Case study assignment "the possibility" restaurant

Business

DECISION SCIENCE (MGT 3050) CASE STUDY ASSIGNMENT " THE POSSIBILITY" RESTAURANT (2) Angela Fox and Zooey Caulfield were food and nutrition majors at State University, as well as close friends and roommates. Upon graduation Angela and Zooey decided to open a French restaurant in Draperton, the small town where the university was located. There were no other French restaurants in Draperton, and the possibility of doing something new and somewhat risky intrigued the two friends. They purchased an old Victorian home just off Main Street for their new restaurant, which they named " The Possibility".

Angela and Zooey knew in advance that at least initially they could not offer a full, varied menu of dishes. They had no idea what their local customers' tastes in French cuisine would be, so they decided to serve only two full-course meals each night, one with beef and the other with fish. Their chef, Pierre, was confident he could make each dish so exciting and unique that two meals would be sufficient, at least until they could assess which menu items were most popular. Pierre indicated that with each meal he could experiment with different appetizers, soups, salads, vegetable dishes, and desserts until they were able to identify a full selection of menu items. The next problem for Angela and Zooey was to determine how many meals to prepare for each night so they could shop for ingredients and set up the work schedule.

They could not afford too much waste. They estimated that they would sell a maximum of 60 meals each night. Each fish dinner, including all accompaniments, requires 15 minutes to prepare, and each beef dinner takes twice as long. There is a total of 20 hours of kitchen staff labour

available each day. Angela and Zooey believe that because of the health consciousness of their potential clientele they will sell at least three fish dinners for every two beef dinners.

However, they also believe that at least 10% of their customers will order beef dinners. The profit from a beef dinner will be about $16. Formulate a linear programming model for Angela and Zooey that will help them estimate the number of meals they should prepare each night and solve this model graphically.