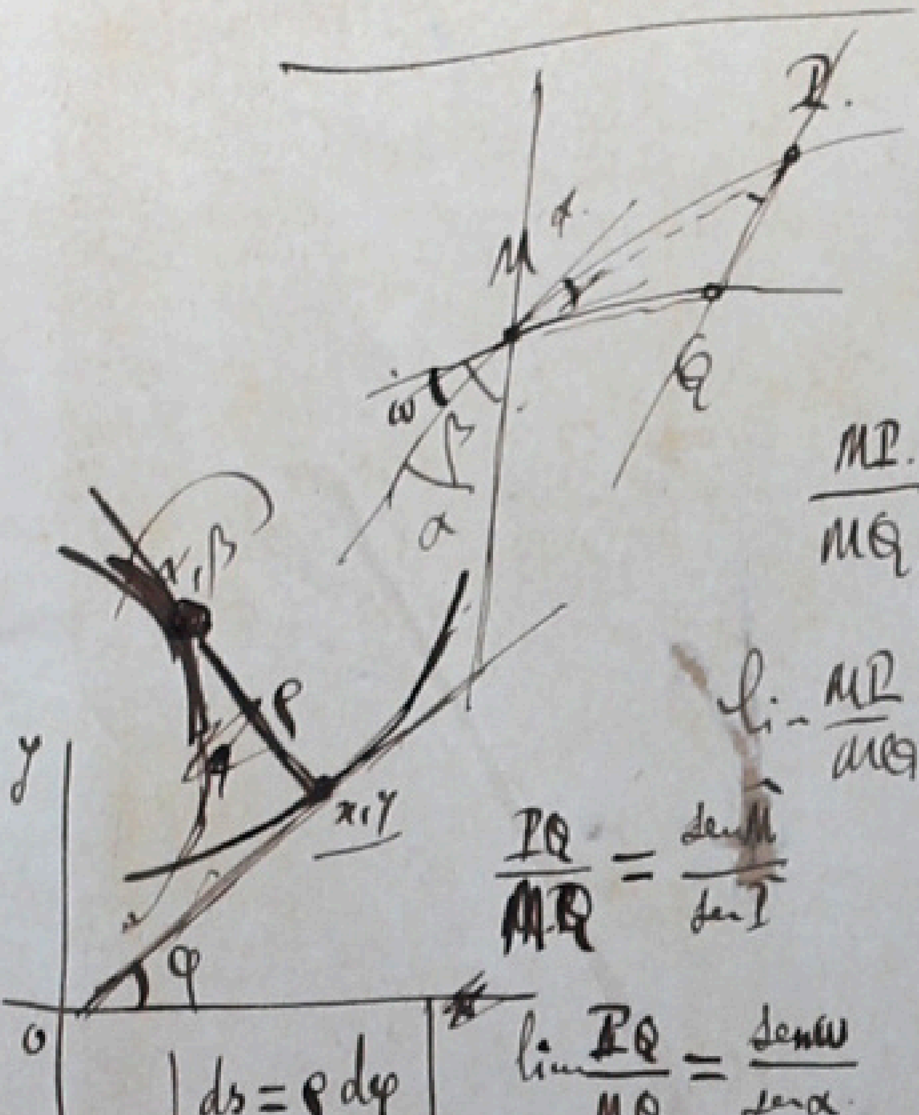
$x' = (x^2 - y^2)\,y$

$y = f(x)$



$(x-\alpha)^2 + (y-\beta)^2 = \rho^2$

$x - \alpha + (y-\beta)\,y' = 0$

$1 + y'^2 + (y-\beta)\,y'' = 0$

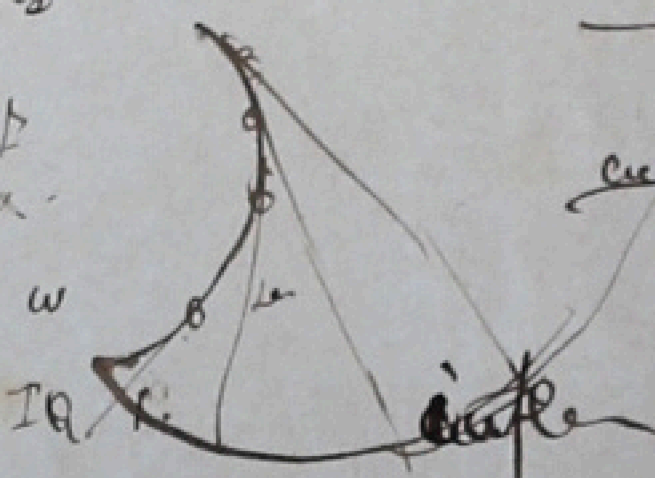
$\frac{MP}{MQ} = \frac{\operatorname{sen}\hat{Q}}{\operatorname{sen}\hat{P}}$

$\lim \frac{MP}{MQ} = \frac{r-\rho}{r-\alpha}$

$\frac{PQ}{MQ} = \frac{\operatorname{sen}\hat{M}}{\operatorname{sen}\hat{P}}$

$\lim \frac{PQ}{MQ} = \frac{\operatorname{sen}\omega}{\operatorname{sen}\alpha}$

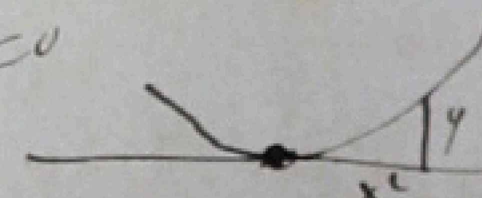
$\boxed{ds = \rho\, d\varphi}$



$y - \beta = -\frac{1+y'^2}{y''}$

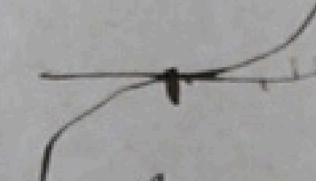
$x - \alpha = y'\frac{1+y'^2}{y''}$

$\rho = \pm\frac{(1+y'^2)^{\frac{3}{2}}}{y''}$



$\rho = \pm \frac{(1+y'^2)^{\frac{3}{2}}}{}$

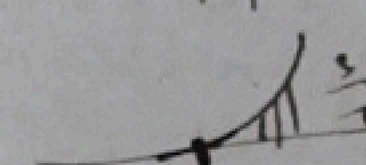
$\lim \frac{y}{x^2} = \frac{1}{2\rho}$



$\frac{y}{x^3}$

y'''

$\frac{d\beta}{d\alpha} = -\cot\varphi$



$d\alpha^2 + d\beta^2 = d\sigma^2 = d\rho^2$

$\sigma = \rho$

$\frac{y}{x^2}$

$\alpha = x - \rho\operatorname{sen}\varphi$

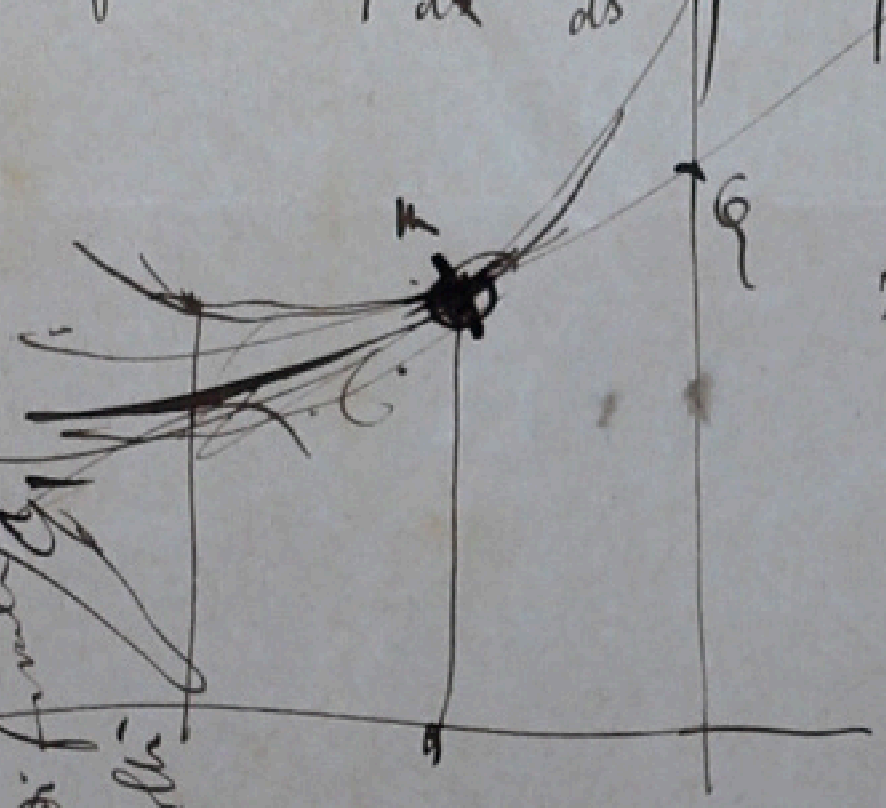
$\beta = y + \rho\cos\varphi$

$\frac{d\alpha}{ds} = \ldots - \frac{d\rho}{ds}\operatorname{sen}\varphi -$

$\frac{d\beta}{ds} = \frac{d\rho}{ds}\cos\varphi$

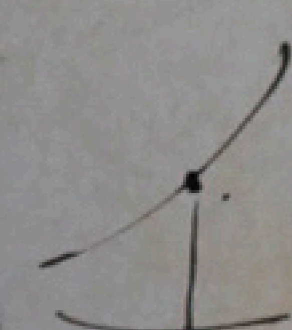
$y = \varphi(x)$

$y = \psi(x)$



$f(x) = \varphi(x) - \psi(x)$

$f(x) = 0 \quad f'(x) = 0$



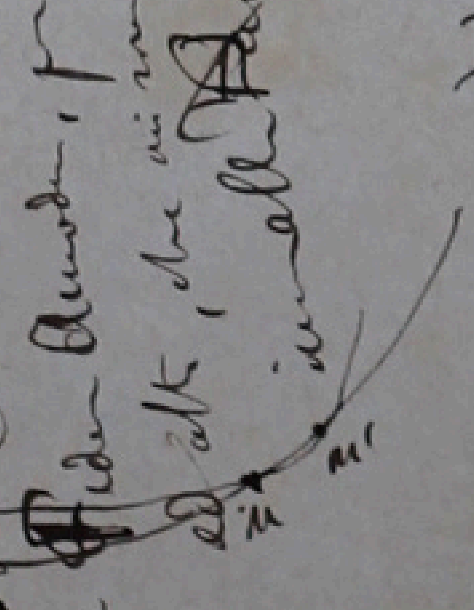
$PQ = f(x+h) = f(x) + hf'(x) + \cdots + \frac{h^{n+1}}{(n+1)!} f^{(n+1)}(x)$

$PQ \quad n+1$

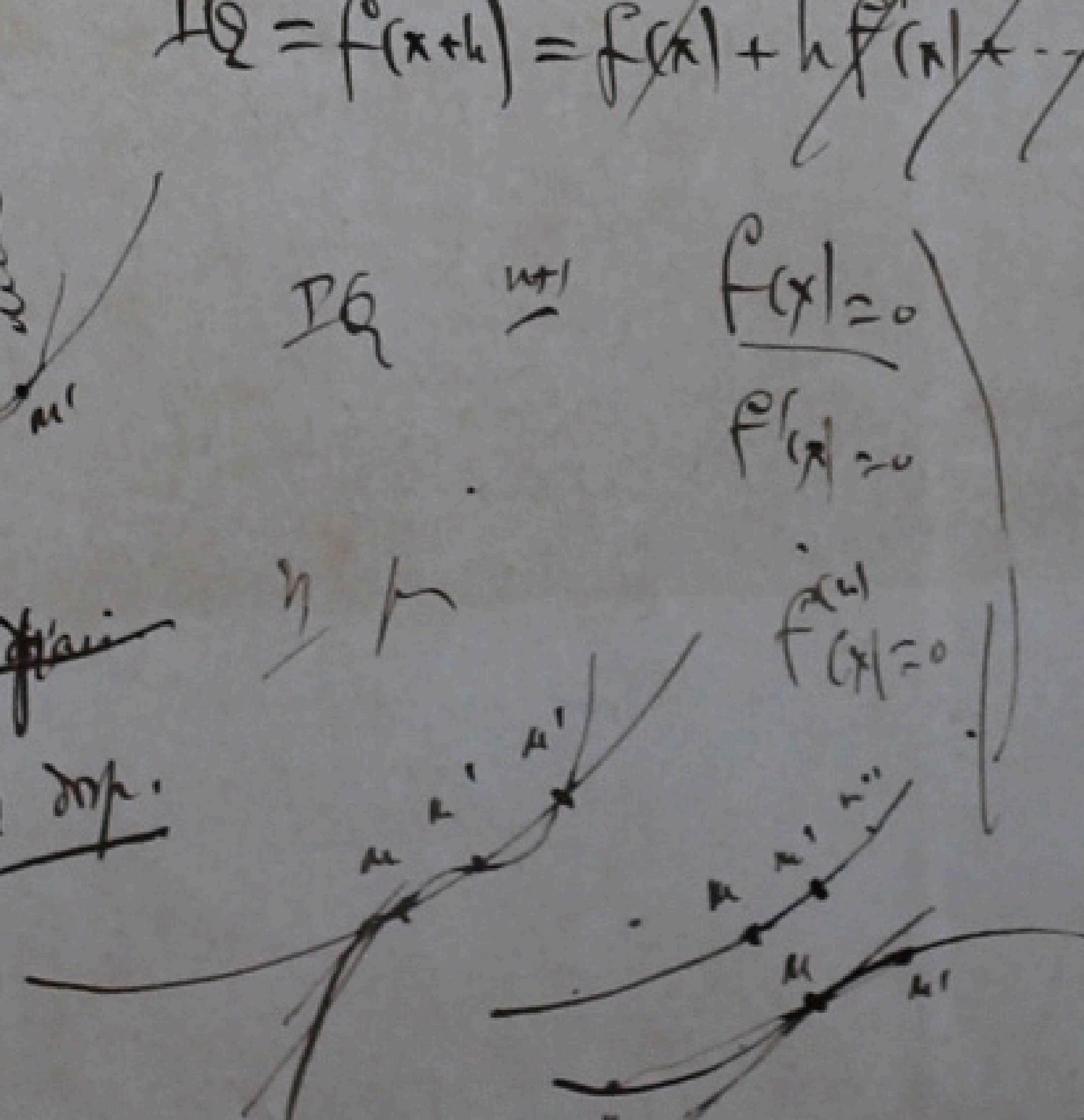
$f(x) = 0$

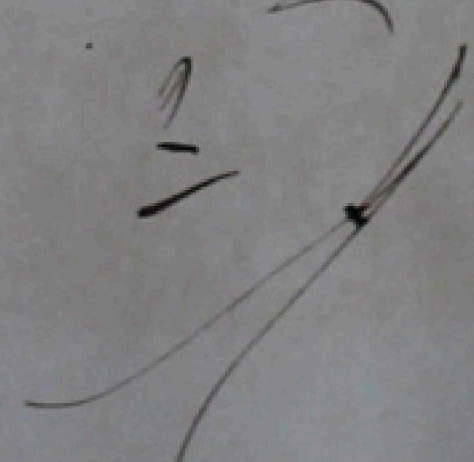
$f'(x) = 0$

$f^{(n)}(x) = 0$

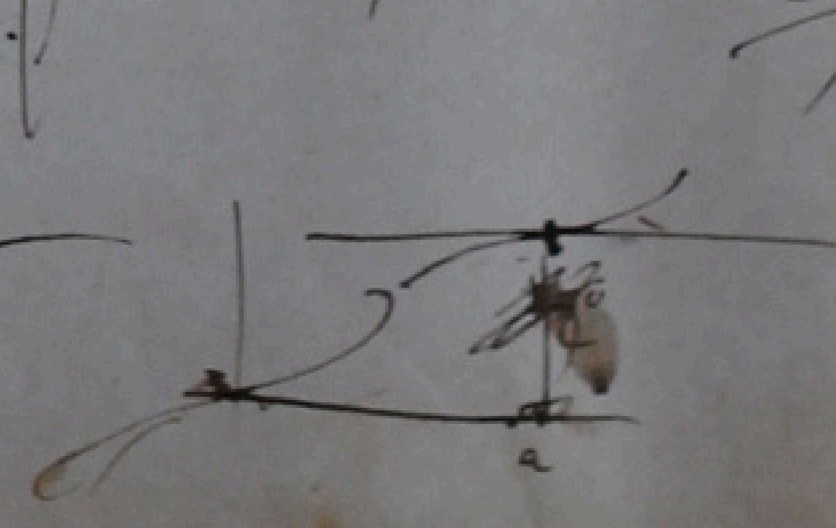


n disp.





$y'' = 0$



$y'' = 0$

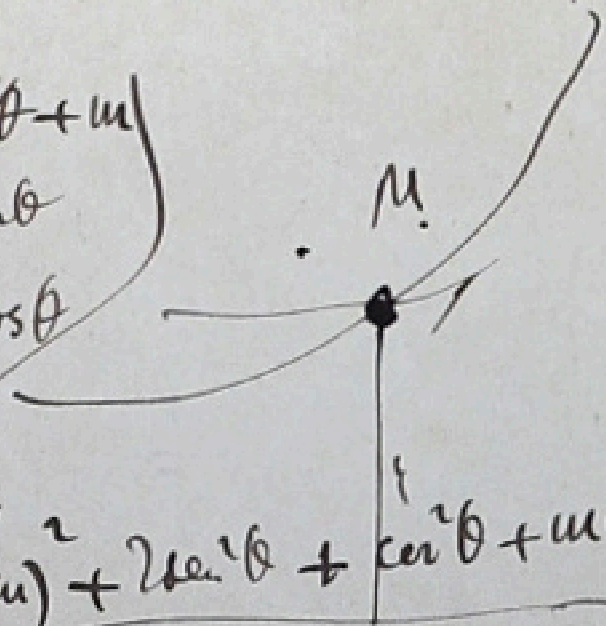
$r^2 + 2r'^2 - rr''$

$(\cos\theta + 2)^2 + 2\sin^2\theta - (\cos\theta + 2)$

$r = \cos\theta + m$

$r' = -\sin\theta$

$r'' = -\cos\theta$



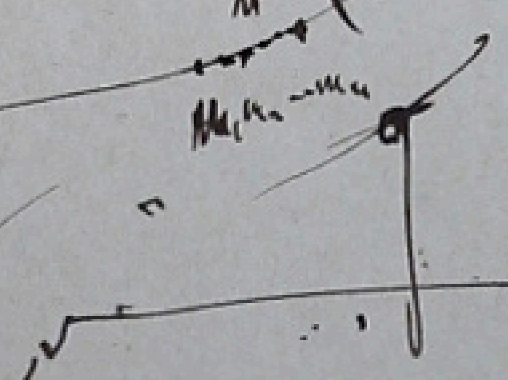
$(\cos\theta + m)^2 + 2\sin^2\theta + \cos^2\theta + m\cos\theta = 0$

$a - x = -r\cos\theta$

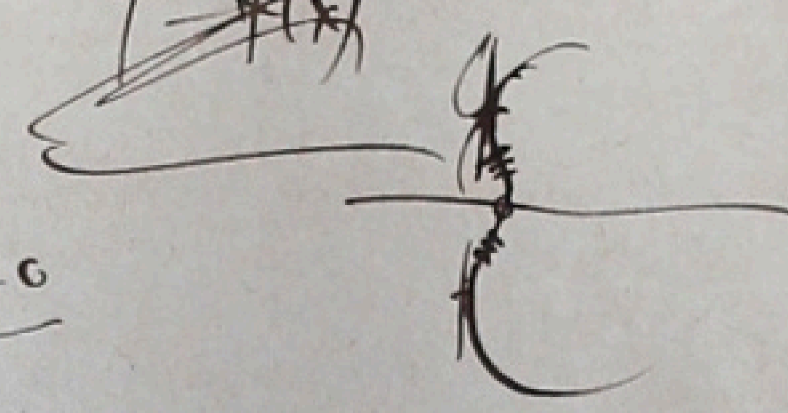
$y = r\sin\theta$

$x = a + r\cos\theta$

$y = r\sin\theta$



$y = f(x)$



$f(x, y) = 0$

$y = f(x)$

$\varphi(x, y) = 0$

$f(x) = \varphi(x)$

$f'(x) = \varphi'(x)$

$f''(x) = \varphi''(x)$

$f^{(n-1)}(x) = \varphi^{(n-1)}(x)$

$f^{(n)}(x) = \varphi^{(n)}(x)$

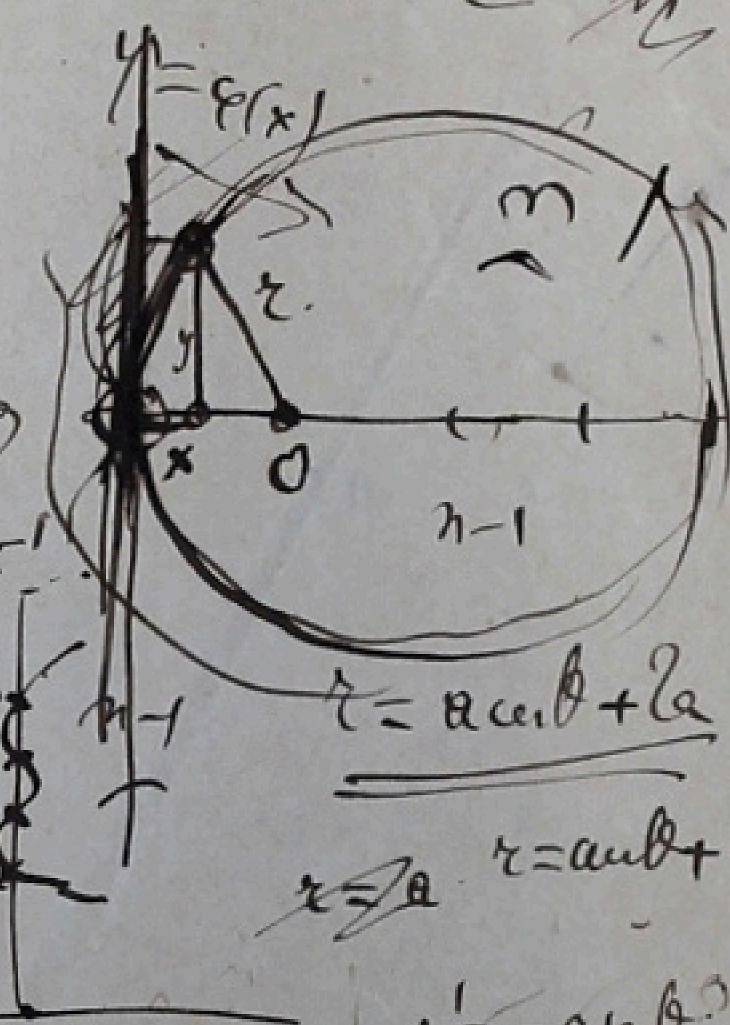
1

2

$n-1$

$X.$

$y = \varphi(x)$



$r = a\cos\theta + 2a$

$r = a\cos\theta + b$

$r' = -a\sin\theta$

$r'' = -a\cos\theta$

$b < 2a$

$f(x, y) = 0$

$r = a(\cos\theta + 2)$

$\theta = \pi - \varepsilon$

$r = a(2 - \cos\varepsilon)$

$\cancel{y = ax + b}$

$Y = mX + h$

$x = a\left(1 + \frac{1}{2}\varepsilon^2\right)$

$y = a\varepsilon$

$m = y'$

$y = mx + h$

$y' = m$

$y'' = 0$

$m = y'$

$h = y - xy'$

$Y = Xy' + y - xy'$

$Y - y = (X - x)y'$

$x = a - a\cos\varepsilon(2 - \cos\varepsilon)$

$= a[1 - 2\cos\varepsilon + \cos^2\varepsilon]$

$\varphi(x, y, a, b, c, \ldots) = 0$

$2 - \left(1 - \frac{1}{2}\varepsilon^2\right)$ y'

y''

$-a + b$

$x = -a$

$r\cos\theta = -a$

$y^2 = r^2 - a^2$

$\cos\theta = -1$

$y'' = 0$ $r = a$

$y''' = 0$

$y^{(n)} = 0$

$y^{(n+1)}$

$(\cos\theta + 2)^2 + 2\sin^2\theta + (\cos\theta + 2)\cos\theta$

$2°$ ... $+ 6\cos\theta + 6 = 0$

$\cos^2\theta + 4\cos\theta + 4 + 2\sin^2\theta$

$+ \cos\theta\cos\theta +$

$3°$ ...

$y^2 = (a\cos\theta + b)^2 - a^2 = b^2 + 2ab\cos\theta - a^2\sin^2\theta$

n ...

$\theta = \pi$

$\cos\theta = -1$

$\frac{1}{2}\varepsilon^2$

$x = \frac{a}{4}\varepsilon^4$

$x = a(1 - \cos\varepsilon)$

Col ... che ... solo il delta all'uno ... separate ... di quello di ... è una alla ... Calla di ...