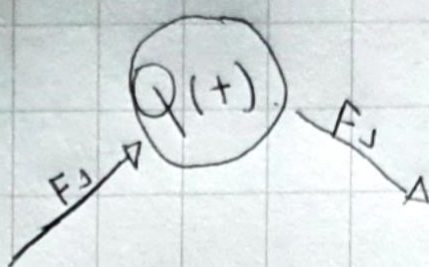


1)



F_1 = força de repulsão
entre $Q(+)$ e $Q_A(+)$

F_2 = força de atração
entre $Q(+)$ e $Q_B(-)$

2)

$$\sin a = \frac{co}{H} \quad co = y$$

$$H = \sqrt{y^2 + x^2}$$

$$\sin a = \frac{y}{\sqrt{y^2 + x^2}}$$

$$\cos a = \frac{ca}{H} \quad ca = x$$

$$H = \sqrt{y^2 + x^2}$$

$$\cos a = \frac{x}{\sqrt{y^2 + x^2}}$$

$$\sin b = \frac{co}{H} \quad co = y$$

$$H = \sqrt{(L-x)^2 + y^2}$$

$$\sin b = \frac{y}{\sqrt{(L-x)^2 + y^2}}$$

$$\cos b = \frac{L-x}{\sqrt{y^2 + (L-x)^2}}$$

3)

$$F_{resultante} = \frac{K \cdot Q_1 \cdot Q_2}{r^2}$$

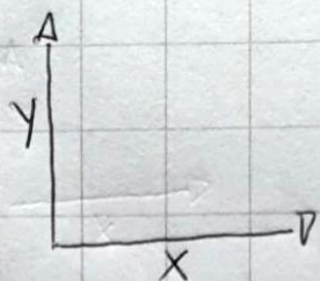
$$F_{r1} = \frac{K \cdot Q_{A(+)} \cdot Q(+)}{(\sqrt{y^2 + x^2})^2}$$

$$F_{r1} = \frac{K \cdot Q_{A(+)} \cdot Q(+)}{y^2 + x^2}$$

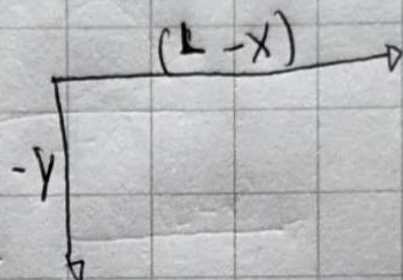
$$F_{r2} = \frac{K \cdot |Q(+)| \cdot |Q_B(-)|}{y^2 + (L-x)^2}$$

4)

$$F_1 =$$



$$F_2 =$$



$$F = m \cdot a$$

$$a = \frac{F}{m}$$

$$\frac{dy^2}{dt^2} = \frac{F_y}{m}$$

$$F_y = y + (-y)$$

$$F_y = 0$$

$$\frac{dx^2}{dt^2} = \frac{F_x}{m}$$

$$F_x = x + (L-x)$$

$$F_x = L$$

$$\frac{dx^2}{dt^2} = \frac{L}{m}$$

$$\frac{dy^2}{dt^2} = 0$$

5)