**ASIGNACION Intervalo de confianza**

1. **Intervalo de Confianza para el promedio y proporción una población**

1. A random sample of 45 door-to-door encyclopedia salespersons were asked how long on average they were able to talk to the potential customer. Their answers revealed a mean of 8.5 minutes with a variance of 9 minutes.

2. A study conducted by a commuter train transportation authority involved surveying a random sample of 200 passengers. The results show that a customer had to wait on the average 9.3 minutes with a standard deviation of 6.2 minutes to buy his or her ticket. Construct a 95% confidence interval for *μ*, the true mean waiting time.

3. A study conducted by the doctors of a particular hospital involved monitoring a random sample of 75 patients. The results showed it took an average of 3 cc of tranquilizer to put a patient to sleep before surgery with a standard deviation of 0.2 cc. Construct a 95% confidence interval for *μ*, the true mean amount of tranquilizer needed to put any patient to sleep.

4. Suppose you wish to estimate a population mean based on a random sample of *n* observations, and prior experience suggests that  =13.2. If you wish to estimate  correct to within 1.8, with probability equal to 0.95, how many observations should be included in your sample?

5. A random sample of 80 jars of grape jelly has a mean weight of 20 oz. with a standard deviation of 1.7 oz. Construct a 99% confidence interval for *μ,* the true weight of a jar of jelly.

6. Twenty retired people living within the Crystal city limits were asked if they would use public transportation if a system was implemented. Their responses are listed below where Y = Yes and N = No. Use these data to estimate *p*, the true proportion of all retired people living in the city limits that would use a public transportation system, and find the estimated margin of error.

Y N N N N

N Y Y Y Y

N N Y Y Y

Y Y Y Y N

7. An airport bus driver conducted a study to see what proportion of customers use the shuttle bus to get to and from the parking lot. The results of his study are listed below, where B = customer used the bus and W = customer walked.

B B B W W B B W W W

W B B B B B W B B B

W W B B B B W B W B

W W B B W W B W W B

B B B B B B B W