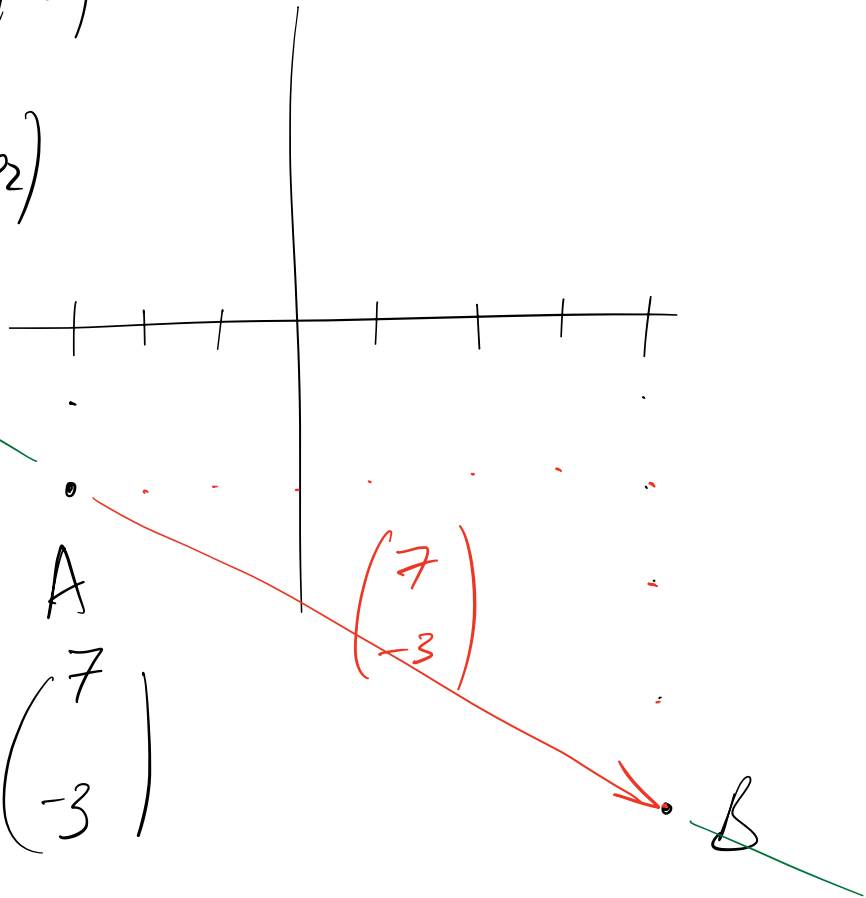


$$A(-3; -2) = (a_1; a_2)$$

$$B(4; -5) = (b_1; b_2)$$

$$\vec{AB} = \begin{pmatrix} b_1 - a_1 \\ b_2 - a_2 \end{pmatrix}$$

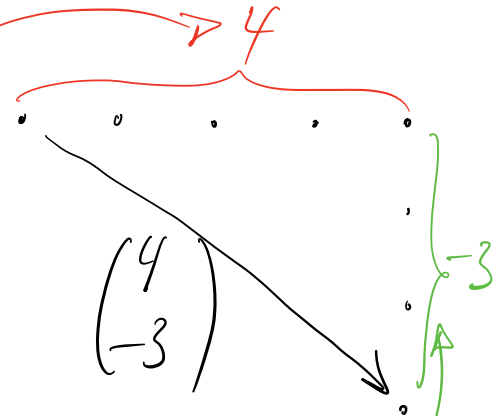
$$= \begin{pmatrix} 4 - (-3) \\ -5 - (-2) \end{pmatrix} = \begin{pmatrix} 7 \\ -3 \end{pmatrix}$$

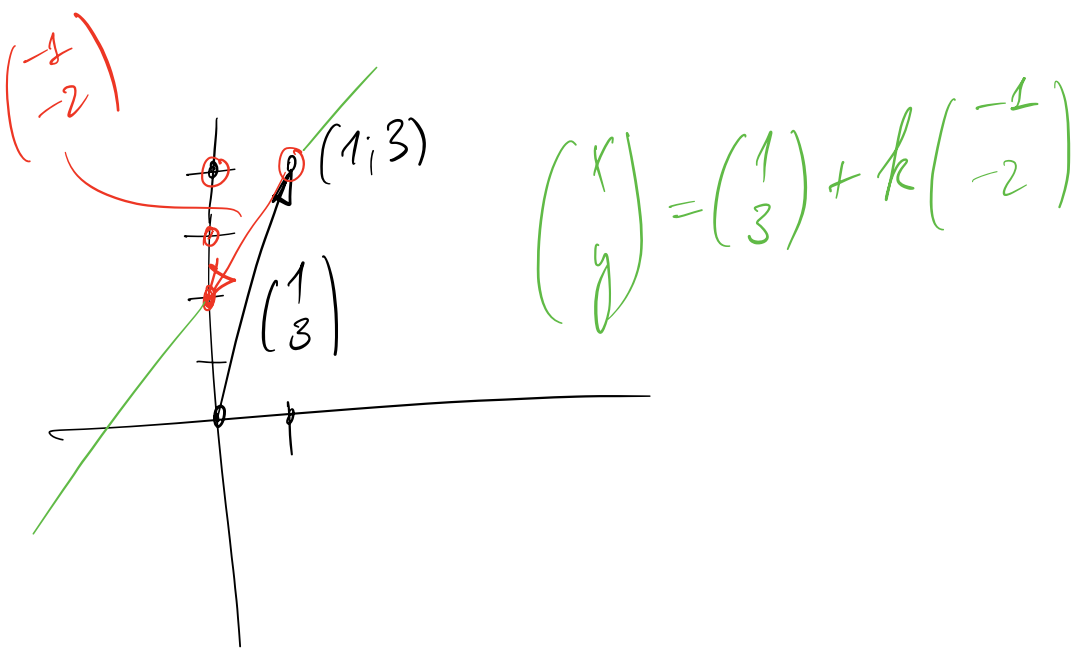


$$\begin{pmatrix} 2 \\ 6 \end{pmatrix} \perp \begin{pmatrix} -6 \\ 2 \end{pmatrix} = -1 \begin{pmatrix} 6 \\ -2 \end{pmatrix}$$

parte: $-\frac{3}{4} = \frac{-3}{4} = \frac{dv}{dh}$

$$\begin{pmatrix} -4 \\ 3 \end{pmatrix}$$





$$\begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} 2 \\ 5 \end{pmatrix} + k \begin{pmatrix} -1 \\ 2 \end{pmatrix} \quad \left. \vphantom{\begin{pmatrix} x \\ y \end{pmatrix}} \right\} \text{in dritte}$$

$$\begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} 2 \\ 5 \end{pmatrix} - k \begin{pmatrix} -1 \\ 2 \end{pmatrix}$$

$$k = -1$$

$$k = 1 :$$

$$\begin{cases} x = 1 \\ y = 7 \end{cases}$$

$$x = 2 - (-1)(-1) = 1$$

$$y = 5 - (-1) \cdot 2 = 7$$

$$\begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} 1 \\ 2 \end{pmatrix} + k \begin{pmatrix} -1 \\ -3 \end{pmatrix}$$

Éq. param.

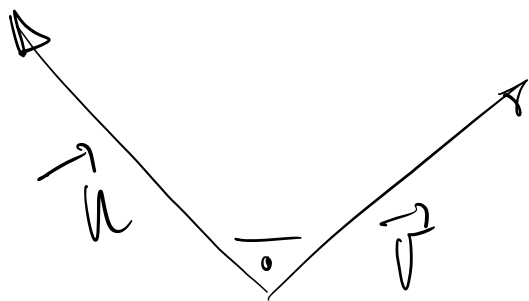
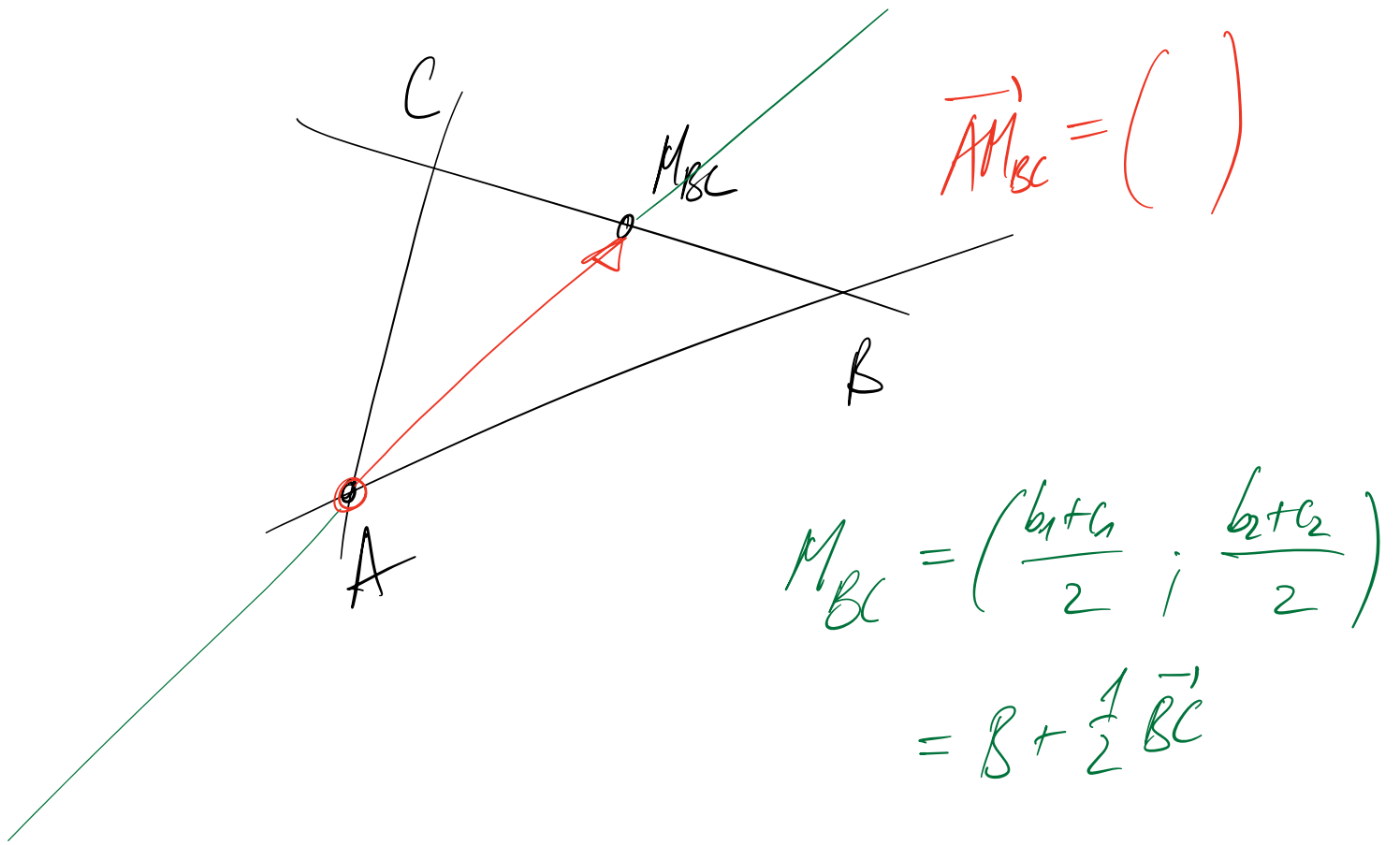
$$\begin{cases} x = 1 - k \\ y = 2 - 3k \end{cases}$$

$$\begin{cases} k = 1 - x \\ y = 2 - 3(1 - x) \end{cases}$$

$$y = 2 - 3 + 3x$$

$$\Leftrightarrow \boxed{3x - y + 1 = 0}$$

Éq. cart.



$$\vec{u} \perp \vec{v} \Leftrightarrow \vec{u} \cdot \vec{v} = 0$$

$$\Leftrightarrow u_1 v_1 + u_2 v_2 = 0$$

En particulier, $\begin{pmatrix} 2 \\ 6 \end{pmatrix} \perp \begin{pmatrix} -6 \\ 2 \end{pmatrix}$

$$\vec{d} = \begin{pmatrix} 7 \\ -3 \end{pmatrix} \quad A(-3; -2)$$

$$\begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} -3 \\ -2 \end{pmatrix} + k \begin{pmatrix} 7 \\ -3 \end{pmatrix} \quad \begin{array}{l} \text{eq. param.} \\ \text{eliminar } k \dots \end{array} \rightarrow \text{eq. cart.}$$

$$\vec{n} = \begin{pmatrix} 3 \\ 7 \end{pmatrix} \rightarrow 3x + 7y + c = 0$$

passa por $(-3, -2)$

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

$$c = 9 + 14 = 23$$

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