

CINEMÁTICA

MOVIMIENTO RECTILÍNEO Y UNIFORME

$$v_m = \frac{s}{t}$$

$$\text{Si } v = \text{cte} \Rightarrow v_m = v$$

$$v = \frac{s}{t}; \quad s = v \cdot t; \quad t = \frac{s}{v}$$

MOVIMIENTO RECTILÍNEO Y UNIFORMEMENTE ACELERADO

$$a_m = \frac{v_f - v_i}{t}$$

$$v_f = v_i + a \cdot t$$

$$v_i = v_f - a \cdot t$$

$$t = \frac{v_f - v_i}{a}$$

$$s = v \cdot t + \frac{1}{2} a \cdot t^2$$

$$\text{Si } v_i = 0 \Rightarrow v_f = v; \quad a_m = a$$

$$a = \frac{v}{t}; \quad v = a \cdot t; \quad t = \frac{v}{a}$$

$$s = \frac{1}{2} a \cdot t^2; \quad a = \frac{2s}{t^2}; \quad t^2 = \frac{2s}{a}$$

MOVIMIENTO RECTILÍNEO Y UNIFORMEMENTE ACELERADO (Caída libre)

$$\text{Si } v_i = 0;$$

$$g = \frac{v}{t}; \quad v = g \cdot t; \quad t = \frac{v}{g}; \quad g = 9,8 \frac{m}{s^2}$$

$$h = \frac{1}{2} g \cdot t^2; \quad g = \frac{2h}{t^2}; \quad t^2 = \frac{2h}{g}$$