

JUNE AT THE MULTIPLEX – QUESTIONS – Spring, 2024

Ms. Plex seeks guidance. With respect to surveying moviegoers, Ms. Plex would like at least one survey to be conducted and would like to know how the data will be analyzed once it is collected.

- Q. 1. From the case text, provide no less than five (5) and no more than seven (7) possible questions for a movie-going customer survey.

After reviewing the information provided by your firm (team), Ms. Plex and the consortium decided to have your firm (team) conduct two surveys and analyze the results. The key question for each survey was to determine the number of individuals that agree with Tammy (i.e., they resent the ads). You have the survey data as an Excel file.

For the questions below use a significance level of $\alpha=.05$. Additionally, you may use a one-tailed (“one-sided”) test for the hypothesis tests below, but recall that confidence intervals are always two-tailed (“two-sided”).

- Q. 2. Based on the result from the first survey (sample), recommendation. That is, what decision (course of action) does the analysis suggest the consortium adopt? Justify your conclusion by applying a statistical evaluation of the accuracy of your result. You’ll need to a), make a chart of the data, b), conduct a hypothesis test, and 3) construct a confidence interval.
- Q. 3. When would the consortium make a Type I error (false positive)? When would the consortium make a Type II error (false negative)? What would be the possible consequences for the consortium of each specific error?
- Q. 4. Your firm (team) conducted a second survey (sample) as well. Would your answer to Question 2 change? You need the same three methodological steps as you did in Q2. Explain the results of this second survey, and explain how the results from the second survey impact (i.e., change or don’t change, and why) your original recommendation regarding the consortium’s decision (course of action).
- Q. 5. Discuss the possible limitations of your survey data. That is, how might the data in either sample survey be incorrect or unrepresentative? What other information might you like to have to either do a better statistical analysis or assist Ms. Plex in her decision-making?