**Confidence Intervals:  The Basics**

Point estimator and point estimate –

Confidence Interval –

Margin of error –

Confidence level –

Interpreting Confidence Intervals –

Interpreting Confidence level –

Construction a Confidence Interval –

**Estimation a population Proportion**

Conditions for construction a Confidence Interval about a Proportion –

Constructing a Confidence Interval for p –

Standard Error –

One –Sample Z interval for a Population Proportion –

Confidence Intervals: A Four Step Process –

Sample Size for Desired Margin of Error –

**Estimating a population Mean**


Confidence Intervals for the mean $\mu$ –


When $\mu$ is unknown:  The t Distributions -


      Degrees of Freedom -


Conditions for constructing a Confidence interval about the Mean -


Standard Error -


One-Sample t Interval for a Population Mean -


Sample size for a desired margin of error when estimating $\mu$ -

**Estimating with Confidence**

| | |
|---|---|
| Determine the point estimate and margin of error from a confidence interval. Interpret a Confidence interval in context. Interpret a confidence level in context. Describe how the sample size and confidence level affect the length of a confidence interval. Explain how practical issues like nonresponse, under coverage, and response bias can affect the interpretation of a confidence interval. | 8.1) 5, 6, 8, 9, 12, 20, 21, 22 |

8.2) 27, 28, 31, 32, 34, 36, 38, 41, 45, 46, 51

| | |
|---|---|
| State and check the Random, 10%, and Large counts conditions for constructing a confidence interval for a population proportion. Determine critical values for calculating a C% confidence interval for a population proportion using a table or technology. Construct and interpret a confidence interval for a population proportion. Determine the sample size required to obtain a C% confidence interval for a population proportion with a specified margin of error. | 8.3) 55, 57, 60, 61, 62, 65, 66, 69, 70, 75

**Spiral Review: R1.4, T3.7, T3.12, R4.10, R6.1**

Practice Test

Test

**Pg. 470) 1, 2, 4, 7, 10-13, 17, 18, 20, 22, 25** |

State and check the Random, 10%, and Normal/Large sample conditions for constructing a confidence interval for a population mean. Explain how the t distributions are different from the standard Normal distribution and why it is necessary to use a t distribution when calculating a confidence interval for a population mean. Determine critical values for calculating a C% confidence interval for a population mean using a table or technology. Construct and interpret a confidence interval for a population mean. Determine the sample size required to obtain C% confidence interval for a population mean with a specified margin of error.