

Optimisation: 2.9.19 en ligne

Analyse: 2.9.8 à faire pour le jeudi 5 mai

Géométrie:

3.6.4

3.6.8

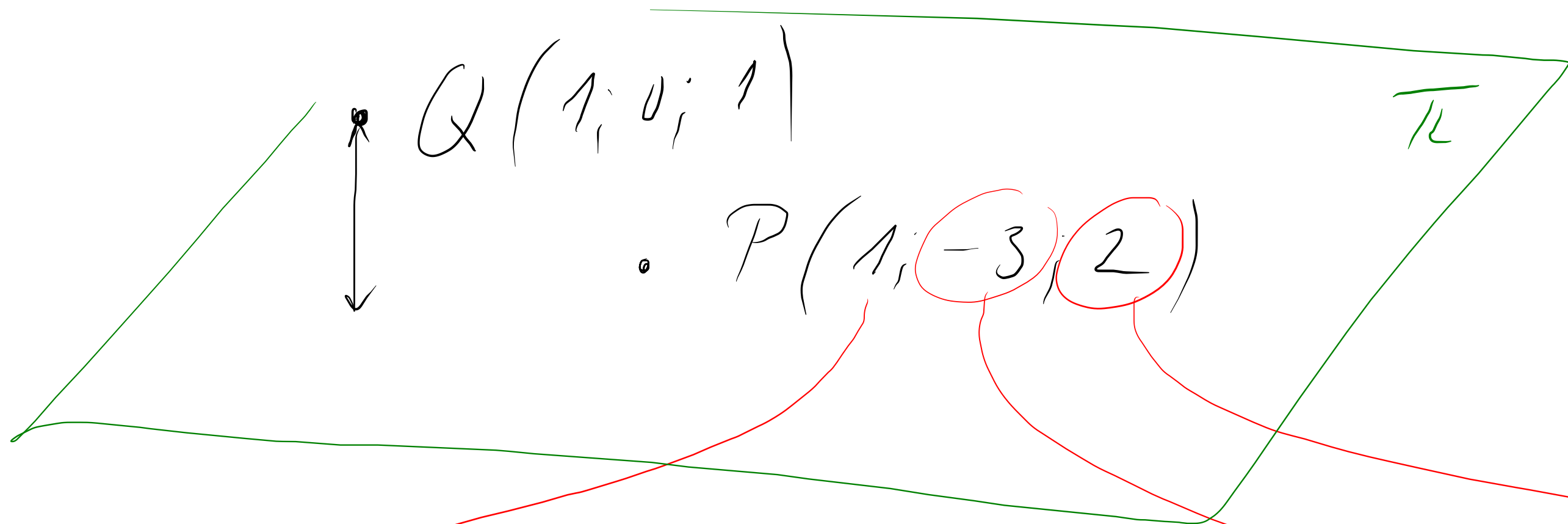
3.6.9

3.6.11

}

à faire pour le

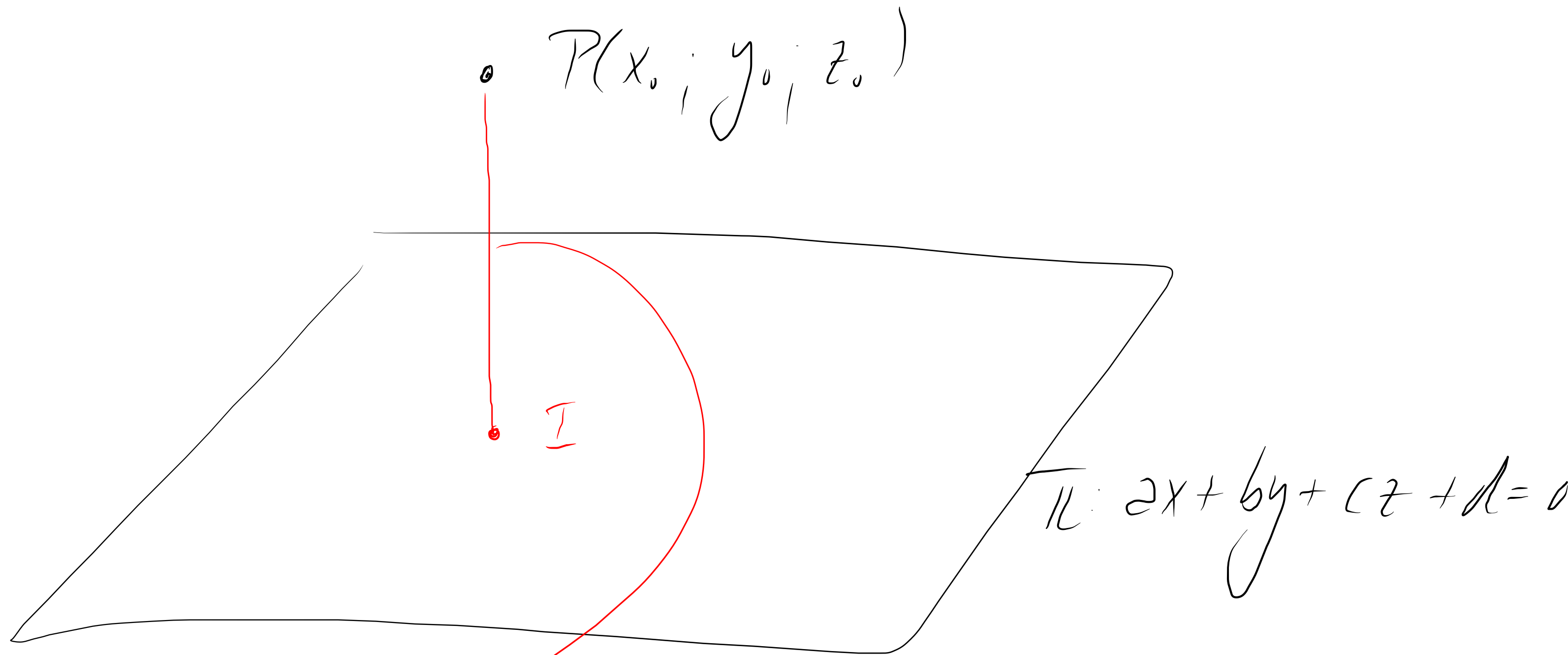
mardi 3 mai



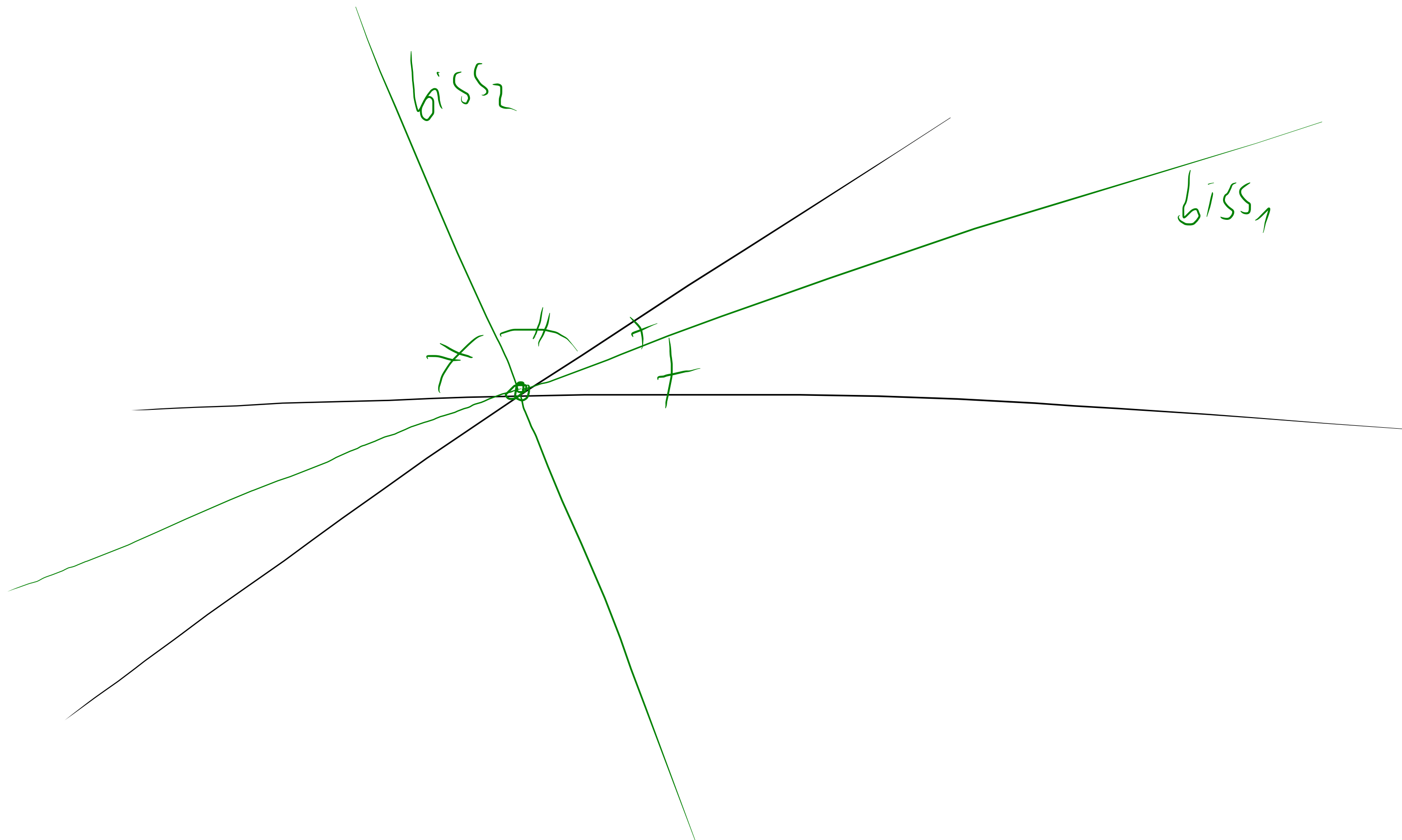
$$4 \cdot 1 + 2 \cdot (-3) - 3 \cdot (2) = -4$$

$$\pi: 4x + 2y - 3z + 4 = 0$$

$$4 \cdot 1 + 2 \cdot 0 - 3 \cdot 1 + 4 = 5 \neq 0 \quad Q \notin \pi$$



$$\text{dist}(P; \pi) = \frac{|ax_0 + by_0 + cz_0 + d|}{\sqrt{a^2 + b^2 + c^2}}$$



$$\pi_1: a_1x + b_1y + c_1z + d_1 = 0$$

$$\pi_2: a_2x + b_2y + c_2z + d_2 = 0$$

Plans bissecteurs

$$\frac{|a_1x + b_1y + c_1z + d_1|}{\sqrt{a_1^2 + b_1^2 + c_1^2}} = \frac{|a_2x + b_2y + c_2z + d_2|}{\sqrt{a_2^2 + b_2^2 + c_2^2}}$$

\Leftrightarrow

$$\frac{a_1x + b_1y + c_1z + d_1}{\sqrt{a_1^2 + b_1^2 + c_1^2}} = \pm \frac{a_2x + b_2y + c_2z + d_2}{\sqrt{a_2^2 + b_2^2 + c_2^2}}$$

$$\begin{pmatrix} 0 \\ 6,5 \\ 0,5 \end{pmatrix}$$

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

$$\begin{pmatrix} -2 \\ 3 \\ 1 \end{pmatrix}$$

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

$$-2x + 3y + z - 20 = 0$$

$$\vec{PI} = \begin{pmatrix} 5 \\ 2,5 \\ 2,5 \end{pmatrix}$$

$$P(-5; 4; -2)$$

distance $\|\vec{PI}\|$

$$\begin{aligned} \|\vec{PI}\| &= \sqrt{25 + 6,25 + 6,25} = 5 \cdot \frac{\sqrt{6}}{2} \\ &= \sqrt{37,5} \end{aligned}$$

$$-2(3 - 2k) + 3(2 + 3k) + k - 1 - 20 = 0$$

$$-6 + 4k + 6 + 9k + k - 1 - 20 = 0$$

$$14k = 21$$

$$k = \frac{3}{2}$$

