$A_{x_x} = 0.$

Sólo tomando en cuenta lo eléctrico, las cargas están en el plano x, y.

$F_x = -kq^2\left[\frac{1}{(\sqrt{2}\,\text{sen}\theta)^2} + \frac{\sqrt{2}}{8L^2\text{sen}\theta}\right]$

$F_y = -kq^2\left(\frac{1}{2L^2\text{sen}^2\theta} + \frac{\sqrt{2}}{8L^2\text{sen}^2\theta}\right]$

L, θ, x

$\text{sen}\theta = \frac{x}{L}$

$L\,\text{sen}\theta = x$

$d = 2L\,\text{sen}\theta$

- De la parte gravitacional.

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

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

$2L\,\text{sen}\theta$, $45°$, x

$\text{sen}45 = \frac{x}{2L\,\text{sen}\theta}$

$\frac{\sqrt{2}}{2} = \frac{x}{2L\,\text{sen}\theta}$

$x = \sqrt{2}\,L\,\text{sen}\theta$

Proyección en x, y $= T\text{sen}\theta$

$T_x = T\text{sen}\theta\cos 45 = \frac{\sqrt{2}}{2}T\text{sen}\theta$

$T_y = T\text{sen}\theta\,\text{sen}45 = \frac{\sqrt{2}}{2}T\text{sen}\theta$

$\cos 45 = \frac{x}{T}$

Entonces

$F_x = 0 = \frac{\sqrt{2}}{2}T\text{sen}\theta - kq^2\left(\frac{1}{2L^2\text{sen}^2\theta} + \frac{\sqrt{2}}{8L^2\text{sen}^2\theta}\right).$

$F_y = \frac{\sqrt{2}}{2}T\text{sen}\theta - kq^2\left(\frac{1}{2L^2\text{sen}^2\theta} + \frac{\sqrt{2}}{8L^2\text{sen}^2\theta}\right). = 0$

$\frac{\sqrt{2}}{2}\frac{mg}{\cos\theta}\text{sen}\theta - kq^2\left(\frac{1}{L^2\text{sen}^2\theta}\left(\frac{1}{2} + \frac{\sqrt{2}}{8}\right)\right)$

$\frac{\sqrt{2}}{2}\frac{mg\,\text{sen}\theta}{\cos\theta} - kq^2\left(\frac{1}{L^2\text{sen}^2\theta}\left(\frac{8+2\sqrt{2}}{16}\right)\right) = 0$

$$\frac{\sqrt{2}\,16\,L^2 \,\mathrm{sen}^3\theta\, mg - 4kq^2(8+2\sqrt{2})\cos\theta}{32\,L^2\,\mathrm{sen}^2\theta\cos\theta} = 0.$$

$$\sqrt{2}\,16\,L^2\,\mathrm{sen}^3\theta\, mg = 4kq^2(8+2\sqrt{2})\cos\theta.$$

$$A\,\mathrm{sen}^3\theta = B\cos\theta.$$

$$A\,\mathrm{sen}^3\theta - B\cos\theta = 0.$$