

2015 – 2
Lista de exercícios nº 4(GABARITO)

1)

a)

$$\begin{aligned}\text{Max } w &= 5y_1 + 7y_2 + 3y_3 \\ \text{s. a. } 2y_1 + 3y_2 + 4y_3 &\leq 240 \\ 2y_1 + 1y_2 + 1y_3 &\leq 150 \\ y_1 &\leq 180 \\ y_1, y_2, y_3 &\geq 0\end{aligned}$$

b)

$$\begin{aligned}\text{Min } w &= 4y_1 + 7y_2 \\ \text{s. a. } 5y_1 - 2y_2 &\geq 3 \\ -3y_1 + 5y_2 &\geq -4 \\ y_1 &\geq 0 \text{ e } y_2 \text{ irrestrita}\end{aligned}$$

c)

$$\begin{aligned}\text{Min } w &= 10y_1 + 6y_2 \\ \text{s. a. } 4y_1 + 5y_2 &\geq 3 \\ 3y_1 - y_2 &\geq -2 \\ y_1 &\geq 0 \text{ e } y_2 \leq 0\end{aligned}$$

d)

$$\begin{aligned}\text{Min } w &= 10y_1 - 8y_2 - 6y_3 \\ \text{s. a. } -2y_1 + 1y_2 + 1y_3 &\geq 2 \\ 3y_1 + 2y_2 + 3y_3 &\geq 3 \\ 1y_1 - 2y_2 + 5y_3 &= -1 \\ y_1, y_2 &\geq 0, y_3 \leq 0\end{aligned}$$