

## Homework #2

This is an individual assignment. All work you submit must be your own.

1. Revisit the Reef's Petroleum company problem from HW1. Use your corrected spreadsheet model to answer the following questions.
  - a. How does the profit from regular gasoline sales vary as the sales price of regular gasoline varies from \$2.50 to \$2.90? (provide a chart/graph and a verbal description)
  - b. How does the total profit from all sales vary as the sales price of regular gasoline varies from \$2.50 to \$2.90 and the sales price of premium gasoline varies from \$2.70 to \$3.10? (provide a chart/graph and a verbal description)
2. Revisit the Lucy Lindner bookstore problem from HW1. Suppose we know that the demand for shirts during the season always varies between 400 to 600 shirts. How does the average total profit vary as the order quantity varies from 400 to 600 shirts? Create a Jupyter Notebook using Python code to complete the appropriate analysis needed to answer this question. Generate a chart/graph of your results and include a text markdown cell in the notebook to document your verbal description of the results.