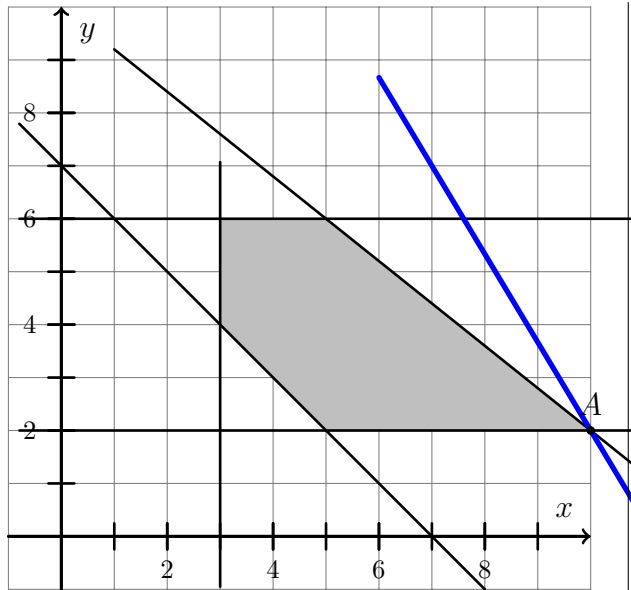


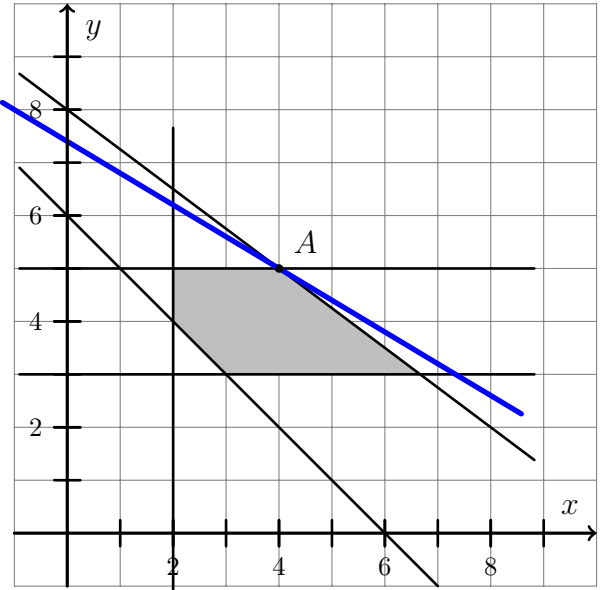
Programmation linéaire

Exercice 1.



max. au point $A(10;2)$

$$\Rightarrow f(10;2) = 112$$



max. au point $A(4;5)$

$$\Rightarrow f(4;5) = 74$$

Exercice 2.

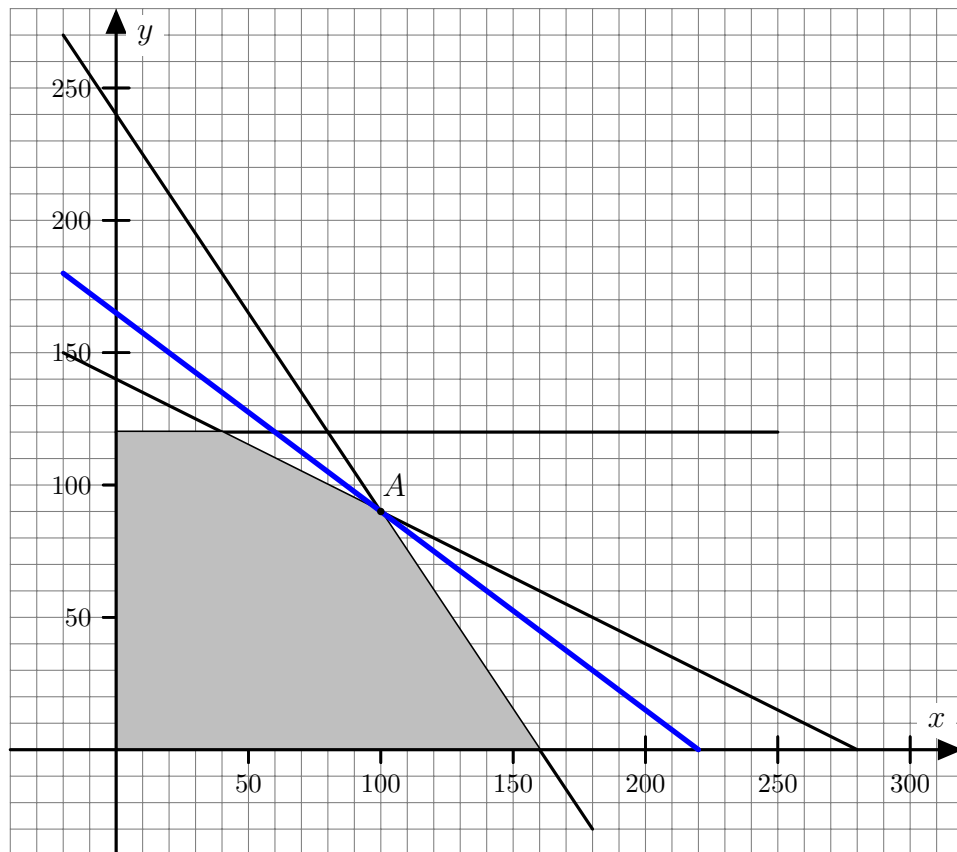
$$\text{a) } \begin{cases} x \geq 0 \\ y \geq 0 \\ y \leq 120 \\ 3x + 2y \leq 480 \\ x + 2y \leq 280 \end{cases}$$

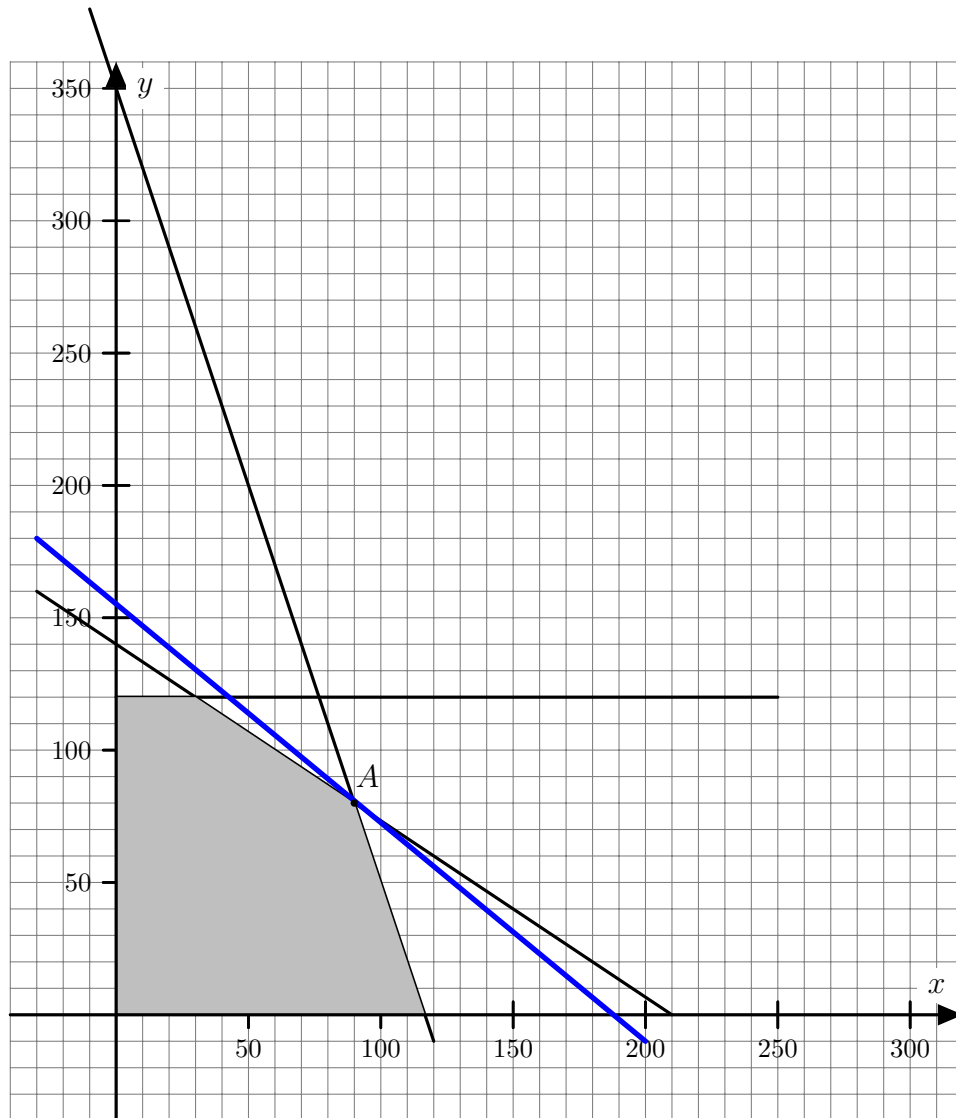
$$\text{b) } f(x; y) = 60x + 80y$$

$$\begin{cases} x \geq 0 \\ y \geq 0 \\ y \leq 120 \\ 2x + 3y \leq 420 \\ 3x + y \leq 350 \end{cases}$$

$$f(x; y) = 50x + 60y$$

c)





$$d) \begin{cases} 3x + 2y = 480 \\ x + 2y = 280 \end{cases}$$

$$\Rightarrow \begin{array}{r} 3x + 2y = 480 \\ -x - 2y = -280 \\ \hline 2x = 200 \end{array}$$

$$\Rightarrow x = 100 \Rightarrow y = 90$$

$$\Rightarrow \text{max. au point } A(100; 90)$$

$$\Rightarrow f(100; 90) = 13'200 \text{ frs}$$

$$\begin{cases} 2x + 3y = 420 \\ 3x + y = 350 \end{cases}$$

$$\Rightarrow \begin{array}{r} 2x + 3y = 420 \\ -9x - 3y = -1050 \\ \hline -7x = -630 \end{array}$$

$$\Rightarrow x = 90 \Rightarrow y = 80$$

$$\Rightarrow \text{max. au point } A(90; 80)$$

$$\Rightarrow f(90; 80) = 9'300 \text{ frs}$$