

Stat 101
Summer 2023 Session 1
Dr. Lily Yen

Activity 7-1

Show all your work

Name: _____
Number: _____
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Score: ____/9

State all spreadsheet functions used.

Problem 1: The Marist Poll published a report stating that 66% of adults nationally think licensed drivers should be required to retake their road test once they reach 65 years of age. It was also reported that interviews were conducted on 1018 American adults, and that the margin of error was 3% using a 95% confidence level.

- Is the margin of error reported by The Marist Poll correct?
- Based on a 95% confidence interval, does the poll provide convincing evidence that *more than 70%* of the population think that licensed drivers should be required to retake their road test once they turn 65?

Score: ____/3

Problem 2: An independent random sample is selected from an approximately normal population with an unknown standard deviation. Find the p -value for a sample size of $n = 16$ and test statistic, $T = 2.01$. Also determine if the null hypothesis would be rejected at $\alpha = 0.02$.

Score: ____/3

Problem 3: A 90% confidence interval for a population mean is (65, 77). The population distribution is approximately normal and the population standard deviation is unknown. This confidence interval is based on a simple random sample of 25 observations. Calculate the sample mean, the margin of error, and the sample standard deviation.

Score: ____/3

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