Ex 3.10

b) $a: \; x+3y = 11$

$b: \begin{cases} x = 8-3m & \mid \cdot 1 \\ y = 1+m & \mid \cdot 3 \end{cases}$

$\Rightarrow \quad x+3y = 11$

$a \equiv b$

$I \in \{(x;y) \mid x+3y = 11\}$

d)

$$a: \begin{cases} x = 5 + 3k \\ y = 8 + 2k \end{cases} \begin{matrix} \cdot(-2) \\ \cdot 3 \end{matrix} \qquad b: \begin{cases} x = -2 - 6m \\ y = 8 + 4m \end{cases} \begin{matrix} \cdot 4 \\ \cdot 6 \end{matrix}$$

$$\Rightarrow -2x + 3y = 14 \qquad \Rightarrow 4x + 6y = 40$$

$$\Leftrightarrow 2x + 3y = 20$$

$\vec{a} = \begin{pmatrix} -3 \\ -2 \end{pmatrix}$ et $\vec{b} = \begin{pmatrix} -3 \\ 2 \end{pmatrix}$ ne sont pas colin.

$\Rightarrow$ a et b sont sécantes

$$I = a \cap b: \begin{cases} -2x + 3y = 14 \\ 2x + 3y = 20 \end{cases} \begin{matrix} \cdot 1 \\ \cdot 1 \end{matrix} \quad \begin{matrix} \cdot 1 \\ \cdot(-1) \end{matrix} \Rightarrow \quad 6y = 34$$

$$y = \frac{34}{6} = \frac{17}{3}$$

$$\Rightarrow \quad -4x = -6$$

$$x = \frac{6}{4} = \frac{3}{2}$$

$$\Rightarrow I\left(\frac{3}{2}; \frac{17}{3}\right)$$