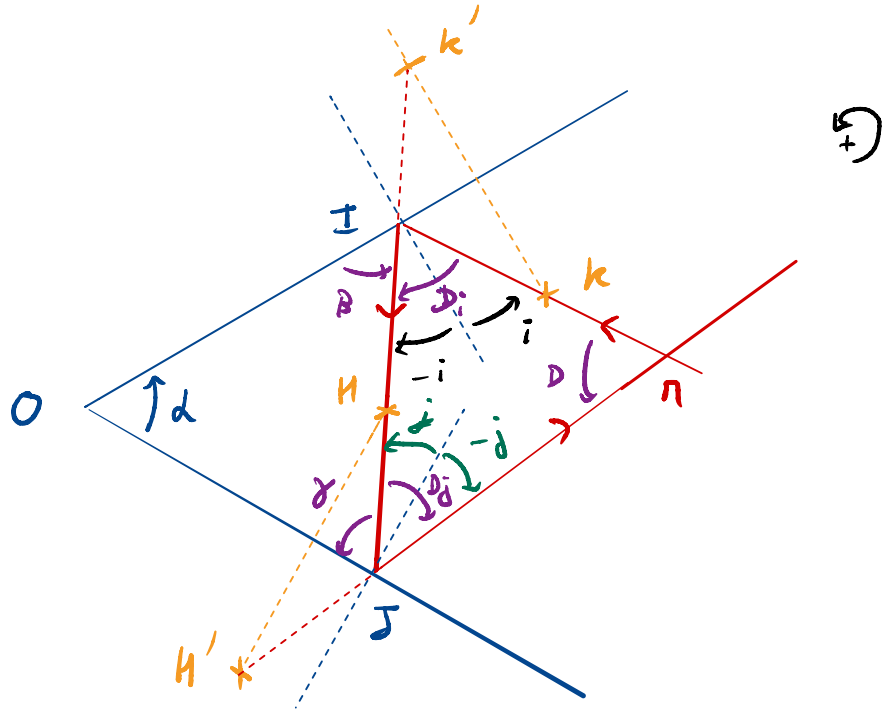
TD 02

Exercice 5.

1



2 $D_i = -i + (-i) = -2i$ ⚠ $D_i < 0$

$D_j = -j + (-j) = -2j$ ⚠ $D_j < 0$

3 Dans OIJ $\quad \pi = \alpha + \beta + \gamma$

$$\text{or} \begin{cases} \beta - (-i) = \pi/2 \\ j + \gamma = \pi/2 \end{cases}$$

d'où $\quad \pi = \alpha + \frac{\pi}{2} - i + \frac{\pi}{2} - j$

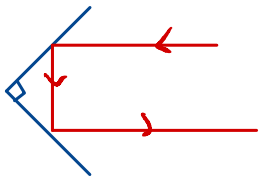
$$\boxed{\alpha = i + j}$$

4 Dans le triangle IJn

$$\pi = D - D_j - D_i = D + 2(i + j) = D + 2\alpha$$

d'où $\quad \boxed{D = \pi - 2\alpha}$

5 • Si $\alpha = \pi/2$ alors $D = 0$, le rayon ressort parallèle au rayon incident



• Si $\alpha = \pi/4$ alors $D = \pi - 2\frac{\pi}{4} = \frac{\pi}{2}$

le rayon émergé $\perp$ au rayon incident.