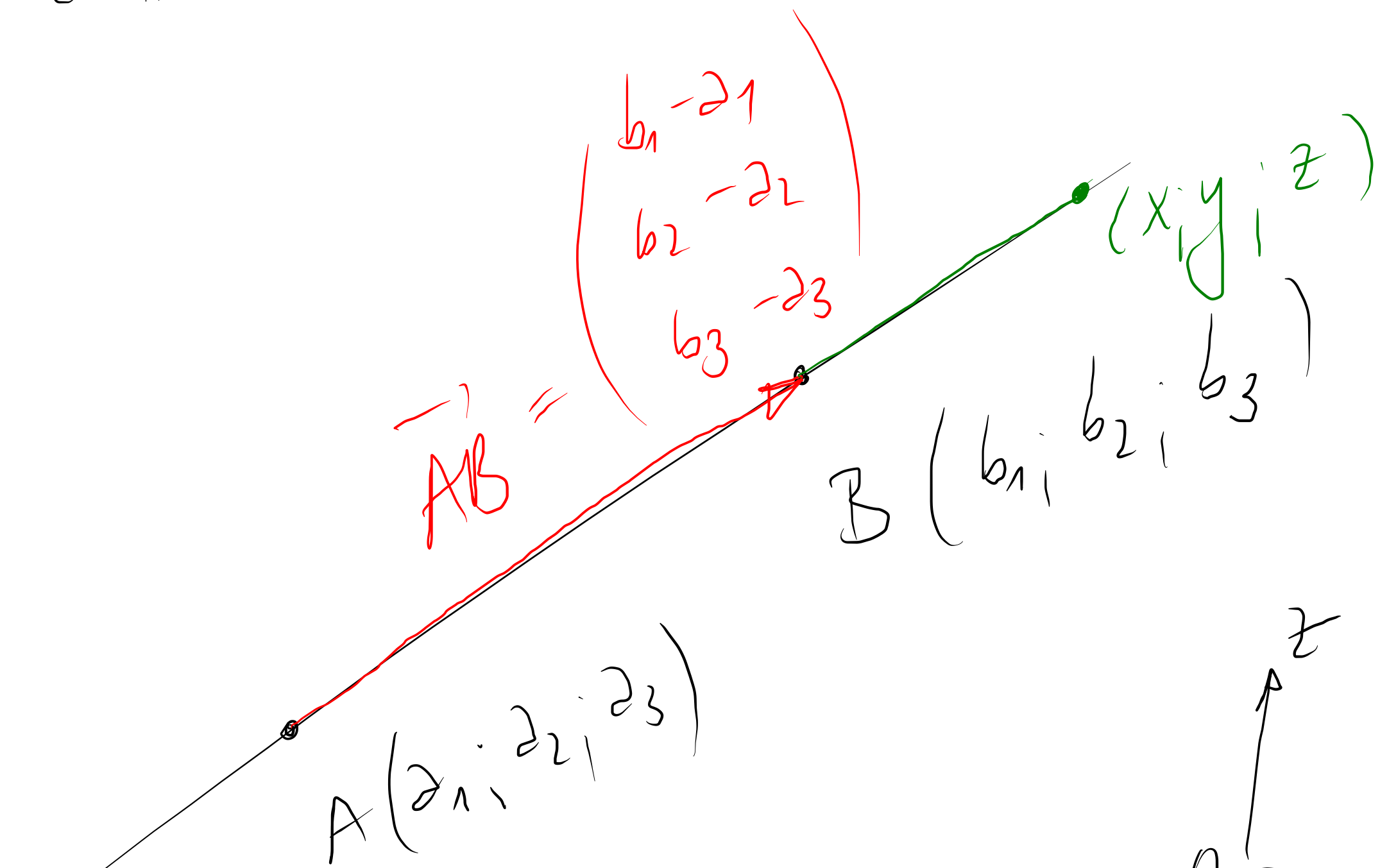
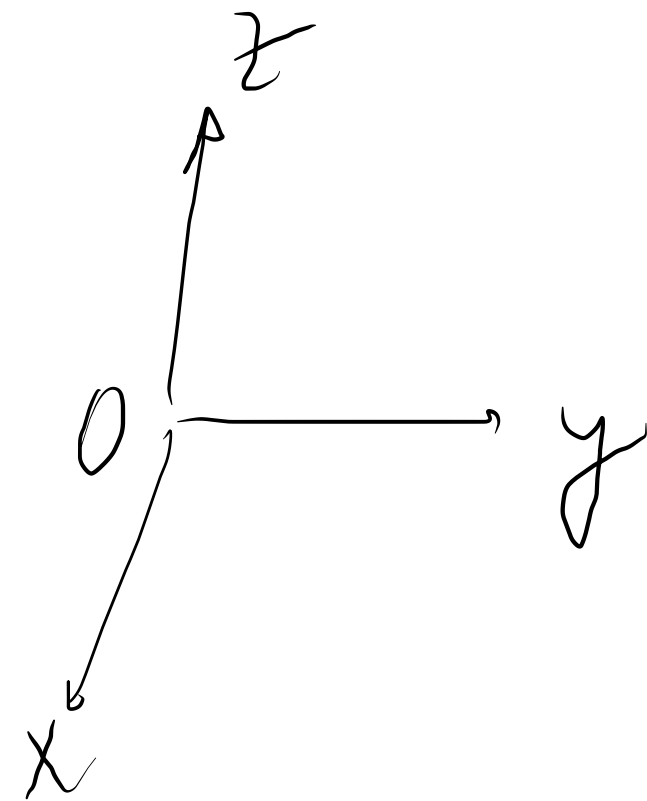


$$A, B \in \mathbb{R}^3$$



$$\begin{pmatrix} x \\ y \\ z \end{pmatrix} = \begin{pmatrix} a_1 \\ a_2 \\ a_3 \end{pmatrix} + k \cdot \begin{pmatrix} b_1 - a_1 \\ b_2 - a_2 \\ b_3 - a_3 \end{pmatrix}$$



Dans l'espace :

$$\begin{pmatrix} x \\ y \\ z \end{pmatrix} = A + k \cdot \vec{u}$$

$$A(a_1, a_2, a_3)$$

$$\vec{u} = \begin{pmatrix} u_1 \\ u_2 \\ u_3 \end{pmatrix}$$

Equation
paramétrique
d'une droite

Example

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

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

$$\begin{cases} k = x - 1 \\ k = y - 2 \\ k = \frac{z + 1}{2} \end{cases}$$

$$\Leftrightarrow \boxed{x - 1 = y - 2 = \frac{z + 1}{2}}$$

$$\begin{cases} x - 1 = y - 2 \\ x - 1 = \frac{z + 1}{2} \end{cases}$$

$$\begin{cases} x - y + 1 = 0 \\ 2x - z - 3 = 0 \end{cases}$$

la droite
comme
intersection
de deux
plans