

$$L = \sqrt{x^2 + H^2} + y \quad + 0,5$$

$$0 = \frac{x \dot{x}}{\sqrt{x^2 + H^2}} + \dot{y} \quad + 0,5$$

$$V_0 = y \quad + 0,25$$

$$\dot{x} = -V_0 \frac{\sqrt{x^2 + H^2}}{x} \quad + 0,25$$

$$\ddot{x}(H) = \frac{-V_0 \sqrt{2H^2}}{H} \quad + 0,5$$

$$\ddot{x}(H) = \frac{\frac{-V_0 x^2 \dot{x}}{\sqrt{x^2 + H^2}} - \sqrt{x^2 + H^2}}{x^2} \quad + 0,5$$

$$\ddot{x}(H) = \frac{-V_0^2}{H} \quad + 0,5$$

$$T \cos \theta = m \ddot{x} \quad + 0,5$$

$$\theta = \frac{\pi}{2} \quad \text{ó} \quad \cos \theta = \frac{H}{\sqrt{x^2 + H^2}} \quad + 0,5$$

$$T(H) = \frac{m}{\cos(\frac{\pi}{2})} \ddot{x}(H) \quad + 0,5$$

$$N + T \sin \theta - mg = 0 \quad + 0,5$$

$$N = mg - T(H) \sin(\frac{\pi}{2}) \quad + 0,5$$

$$F = T \quad + 0,5$$