Friday Quiz 3 Solutions - STAT 252

Question 10

Use the following information for question 10:

Panda Express aims to assess the potential success of a new line of plant-based entrees compared to their classic menu options among health-conscious Cal Poly students. To conduct this evaluation, they select a sample of 1500 students at random. Among them, 1000 participants try the new plant-based entrees, while the remaining 500 are given the traditional menu items. After sampling the dishes, participants are asked to indicate their satisfaction level with the food they tried. Among those who tried the new plant-based entrees, 725 out of 1000 expressed satisfaction, while among those who tried the traditional menu items, 300 out of 500 reported satisfaction. Panda Express seeks to determine if there is a statistically significant difference in customer satisfaction among Cal Poly students between these two menu options.

Sample Proportions: phat_1 = 0.725; phat_2 = 0.600

Standard Error = 0.02547875

Calculate the test statistic. Interpret this value in the context of the problem.

Here's a **full solution and 4-point rubric** in **Markdown format** for the question asking students to compute and interpret the **test statistic** for comparing two proportions.