

Quantitative Management Modeling

Assignment 1

Def:

X1: the number of unites produced from product collegiate

X2: the number of unites produced from product Mini

Z: is the object function to maximize the profit

Problem formulation:

$$Z = 32x_1 + 24x_2$$

S.T

$$3x_1 + 2x_2 \leq 5000 \quad (1)$$

$$45x_1 + 40x_2 \leq 84000 \quad (2)$$

$$X_1 \leq 1000 \quad (3)$$

$$X_2 \leq 1200 \quad (4)$$

$$X_1, X_2 \geq 0 \quad (5)$$