

$$R_{ix} = 0$$

Sete tempo em carga e estresse, em carga e em fase x y.

$$F_x = -kq^2 \left( \frac{1}{(7.30 \times 10^{-2})^2} + \frac{\sqrt{2}}{8.125 \times 10^{-2}} \right)$$

$$F_y = -kq^2 \left( \frac{1}{(7.30 \times 10^{-2})^2} + \frac{\sqrt{2}}{8.125 \times 10^{-2}} \right)$$

Dele para o momento

$$F_x = 0 = -mg + T \cos \theta$$

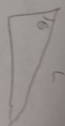
$$T = \frac{mg}{\cos \theta}$$

RAA

$$y(10 \times 10^{-2}) \sin \theta = 7.30 \times 10^{-2}$$

$$T_x = 7.30 \times 10^{-2} \cos \theta = \frac{\sqrt{2}}{2} T \cos \theta$$

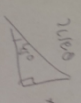
$$T_y = 7.30 \times 10^{-2} \sin \theta = \frac{\sqrt{2}}{2} T \sin \theta$$



$$\cos \theta = \frac{x}{L}$$

$$L \cos \theta = x$$

$$d = 2 L \sin \theta$$



$$\sin \theta = \frac{d}{2L} = \frac{\frac{\sqrt{2}}{2} L}{2L} = \frac{\sqrt{2}}{4}$$

$$y = \frac{\sqrt{2}}{2} L \sin \theta$$



$$\cos \theta = \frac{x}{L}$$

Então

$$F_x = 0 = \frac{\sqrt{2}}{2} T \sin \theta - kq^2 \left( \frac{1}{(7.30 \times 10^{-2})^2} + \frac{\sqrt{2}}{8.125 \times 10^{-2}} \right)$$

$$F_y = \frac{\sqrt{2}}{2} T \cos \theta - kq^2 \left( \frac{1}{(7.30 \times 10^{-2})^2} + \frac{\sqrt{2}}{8.125 \times 10^{-2}} \right) = 0$$

$$\frac{\sqrt{2}}{2} \frac{\sqrt{2}}{2} \frac{mg}{\cos \theta} \cos \theta - kq^2 \left( \frac{1}{(7.30 \times 10^{-2})^2} + \frac{\sqrt{2}}{8.125 \times 10^{-2}} \right)$$

$$\frac{\sqrt{2}}{2} \frac{mg}{\cos \theta} - kq^2 \left( \frac{1}{(7.30 \times 10^{-2})^2} + \frac{\sqrt{2}}{8.125 \times 10^{-2}} \right) = 0$$

$$\frac{\sqrt{2} l^3 \sin^3 \theta \cos \theta - 4 k q^2 (r_1 r_2) \cos \theta}{32 l^3 \sin^3 \theta \cos \theta} = 0$$

$$\sqrt{2} l^3 \sin^3 \theta \cos \theta = 4 k q^2 (r_1 r_2) \cos \theta$$

$$A \sin^3 \theta = B \cos \theta$$

$$A \sin^3 \theta - B \cos \theta = 0$$

