Quantitative Management Modeling

Assignment No. 1

Q. 2 Linear Programming Problem

Solution:

a. Decision Variables

X = Number of Collegiate to produce
Y = Number of Minis to produce

b. Objective Function

Maximize Z = 32X + 24Y

c. Constraints

s.t.

3X + 2Y<= 5000 (Square foot of Nylon)
(45/60)X + (40/60)Y <= (35*40) Labor hours

X<= 1000
Y<= 1200

d. Mathematical Formulation

Therefore,

3X + 2Y<= 5000
(3/4)X + (2/3)Y <= 1400
X<=1000
Y<=1200 &
X, Y >= 0