

$$2) \begin{cases} x = 3 - 4k \\ y = 5 + k \end{cases} \Leftrightarrow \begin{cases} x = 3 - 4k \\ k = y - 5 \end{cases}$$

$$\Leftrightarrow x = 3 - 4(y - 5) = 3 - 4y + 20$$

$$\Leftrightarrow x + 4y - 23 = 0$$

$$b) \vec{d} = \begin{pmatrix} 7 \\ -3 \end{pmatrix} \Rightarrow \vec{n} = \begin{pmatrix} 3 \\ 7 \end{pmatrix}$$

$$\Rightarrow d: 3x + 7y + c = 0 \text{ par } (-3; -2)$$

$$3 \cdot (-3) + 7(-2) + c = 0 \Rightarrow c = 23$$

$$\Rightarrow d: 3x + 7y + 23 = 0$$

$$c) k = \frac{x-2}{-4} \text{ et } k = \frac{y+4}{3}$$

$$\Leftrightarrow \frac{x-2}{-4} = \frac{y+4}{3} \Leftrightarrow 3x - 6 = -4y - 16$$

$$\Leftrightarrow 3x + 4y + 10 = 0$$

$$d) \vec{d} = \begin{pmatrix} -4 \\ 1 \end{pmatrix} \Rightarrow \vec{n} = \begin{pmatrix} 1 \\ 4 \end{pmatrix}$$

$$\Rightarrow d: x + 4y + c = 0 \text{ per } (5; 2)$$

$$\Rightarrow 5 + 8 + c = 0 \Leftrightarrow c = -13$$

$$\Rightarrow d: x + 4y - 13 = 0$$

$$e) \frac{x+7}{5} = \frac{y-10}{8} \Leftrightarrow 8x+56 = 5y-50$$

$$\Leftrightarrow 8x - 5y + 106 = 0$$

$$f) \begin{cases} x = k \\ y = -2 \end{cases} \Leftrightarrow y + 2 = 0$$

$$g) \begin{cases} x = 8 \\ y = 12 + k \end{cases} \Leftrightarrow x - 8 = 0$$