**Name: Math 153 Test #4**

Directions: For each problem state the Population and Parameters and then conduct the appropriate hypothesis test using a 5% level of significance for each test.

1. 150 snorers were questioned about the number of hours they sleep each day. We want to test the hypothesis that snorers need more sleep than the general public which needs an average of 7.7 hours of sleep. If the sample mean is 7.9 hours and the sample standard deviation is .25 hours is there sufficient evidence that suggests snorers do need more sleep then non-snorers?
2. John recently claimed that the proportion of high school males that claim to drink alcohol is significantly higher than the proportion of high school females that claim to consume alcohol. He conducted a survey in his school, out of 80 males, 45 claims to drink alcohol. Out of 76 females, 31 claim to consume alcohol. Do you believe that the proportion of males is higher than the proportion of females?