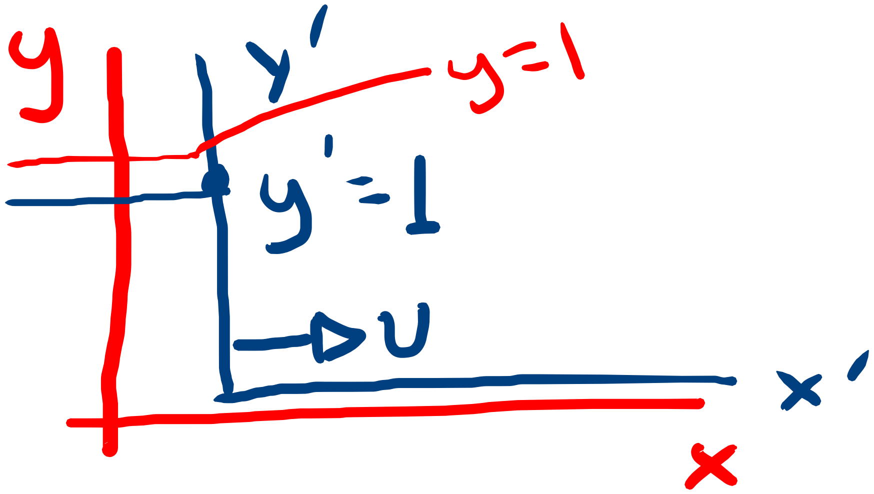
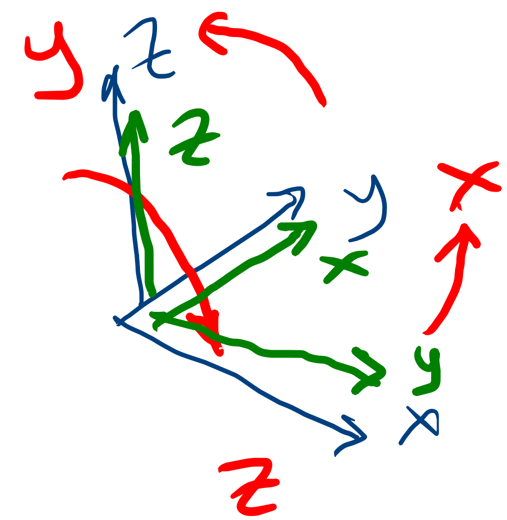


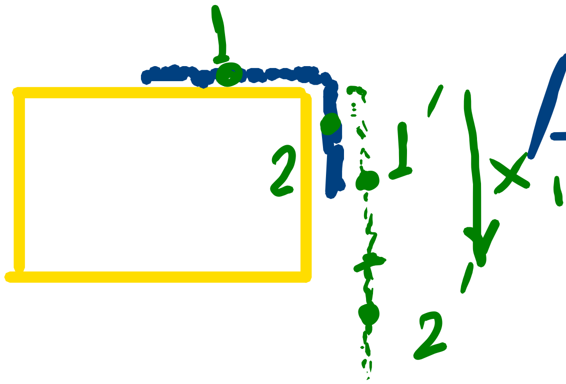
$\rightarrow \quad y' < y$

$$\boxed{y' = y}$$

$$\vec{a} \times \vec{b} = \begin{vmatrix} \hat{x} & \hat{y} & \hat{z} \\ a_x & a_y & a_z \\ b_x & b_y & b_z \end{vmatrix} = - \begin{vmatrix} \hat{y} & \hat{x} & \hat{z} \\ a_y & a_x & a_z \\ b_y & b_x & b_z \end{vmatrix}$$

$$= \begin{vmatrix} \hat{y} & \hat{z} & \hat{x} \\ a_y & a_z & a_x \\ b_y & b_z & b_x \end{vmatrix}$$





$\Delta E_k = W_{F_{ext}}$

$U_{TE\lambda} = \dots\dots$

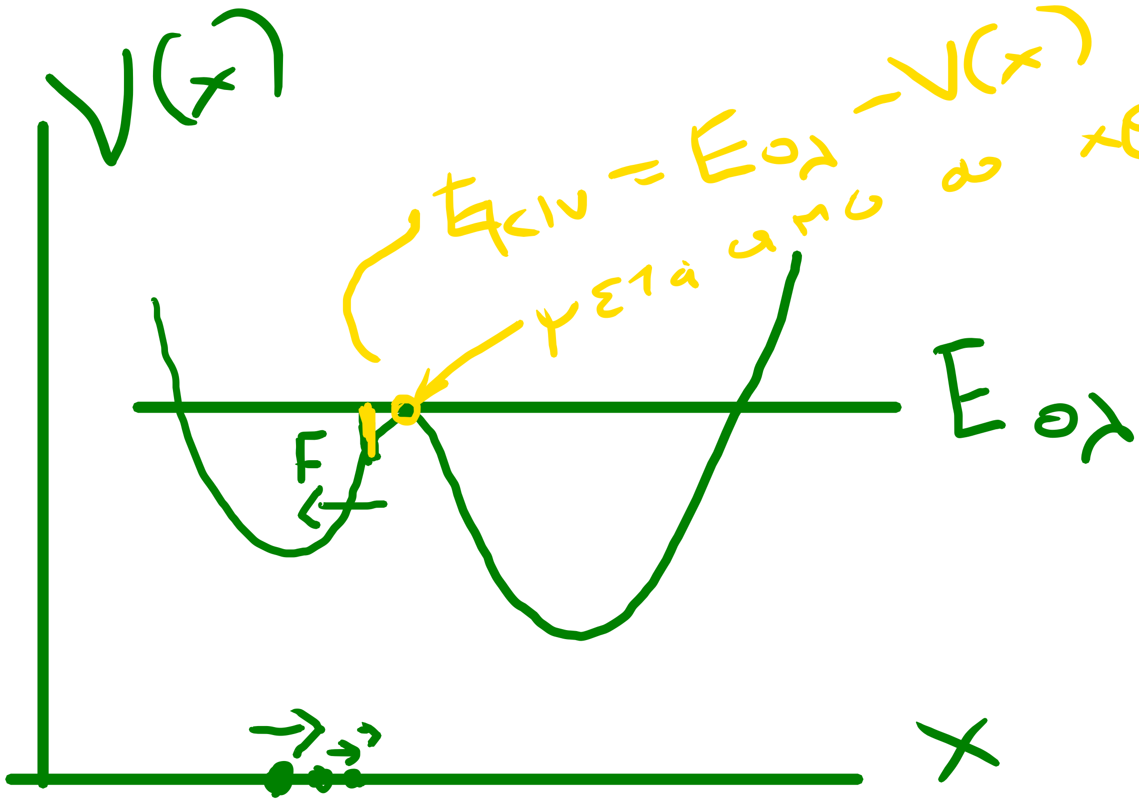
$W_N = 0 \qquad \vec{N} \perp d\vec{s}$

B, N

$W_B = B_1 \dfrac{x_1}{2} + B_2 x_1$

$B_1 = B \dfrac{x_1}{L}$

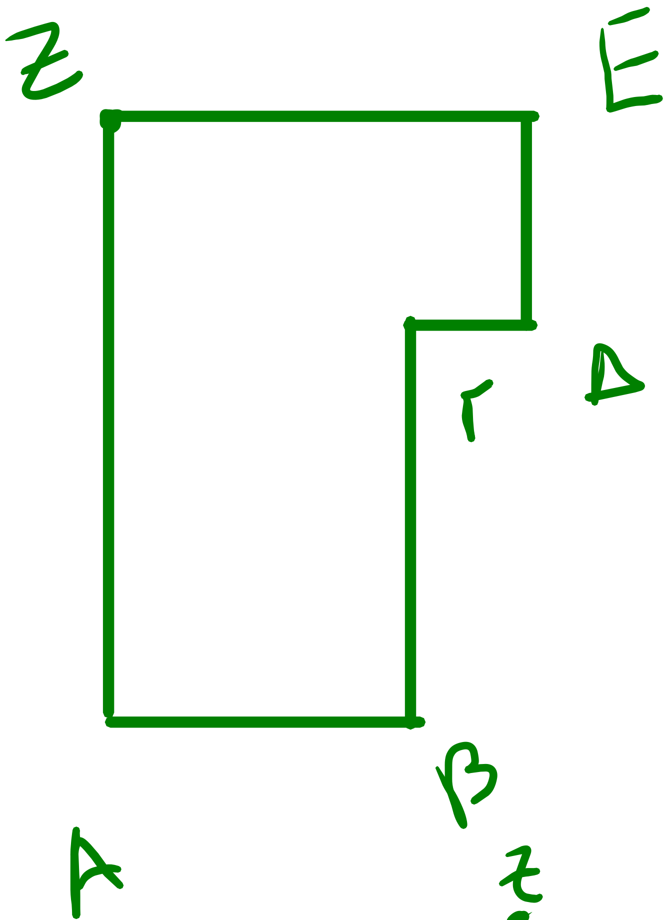
$B_2 = B\left(1 - \dfrac{x_1}{L}\right)$

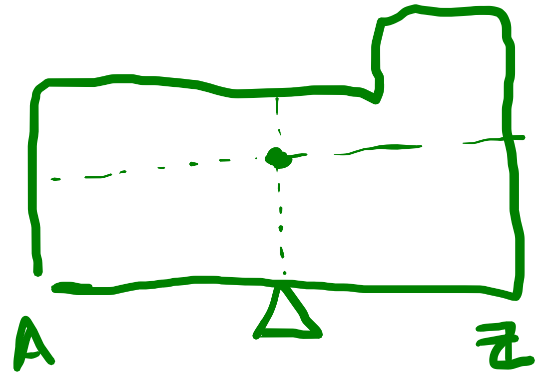


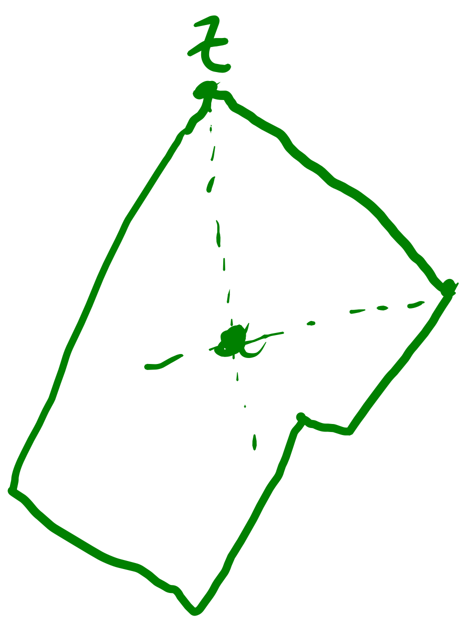
$$m \frac{d^2x}{dt^2} = F$$

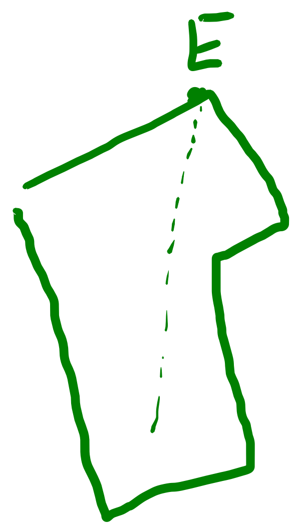
$$t \to -t = T$$

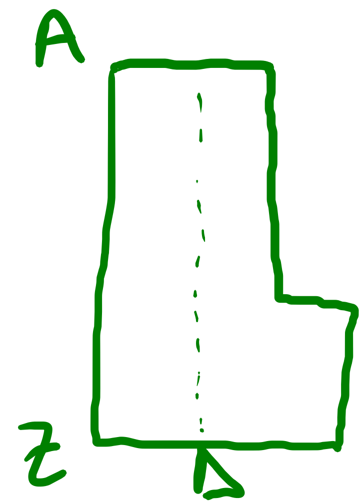
$$m \frac{d^2x}{dT^2} = F$$

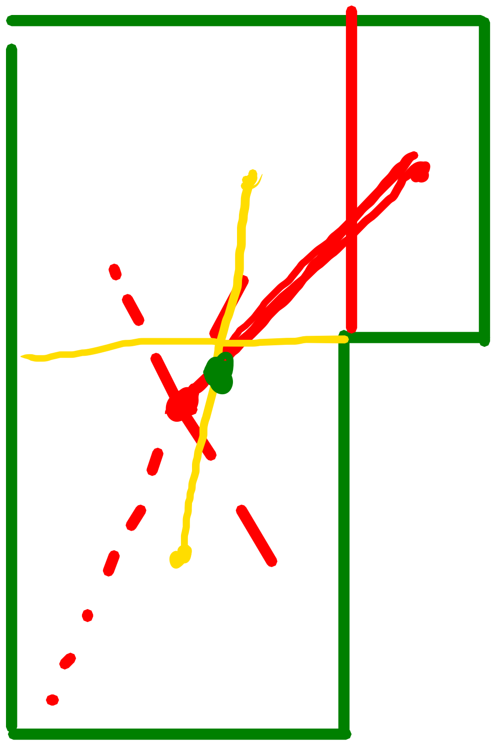

Z
E
Δ
Γ
B
A


A
Δ
Z


Z


E


A
Z
Δ



$$T(x, y, z, t)$$

$$\vec{\nabla} T = \hat{x} \frac{\partial}{\partial x} T + \hat{y} \frac{\partial T}{\partial y} + \hat{z} \frac{\partial T}{\partial z} = \vec{A}(x, y, z, t)$$

$$T(x(t), y(t), z(t), t)$$

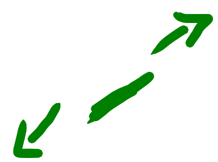
$T = \max$

$\vec{\nabla} T = \vec{0}$

$$\frac{dT}{dt} = \frac{\partial T}{\partial x}\frac{dx}{dt} + \frac{\partial T}{\partial y}\frac{dy}{dt} + \frac{\partial T}{\partial z}\frac{dz}{dt} + \frac{\partial T}{\partial t}$$

$$= f(t)$$

$$\Delta F = -m\left(g_K - g_{\pi}\right)$$



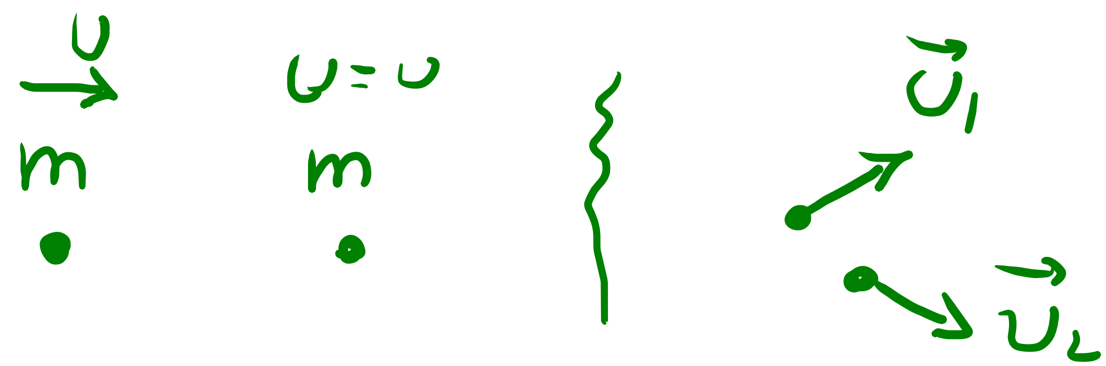
$$= m \frac{dg}{dr} h$$

$$g = \frac{GM}{r^2} \qquad \frac{dg}{dr} = -\frac{2GM}{r^3}$$

B

$$\Delta F = m \frac{2GM}{r^3} h = 2 \frac{GMm}{r^2} \frac{h}{r} \qquad R = \frac{2GM}{c^2}$$

MT



$$\gamma m \vec{v} + 0 = \gamma_1 m \vec{v}_1 + \gamma_2 m \vec{v}_2$$ διατ. σχ. ορμ

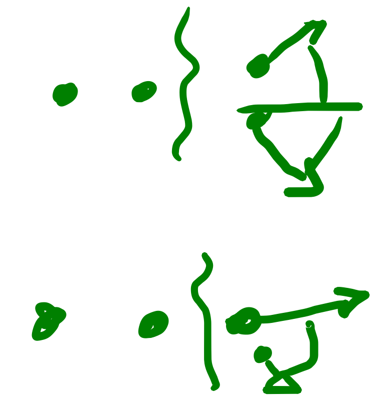
$$\gamma m + m = \gamma_1 m + \gamma_2 m$$ διατ. σχ. ενέργ.

$$\left.\begin{aligned} \gamma \vec{v} &= \gamma_1 \vec{v}_1 + \gamma_2 \vec{v}_2 \\ 1+\gamma &= \gamma_1 + \gamma_2 \end{aligned}\right\}$$

$$v^2 = v_1^2 + v_2^2 \longrightarrow v^2 - v_1^2 = v_2^2$$

$$\vec{v} = \vec{v}_1 + \vec{v}_2 \longrightarrow \vec{v} - \vec{v}_1 = \vec{v}_2$$

$$(\vec{v} + \vec{v}_1)\cdot \quad ,,$$

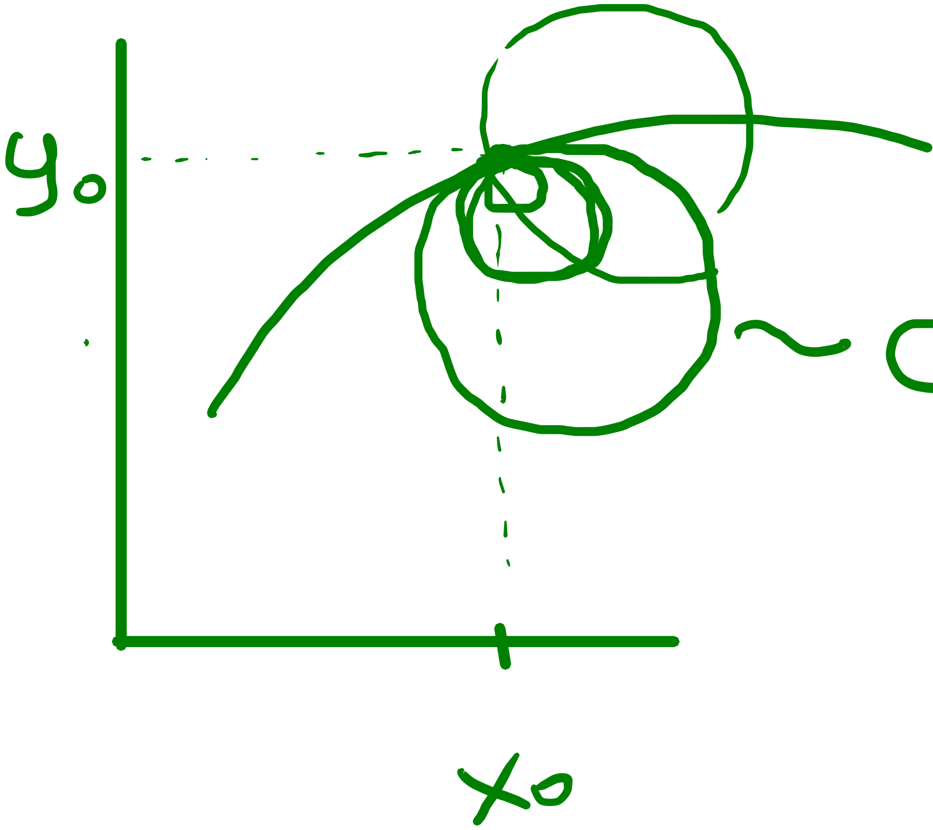


$$v_2^2 = v^2 - v_1^2 = (\vec{v} + \vec{v}_1)\cdot\vec{v}_2$$

$$= (2\vec{v} - \vec{v}_2)\cdot\vec{v}_2$$

$$\cancel{2v_2^2} = 2\vec{v}\cdot\vec{v}_2 = 2(\vec{v}_1 + \cancel{\vec{v}_2})\cdot\vec{v}_2$$

$$\vec{v}_1 \perp \vec{v}_2$$



$y = f(x)$

$C: \ (x - \underline{x_1})^2 + (y - \underline{y_1})^2 = \underline{R}^2$

1) $(x_0 - x_1)^2 + (y_0 - y_1)^2 = R^2$

2) $2(x_0 - x_1) + 2(y_0 - y_1) \, dy/dx\big|_{x_0, y_0} = 0$

$2(x - x_1)\,dx + 2(y - y_1)\,dy = 0$

3)

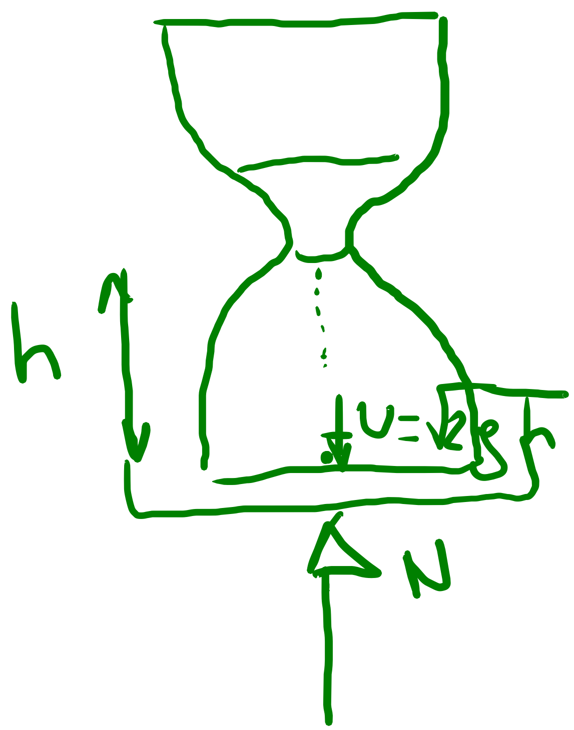
$y - y_1 = \sqrt{R^2 - (x - x_1)^2}$

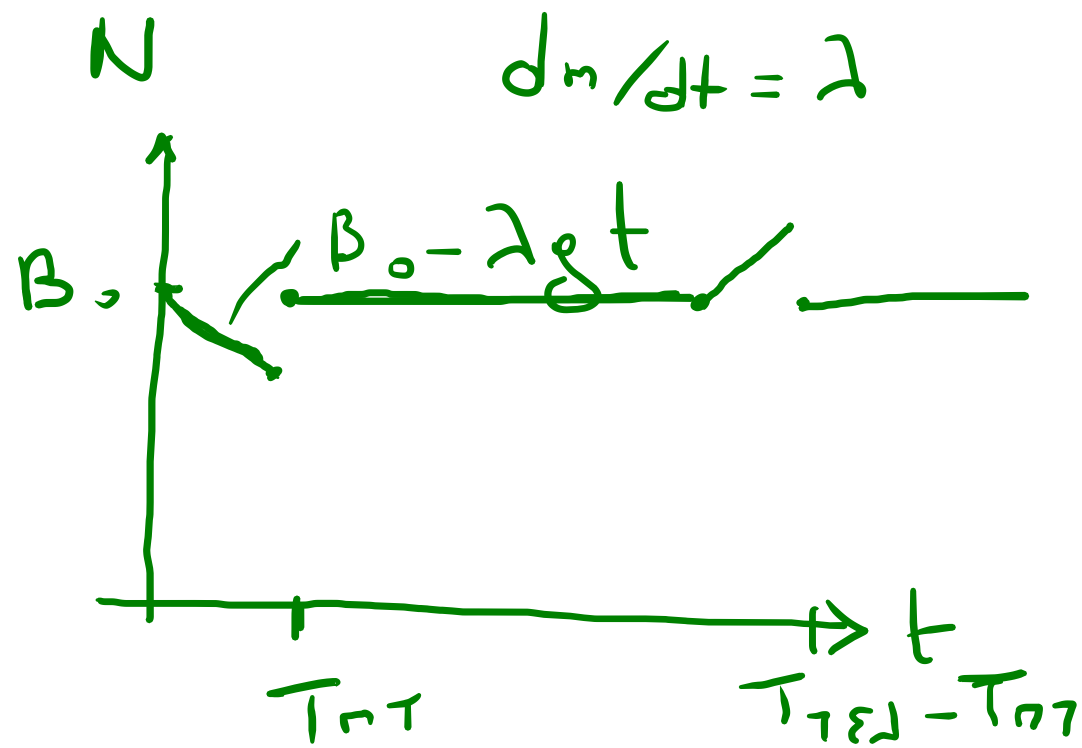
$\left.\frac{d^2y}{dx^2}\right|_{x_0} = f''(x_0)$

$B_0 = B_\kappa + B_{\alpha\mu.}$

ολικ.

$dm/dt = \lambda$





$B_0 - \lambda g T_{\pi\tau}$

$T_{\pi\tau} = \sqrt{\frac{2h}{g}}$

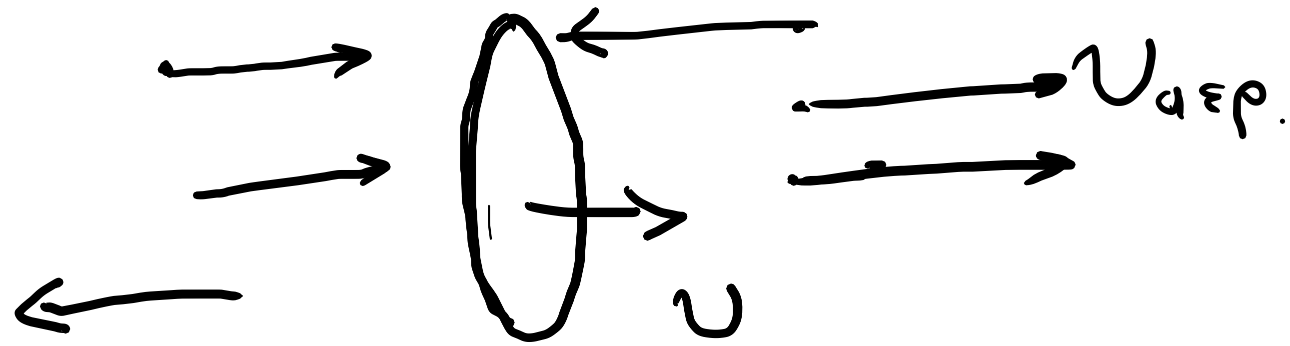
$N_{T_{\pi\tau}+} = B_0 - \lambda g\sqrt{\frac{2h}{g}} + F$

$P_{\pi\rho\iota\nu} = \dot{dm}\sqrt{2gh}$ $\quad$ $P_{\mu\varepsilon\tau} = 0$

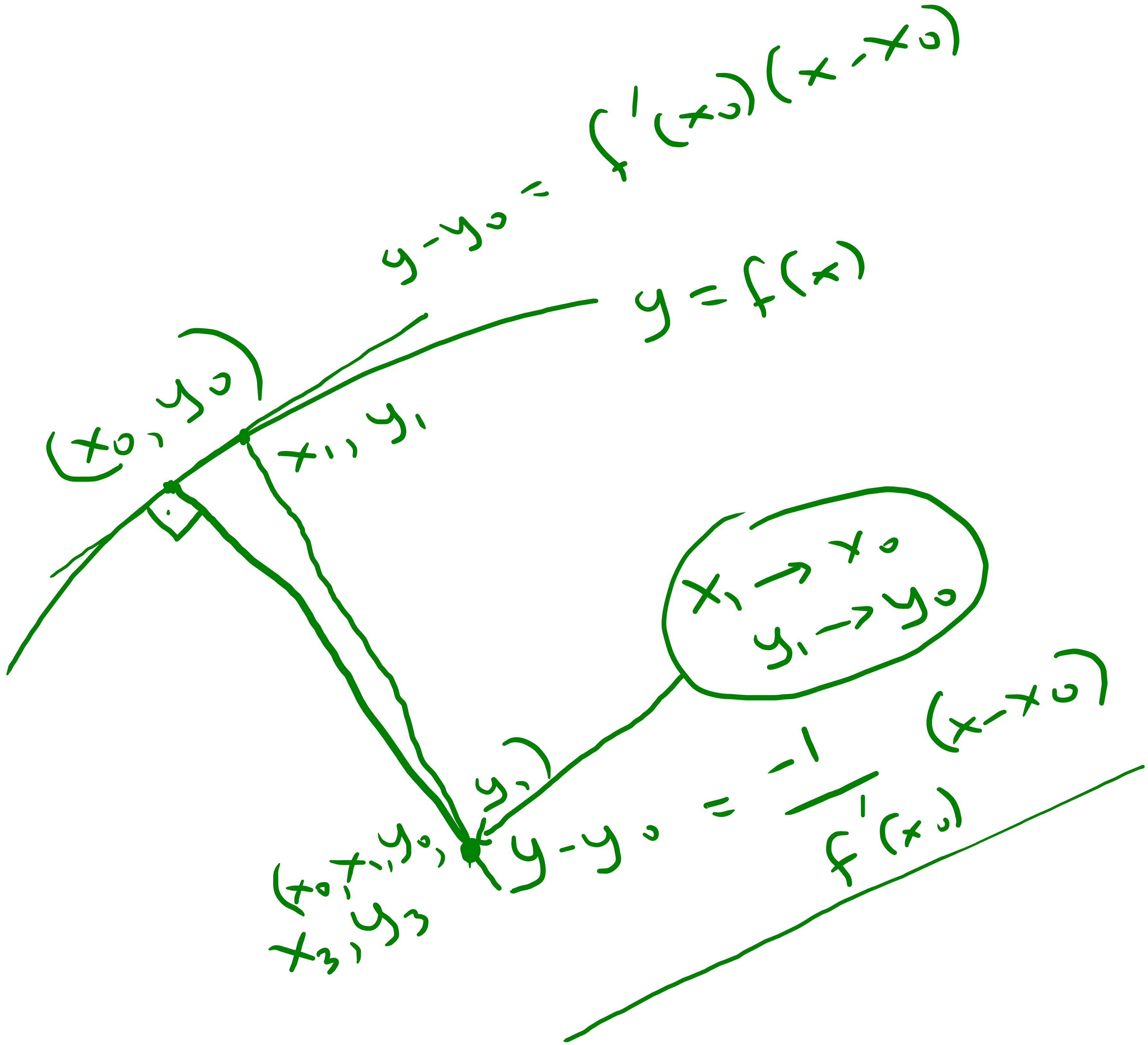
$F_\kappa = \frac{dp}{dt} = \frac{dm}{dt}\sqrt{2gh} = \lambda\sqrt{2gh}$

$N_{T_{\pi\tau}+} = B_0 - \sqrt{\lambda^2 2hg} + \sqrt{\lambda^2 g 2h} = B_0$

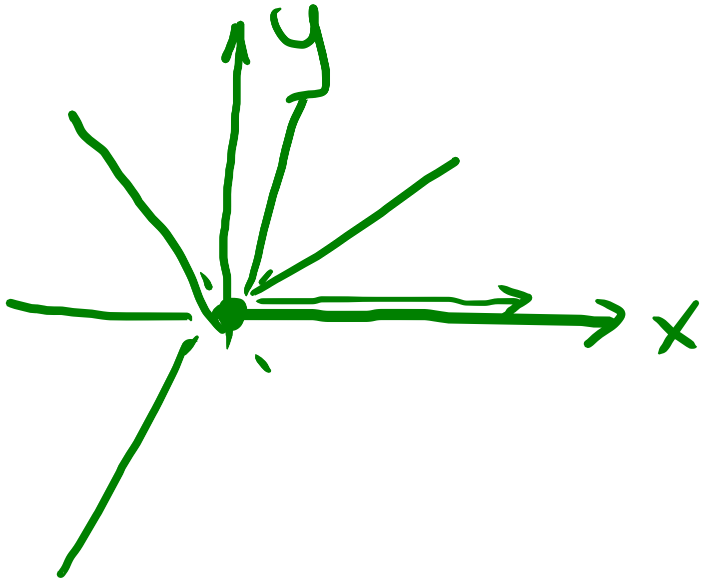
μόρια
περισ. από μπροστά το κτυπάνε

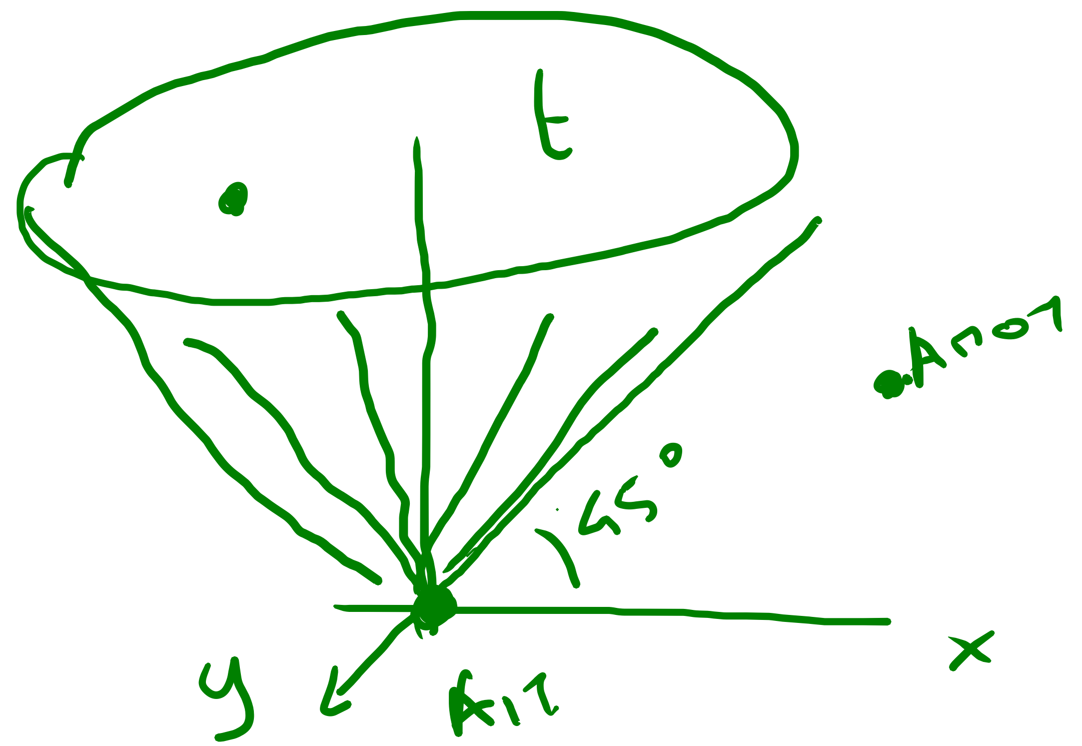


$$F_{αντ} \propto υ^2$$


$y - y_0 = f'(x_0)(x - x_0)$
$y = f(x)$
(x_0, y_0)
x_1, y_1
$x_1 \to x_0$
$y_1 \to y_0$
$y_1)$
$(x_0 x_1, y_0,$
x_3, y_3
$y - y_0 = \frac{-1}{f'(x_0)}(x - x_0)$

Κώνος φωτός





$$\boxed{x = ct}$$

$c = 1$ l: lyrs

t: yrs

$$c = \frac{1 \text{ lyrs}}{1 \text{ yr}}$$