December 1, 2011

Dewey, Cheatum, & Howe Statistics, LLC.

attn.: Andrew Howe

Armski Boulevard

Azivale, NY 90211

Dear Mr. Howe,

Tony’s Frozen Pizza, Inc. is a fine purveyor of quality frozen pizza products. We are receiving a lot of competition from our rival pizza company, Nonnie DiMeo’s. Our company currently receives a profit of $3.25 for each regular pizza and $4.00 for each gourmet pizza manufactured. In one hour, the facility can store 150 pounds of pizza dough mix and 50 pounds of topping mix. Each regular pizza uses 1 pound of dough mix and 4 ounces (16 ounces = 1 pound) of topping mix. Each gourmet pizza uses 1 pound of dough mix and 8 ounces of topping mix. Based on past demand, we must sell at least 50 regular pizzas and at least 25 gourmet pizzas to our distributers an hour.

We would like to expand our operations in the area and bury our competition. Our problem is that we are not sure if we are making the proper number of each type of pizza in order to attain the maximum amount of profit. Would you please use your expert knowledge and help us with this dilemma?

Sincerely,

Tony Pizzati

*President, CEO*

*Tony’s Frozen Pizza*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Name | | Date | | | | | | |
| ***Directions:*** Please use the information in the rubric as a guideline for your written response to Tony Soprano at Tony’s Frozen Pizza, Inc. Be sure that your summary paragraph response is in context and uses complete sentences. | | | | | | | | |
|  | | | | | | | | |
|  | | | | | | | | |
| Variables are defined. | | | | 4 | 3 | 2 | 1 | 0 |
| All constraints are written correctly. | | | | 4 | 3 | 2 | 1 | 0 |
| Axes and lines labeled correctly and in detail on the graph. | | | | 4 | 3 | 2 | 1 | 0 |
| Feasibility region is graphed correctly. | | | | 4 | 3 | 2 | 1 | 0 |
| Vertices are correct and labeled on the graph. | | | | 4 | 3 | 2 | 1 | 0 |
| Profit function is correct and all profit possibilities are given. | | | | 4 | 3 | 2 | 1 | 0 |
| Correct optimization point for profit identified. | | | | 4 | 3 | 2 | 1 | 0 |
| Summary paragraph of your analysis is clear, concise, detailed, and accurate. | | | | 4 | 3 | 2 | 1 | 0 |
| Content: | Possible Points | | Weighted Points | | | | | |
| (Actual Points/Possible Points)\*0.8 | (\_\_\_\_\_\_\_\_/32)\*0.8 | |  | | | | | |
| Problem Solving: |  | |  | | | | | |
| (Actual Points/Possible Points)\*0.2 | (\_\_\_\_\_\_\_\_/15)\*0.2 | |  | | | | | |
|  |  | | Total Points | | | | | |
|  |  | |  | | | | | |

“Possible Points” column is translated as Meets Standard, Nearly Meets Standard, Below Standard, Little Progress Toward Standard, No Progress Toward Standard, from left to right.