**Practice Hypothesis Testing Questions (#’s 1-3)**

1. 150 people who snore were questioned about the number of hours they sleep each day. We want to test the hypothesis that people who snore need more sleep than the general population which needs an average of 7.7 hours of sleep. If the sample mean was 7.9 hours and the sample standard deviation is .25 hours for the people who snore, is there sufficient evidence that suggests snorers do need more sleep than non-snorers?
2. We would like to determine if the typical amount spent per customer for dinner at the new restaurant in town is more than $20.00. A sample of 36 customers over a three-week period were randomly selected and the mean amount spent was $23.60. Assume we know the standard deviation of the population to be $2.50. Conduct and appropriate hypothesis test to see if the typical amount spent per customer is more than $20.00?
3. Two chefs were discussing the topic of bacon and one of them stated that he believed that 75% of the people in the United States like Bacon. The other chef said that it had to be higher than that. She decided to test the claim and randomly selected 44 people from different restaurants and discovered that 38 of the 44 people said they like Bacon. Is this enough evidence to support her claim?
4. If someone believes the average temperature in a specific state is over 76o and they take a sample of 50 days and record the temperatures for that state. The average temperature for 50 days is 80o. They conduct an appropriate hypothesis test and discover the p-value is equal to 0.04. **Explain in detail** what the p-value is saying in the context of this problem.
5. Explain the difference between a 1-Sample T Test & a 1-Sample Z-Test?