In New York State, savings banks are permitted to sell a form of life insurance called savings bank life insurance (SBLI) . The approval process consist of underwriting, which includes a review of the application, a medical information bureau check, possible request for additional medical information and medical exams, and policy compilation stage in which the policy pages are generated and sent to the bank for delivery. The ability to deliver approved policies to customers in a timely manner is critical to the profitability of this service. During a period of one month, a random sample of 27 approved policies is selected and the total processing time, in days is recorded( and stored in insurance).

73 19 16 64 28 28 31 90 60 56 31 56 22 18 45 48 17 17 17 91 92 63 50 51 69 16 17

1. In the past, the mean processing time was 45 days. At the 0.05 level of significance, is there evidence that the mean processing time has changed from 45 days?

(Use the Hypothesis test one sample)

You are the manager of a restaurant that delivers pizza to college dormitory rooms. You have just changed your delivery process in an effort to reduce the mean time between order and completion of delivery from the current 25 minutes. A sample of 36 orders using the new delivery process yields a sample mean of 22.4 minutes and a standard deviation of 6 minutes.

1. At the 0.05 level of significance, use the five step p-value approach

( use the hypothesis test one sample)

Suppose you saw an email that stated that the mean age of employees in your company is less than 40 years and that more than 50% of the employees are female. You decide to take a sample of employees and test the claim. Assume the CUMBA database represents a random sample of 100 employees. Using the "Hypothesis Tests One Sample" file and a .05 significance level:

* + Using the *age* data only, (Data included below in the CUMBA file) test whether the mean age is less than 40.
  + Using the *gender* data within that file only, test whether more than 50% of the employees are female.
  + **Be sure to state your actual hypothesis, your decision to reject the null or not, and your conclusion in a paragraph directed to management.**