

1.

X is the number of collegiate produced per week.

Y is the number of mini produced per week.

Z represents the profit(dollars) per week

Maximize : $z=32x+24y$

Subject to restrictions

$$3000x+2400y \leq 5000$$

$$45x+40y \leq 1400$$

And

$$x \geq 0, y \geq 0$$

constraints

$$3000x+2400y \leq 5000$$

$$45x+40y \leq 1400$$

$$x \geq 0, y \geq 0.$$

objective function profit= $32x+24y$

2.

X is the large size of product's unit at plant.

Y is the medium size of product's unit at plant.

Z is the small size of product's unit at plant.

S represents the profit of the weigelt corporation

Maximize : $S=420(x+y+z)+360(x+y+z)+300(x+y+z)$

subject to the restrictions

$$x+y+z \leq 750$$

$$x+y+z \leq 900$$

$$x+y+z \leq 450$$

$$20x+15y+12z \leq 13000$$

$$20x+15y+12z \leq 12000$$

$$20x+15y+12z \leq 5000$$

$$x \leq 900$$

$$y \leq 1200$$

$$z \leq 750$$

and

$$x \geq 0, y \geq 0, z \geq 0.$$