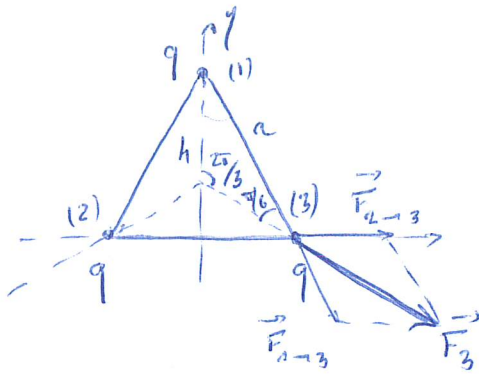


EM 114 - Interactions de trois particules chargées



$$1 - \|\vec{F}_3\| = \frac{q^2}{4\pi\epsilon_0 a^2} 2 \cos\left(\frac{\pi}{6}\right)$$

$$\text{car } a = \frac{h}{\cos \frac{\pi}{6}} \rightarrow F = \frac{q^2}{4\pi\epsilon_0 h^2} \cos^3\left(\frac{\pi}{6}\right)$$

$$2 - E_{p3} = q(V_1(3) + V_2(3)) = q \frac{q}{4\pi\epsilon_0 a} \times 2 \rightarrow E_p = \frac{q^2 \cos(\pi/6)}{2\pi\epsilon_0 h}$$

3. Systeme: 1 charge

conservatif : $\Delta E_M = 0 = 0 + E_p = E_{cmax} + 0$

$$\rightarrow v_{max} = \sqrt{\frac{-q^2 \cos(\pi/6)}{\pi m \epsilon_0 h}}$$

$$v_{max} = 3 \cdot 10^6 \text{ m.s}^{-1} = \frac{c}{100}$$