HW Day 3 Name _____

1.

The area of a parking lot is 600 square meters. A car requires 6 square meters. A bus requires 30 square meters. The attendant can handle only 60 vehicles. If a car is charged $2.50 and a bus $7.50, how many of each should be accepted to maximize income?

Constraints:

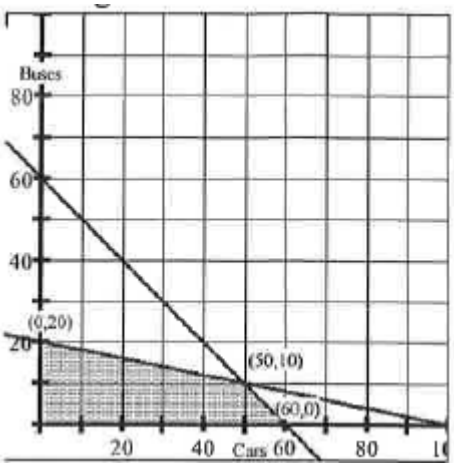
$c \geq 0;\ b \geq 0$

$c + b \leq 60$

$6c + 30b \leq 600$

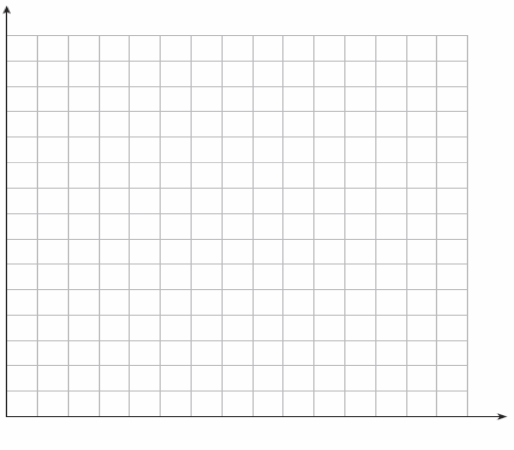
Profit:

$P(c,b) = 2.5c + 7.5b$



2.

The B & W Leather Company wants to add handmade belts and wallets to its product line. Each belt nets the company $18 in profit, and each wallet nets $12. Both belts and wallets require cutting and sewing. Belts require 2 hours of cutting time and 6 hours of sewing time. Wallets require 3 hours of cutting time and 3 hours of sewing time. If the cutting machine is available 12 hours a week and the sewing machine is available 18 hours per week, what ratio of belts and wallets will produce the most profit within the constraints?



Constraints:

$b \geq 0;\ w \geq 0$

Cutting: $2b + 3w \leq 12$

Sewing: $6b + 3w \leq 18$