll of 1005 individuals, 452 thought they were worse off financially than a year ago. Find the 95% confidence interval for the true proportion of individuals who feel they are worse off financially.

Q1 (*4 points*) If the standard deviation of a national accounting examination is 300, how large a sample is needed to estimate the true mean score within 5 points with 95% confidence?