$$\operatorname{Sen}^6\theta + C\operatorname{Sen}^2\theta - C = 0$$

$$C\operatorname{Sen}^2\theta - C = -\operatorname{Sen}^6\theta$$

$$C = \frac{-\operatorname{Sen}^6\theta}{\operatorname{sen}^2\theta - 1} = \frac{-\operatorname{Sen}^6\theta}{}$$

$1 = \operatorname{Sen}^2\theta + \operatorname{Cos}^2\theta \Rightarrow 1 - \operatorname{Sen}^2\theta = \operatorname{Cos}^2\theta$

$$\operatorname{Sen}^6\theta + C\operatorname{sen}^2\theta - C = 0$$

$\theta = \sqrt{2}/2$

$\operatorname{Sen}\sqrt{2}/2$

	45°
Sen	$\sqrt{2}/2$
Cos	$\sqrt{2}/2$
Tan	1

$$\left(\frac{\sqrt{2}}{2}\right)^6 + C\left(\frac{\sqrt{2}}{2}\right)^2 - C = 0$$

$$\left(\left(\frac{\sqrt{2}}{2}\right)^2\right)^3 + C\left(\frac{1}{4}\right) - C = 0 \Rightarrow \left(\frac{1}{4}\right)^3 + C\frac{1}{4} - C = 0$$

$$\frac{1}{64} + C\frac{1}{4} - C = 0$$

$$\frac{1}{64} = C - \frac{1}{4}C$$

$$\frac{1}{64} = \frac{4C - 1C}{4} \Rightarrow \frac{4}{64} = 3C \Rightarrow \frac{1}{16} = 3C$$

$$\frac{1}{48} = C$$

$C \approx 729/10000$

$$\operatorname{sen}^6\theta + C\operatorname{sen}^2\theta - C = 0$$

$$\operatorname{sen}^6\theta + \left(\frac{729}{10000}\right)\operatorname{sen}^2\theta - \left(\frac{729}{10000}\right) = 0$$

$$Sen^6\theta + C\,sen^2\theta - C = 0$$

$$C^2 - C^2\,sen^2\theta = Sen^6\theta$$

$$C^2(1 - Sen^2\theta) = Sen^6\theta$$

$$C^2\,Cos^2\theta = Sen^6(\theta)$$

$$C^2 = \frac{Sen^6(\theta)}{Cos^2(\theta)} = \frac{sen^2\theta \cdot sen^4\theta}{Cos^2\theta}$$

$$Tan\theta\ sen^4$$

$$C^{2n} = \left(\frac{Kq^2}{L^2 mg}\left(\frac{1}{4} + \frac{\sqrt{2}}{2}\right)\right)^n$$

$$K = 9 \times 10^{-9}$$

$$C \approx 729 \times 10^{-36}$$

$$\frac{Kq^2}{L^2}\left(\frac{1}{4\,sen^2\theta} + \frac{\sqrt{2}}{2}\,\frac{1}{sen^2\theta}\right) = mg\ tan\theta$$

mg divide

$$\frac{Kq^2}{L^2 mg}\left(\frac{1}{sen^2\theta}\left[\frac{1}{4} + \frac{\sqrt{2}}{2}\right]\right) = \frac{Sen\,\theta}{Cos\theta}$$

$sen^2\theta$ multiplica

$$\frac{Kq^2}{L^2 mg}\left(\frac{1}{4} + \frac{\sqrt{2}}{2}\right) = \frac{sen^3\theta}{Cos\theta} = C$$

$$\frac{Kq^2}{mgL^2}\left(\frac{1}{4\,sen^2\theta} + \frac{\sqrt{2}}{2}\,\frac{1}{sen^2\theta}\right) = tan\theta$$

$$w = mg$$

$$tan\theta = 0 \Rightarrow \theta = \arctan(0)$$

$$\frac{w}{g} = m$$

$$\left(\frac{Kq}{l^2mg}\left(\frac{1}{4}+\frac{\sqrt{2}}{2}\right)\right)^2\left(\cos(\theta)\right)^2 = \left(\operatorname{sen}^3\theta\right)^2$$

$$\sqrt{C^2} \quad // \quad \cdot \quad // \quad = \quad //$$

$$C^2 \cdot \cos^2\theta = \operatorname{sen}^6\theta$$

$$\sqrt{\frac{729}{10000}}\cos(\theta) = \operatorname{sen}^3\theta$$

$$27 = 3^3$$

$$\frac{27}{100}\cos(\theta) = \operatorname{sen}^3\theta \qquad \sqrt[3]{27} = 3$$

$$\frac{27}{100} = \frac{\operatorname{sen}^2\theta \cdot \operatorname{sen}\theta}{\cos\theta}$$

$$\frac{27}{100} \to \frac{\operatorname{sen}^3\theta}{\cos\theta} \Rightarrow \frac{3^3}{100} = \frac{\operatorname{sen}^3\theta}{\cos\theta}$$

$$\operatorname{sen}\theta = 3$$

$$\cos\theta = 100$$

$$\operatorname{sen}^6\theta + C\operatorname{sen}^2\theta - C = 0 = \operatorname{Sen}(\theta)$$

$$\underbrace{\frac{Kq}{L^2mg}\left(\frac{1}{4}+\frac{\sqrt{2}}{2}\right)}_{C}\cos(\theta) = \operatorname{sen}^3(\theta)$$

$$\frac{Kq}{L^2mg}\left(\frac{1+2\sqrt{2}}{4}\right) = \frac{Kq + 2Kq\sqrt{2}}{4L^2mg} = \frac{729}{10000}$$

$$Kq\left(\frac{1+2\sqrt{2}}{L^2 mg}\right) = \frac{729.4}{10000}$$

$$\frac{2916}{10000} = \left(\frac{1+2\sqrt{2}}{25.(14,6)}\right).\ 9\times10^{-9}.\ 3\times10^{-4}$$