

a) Decision variables are the Collegiate and the Mini and let us call them X and Y respectively.

b) Objective function = $32x+24y$

c) Constraints are:

- $3X+2Y \leq 5000$
- $45X+40Y \leq 84000$

AND

- $X, Y \geq 0$
- $X \leq 1000$
- $Y \leq 1200$

d) Max:(Z) = $32x+24y$

$$3X+2Y \leq 5000$$

$$45X+40Y \leq 84000$$

$$X, Y \geq 0$$

$$X \leq 1000$$

$$Y \leq 1200$$