* **Chapter 9:  2, 6, 8, 10, 12, 16, 24**

**·**        **Chapter 10:  6, 8, 10, 14**

**·**         **Chapter 11:  4, 10, 12**

**·**         **Chapter 13:  2, 16, 18 (Week 5)**

Questions –

A sample of 81 observations is taken from a normal population with a standard deviation of 5. The sample mean is 40. Determine the 95% confidence interval for the population mean.

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Dr. Patton is a professor of English. Recently she counted the number of misspelled words in a group of student essays. She noted the distribution of misspelled words per easy followed the normal distribution with a standard deviation of 2.44 words per essay. For her 10:00 am section of 40 students, the mean number of misspelled words was 6.05. Construct a 95 percent confidence interval for the mean number of misspelled words in the population of student essays.

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The American Sugar Producers Assn. wants to estimate the mean yearly sugar consumption. A sample of 16 students reveals the mean yearly consumption to be 60 pounds with a standard deviation of 20 pounds.

What is the value of the population mean? What is the best estimate value?

Explain why one would need to use the t distribution and what assumption would one make.

For a 90% confidence internal, what is the value of t?

Develop the 90% confidence interval for the population mean and would it be reasonable to conclude that the population mean is 63 pounds?

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Ms. Wilson is considering running for mayor of the town of Bear Gulch, Montana. Before completing the petitions, she decides to conduct a survey of voters in Bear Gulch. A sample of 400 voters reveals that 300 would support her in the November election.

Estimate the value of the population proportion.

Develop a 99 percent confidence interval for the population proportion.

Interpret your findings.