Time Frame: 50 minutes

Subject Matter: *t* Confidence Interval for the Mean (Statistics)

TELL ME

Objective: TSWBAT find the *t* confidence of interval for the mean (Statistics)

Standards: DA – 4.9

Materials: PowerPoint Presentation, Calculator, and Worksheets

SHOW ME

Presentation of Information

Using the statistics tool of the TI – 83 Calculator the teacher will discuss the following.

Let Me Try

1. The average hemoglobin reading for a sample of 20 teachers was 16 grams per 100 milliliters, with a sample standard deviation of 2 grams. Find the 99% confidence interval of the true mean.
2. A sample of six adult elephants had an average weight of 12200 pounds, with a sample standard deviation of 200 pounds. Find the 95% confidence interval of the true mean.
3. A recent study of 28 city residents showed that the mean time they had lived at their present address was 9.3 years. The standard deviation of the sample was 2 years. Find the 90% confidence of interval of the true mean.
4. An automobile shop manager times six employees and found that the average time it took them to change a water pump was 18 minutes. The standard deviation of the sample was 3 minutes. Find the 99% confidence interval of the true mean.
5. A recent study of 25 students showed that they spent an average of $18.53 for gasoline per week. The standard deviation of the sample was $3.00. Find the 95% confidence of interval of the true mean.
6. For a group of 10 mean subjected to a stress situation, the mean number of heart beats per minute was 126, and the standard deviation was 4. Find the 95% confidence of interval of the true mean.
7. For the stress test described above, six women had an average heart rate of 115 beats per minute. The standard deviation of the sample was 6 beats. Find the 95% confidence of interval of the true mean for the women.
8. For the sample of 24 operating rooms taken in the hospital study, the mean noise level was 41.6 decibels, and the standard deviation was 7.5 decibels. Find the 95% confidence of interval of the true mean of the noise levels in the operating rooms.
9. For a group of 20 students taking a final exam, the mean heart rate was 96 beats per minute, and the standard deviation was 5. Find the 95% confidence of interval of the true mean.
10. The average yearly income for 28 married couples living in city C is $58,219. The standard deviation of the sample is $56. Find the 95% confidence of interval of the true mean.