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| **Instructions**:   1. The datasets for the cases are contained on the attached Excel spreadsheet 2. Please read these cases thoroughly to identify and apply correct statistical techniques to each case. Use of incorrect techniques will lead to incorrect inference and will make your study meaningless. 3. Write a report (Word or Excel) explaining the following:    1. A short summary of the case    2. Hypothesis Statements (Mathematical)    3. Analysis of Type 1 and Type 2 Errors    4. Paste the MegaStat Output    5. p-value vs alpha comparison    6. Decision and Interpretation |

**Case 3: *Grocery4You.com***

*e-grocers* are companies that sells groceries over the internet. Customers open an online account, enter their orders, pay by credit card or debit card, and receive deliveries by truck. Several businesses think that it is means of convenience for busy customers who have no or very little time to go to a grocery store, buy groceries, and wait in line to pay – not to mention the driving time to and from the grocery store. In the year 2001, two of America’s largest online supermarkets – *Webvan.com* on the West Coast and *HomeRuns.com* on the East Coast – abruptly shut down[[1]](#footnote-1). They left behind at least 2,000 people without jobs and irate customers who thought that the service of all things cyber, seemed like a sure bet.1 The investors lost their money. Learning lessons from history, *Grocery4You.com*, a potential e-grocer is planning cautiously on the prospects of starting the e-grocery business. A team of entrepreneurs wants to thoroughly research the prospects of staying in business and being profitable prior to starting it. They analyzed the market and determined that the average order would have to be $84 to breakeven (cover the costs) and any further increase in an average order would generate a profit. As a pilot, the team offers the e-grocery service in one large city. Although the entrepreneurs have an MBA, statistical (data) analysis was their weakness in school. They relied on other team members to complete the assignments thinking “What’s the point? I am never going to use this.” They hire your team as an analyst to validate the possibility of being profitable. Statistics was your favorite subject in school because your funny instructor combined theory with applications making the subject interesting. You welcome this opportunity to apply some statistical analysis you learned in school on this project. You know from your statistics education that inferential statistics begins with collecting a sample. You record the size of the order for a random sample of customers from this large city in the Excel spreadsheet. Based on this data, can you convince the team of entrepreneurs that the business will be profitable? Also analyze and present Type I and Type II errors to select the level of significance.

1. Time.com “E-Grocers Check Out”, Monday July 23, 2001 [↑](#footnote-ref-1)