Cinemática · Formulario

M.R.U.

$$x = x_0 + v \cdot t$$

M.R.U.A.

$$x = x_0 + v_0 \cdot t + \tfrac{1}{2}\, a \cdot t^2$$

$$v = v_0 + a \cdot t$$

Tiro Vertical

$$y = y_0 + v_0 \cdot t - \frac{1}{2} \cdot g \cdot t^2$$

$$v = v_0 - g \cdot t$$

Tiro Horizontal

$$\begin{cases} x = v_0 \cdot t \\ y = y_0 - \dfrac{1}{2} \cdot g \cdot t^2 \end{cases}$$

$$\begin{cases} v_x = v_0 \\ v_y = -g \cdot t \end{cases}$$

$$v = \sqrt{v_x^2 + v_y^2}$$

Tiro Oblícuo

$$\begin{cases} x = v_0 \cdot cos\alpha \cdot t \\ y = y_0 + v_0 \cdot sen\alpha \cdot t - \dfrac{1}{2} \cdot g \cdot t^2 \end{cases}$$

$$\begin{cases} v_x = v_0 \cdot cos\alpha \\ v_y = v_0 \cdot sen\alpha - g \cdot t \end{cases}$$

$$v = \sqrt{v_x^2 + v_y^2}$$

M.C.U.

$$\theta = \omega \cdot t$$

$$nº\ vueltas = \frac{\theta}{2\pi}$$

$$s = \theta \cdot R$$

$$\omega = \frac{2\pi}{T}$$

$$\omega = \frac{\theta}{t}$$

$$v = \omega \cdot R$$

$$a_n = \frac{v^2}{R}$$

M.C.U.A.

$$\theta = \theta_0 + \omega_0 \cdot t + \frac{1}{2} \cdot \alpha \cdot t^2$$

$$\alpha = \frac{\omega - \omega_0}{t}$$

$$a_n = \frac{v^2}{R}$$

$$a_t = \alpha \cdot R$$

$$nº\ vueltas = \frac{\theta}{2\pi}$$