**MATH399: Course Project Part I Worksheet**

Directions**:**

Please review the two articles listed below.

Confidence Intervals, Pt. 1:

* <https://chamberlainuniversity.idm.oclc.org/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=mdc&AN=22685844&site=ehost-live&scope=site>

Confidence Intervals, Pt. 2:

* <https://chamberlainuniversity.idm.oclc.org/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=mdc&AN=22720461&site=ehost-live&scope=site>

# Introduction

(REMOVE THIS LINE PRIOR TO SUBMITTING REPORT: Summarize what you have learned about confidence intervals from the articles above. Discuss why it would be important to find the population mean of the data used for this term. Provide a description of the data you were provided and discuss what you know about the chosen topic.)

# Sample Data

(REMOVE THIS LINE PRIOR TO SUBMITTING REPORT: List ALL of the sample data in the table below.)

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# Directions:

1. Use the table above to create an 80%, 95%, and 99% confidence interval.
2. Choose another confidence level (besides 80%, 95% or 99%) to create another confidence interval.
3. Provide a sentence for each confidence interval created above which explains what the confidence interval means in context of topic of your project.

# Computations

(Round the mean and sample standard deviation to values to FIVE decimal places)

(REMOVE THIS LINE PRIOR TO SUBMITTING REPORT: Calculate each of the following.)

Sample Mean =

Sample Standard Deviation =

(Round the lower/upper limits and margin of error to THREE decimal places).

#1.

80% Confidence Interval:

80% Confidence Interval Margin of Error:

Sentence:

#2.

95% Confidence Interval:

95% Confidence Interval Margin of Error:

Sentence:

#3.

99% Confidence Interval:

99% Confidence Interval Margin of Error:

Sentence:

#4. Make up YOUR OWN Interval.

\_\_\_\_\_\_% Confidence Interval:

\_\_\_\_\_\_% Confidence Interval Margin of Error:

Sentence

# Problem Analysis

(REMOVE THESE LINES PRIOR TO SUBMITTING REPORT: Write a half-page reflection. What trend do you see takes place to the confidence interval as the confidence level rises? Explain mathematically why that takes place. Explain how Part I of the project has helped you understand confidence intervals better? How did this project help you understand statistics better?)