ovimiento (sin importar las causas)

TILINEA → Dos movimientos

Pueden ser

UNIFORME HORIZONTAL — **MRU** — $V = cte$, $a = 0$ — $x_f = x_i + v.t$

ACELERADO — **MRUV**

- HORIZONTAL: $v \neq cte$, $a = cte$

$$x_f = x_i + v_i.t \pm \frac{1}{2} a t^2$$
$$v_f = v_i \pm a t^2$$
$$v_f^2 = v_i^2 \pm 2 a x$$

- VERTICAL: $v \neq cte$, $a = cte = g$ — CAIDA LIBRE / TIRO VERTICAL

$$h_f = h_i + v_i.t \pm \frac{1}{2} g t^2$$
$$v_f = v_i \pm g t$$
$$v_f^2 = v_i^2 \pm 2gh$$

h = espacio recorrido vert.

x = espacio recorrido horizontal

Subind. f = final, i = inicial

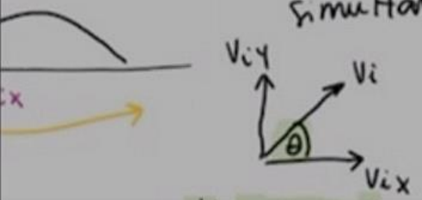
$+g, +a \Rightarrow$ acelera

$-g, -a \Rightarrow$ frena o desacelera

,8 m/s²

2 pies/s²

ICUA → Dos movimientos simultaneos

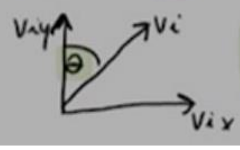


$V_{iy} = V_i . sen\theta$

$V_{ix} = V_i . cos\theta$

- En el eje de las x: movimiento **MRU** — $V_x = V_i . cos\theta$ — $x_f = v.t$
- En el eje de las y: movimiento **MRUV** (vertical) — Con la vi en y — $V_y = V_i . sen\theta$

$$h_f = h_i + v_i.t \pm \frac{1}{2} g t^2$$
$$v_f = v_i \pm g t$$
$$v_f^2 = v_i^2 \pm 2gh$$



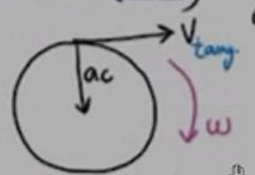
$V_{ix} = V_i . sen\theta$

$V_{iy} = V_i . cos\theta$

Dos movimientos

a_c = aceleración que "hace" la trayectoria circular.

UNIFORME (MCU) — $V_t = cte$, $a_c = cte$

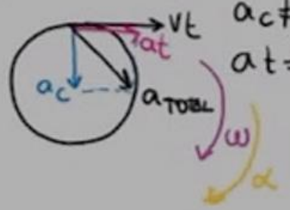


VARIADO (MCUV) — $V_t \neq cte$, $a_c \neq cte$, $a_t = cte$

a_t = aceleración tangencial q' cambia a la V_t.

a_T = aceleración total, suma vectorial $a_c + a_t$

$$a_T = \sqrt{a_c^2 + a_t^2}$$



Expresiones Angulares	Expresiones angulares vs lineal
$\omega = \frac{\theta_f - \theta_i}{t_f - t_i}$	$a_c = \frac{V_t^2}{R}$
$\omega = \frac{\theta}{t}$	$a_t = \alpha . R$
$\theta_f = \theta_i + \omega_i . t \pm \frac{1}{2} \alpha . t^2$	$V_t = \omega . R$
$\omega_f = \omega_i \pm \alpha . t$	$S = \theta . R$
$\omega_f^2 = \omega_i^2 \pm 2 \alpha . \theta$	SIOSI $\Rightarrow \omega = \left[\frac{rad}{s}\right]$; $\alpha = \left[\frac{rad}{s^2}\right]$; $\theta = [rad$

1 rev → 2π rad

1 vuelta

360°

S = espacio lineal recorrido