

Ecuaciones físicas 1

Nº	Ecuación	Despejar	Soluciones
1	$a = \frac{v}{t}$	v	$v = at$
2	$s = s_0 + v(t - t_0)$	v, t	$v = \frac{s - s_0}{t - t_0}; \quad t = \frac{s - s_0 + vt_0}{v}$
3	$\Delta P = d g (h_2 - h_1)$	d, h_2	$d = \frac{\Delta P}{g (h_2 - h_1)}; \quad h_2 = \frac{\Delta P + d g h_1}{d g}$
4	$\frac{PV}{T} = cte$	P, T	$P = \frac{cteT}{V}; \quad T = \frac{PV}{cte}$
5	$R = k \frac{l}{s}$	l, s	$l = \frac{Rs}{k}; \quad s = \frac{kl}{R}$
6	$M = \frac{m_a}{m_a + m_b}$	m_a	$m_a = \frac{M m_b}{1 - M}$
7	$v_f = v_0 - at$	a	$a = \frac{v_0 - v_f}{t}$
8	$A = \frac{1}{B} + \frac{1}{C}$	B, C	$B = \frac{C}{AC - 1}; \quad C = \frac{B}{AB - 1}$
9	$1 + \frac{A}{B} = C$	A, B	$A = B(C - 1); \quad B = \frac{A}{C - 1}$
10	$\lambda = \frac{h}{mv}$	v	$v = \frac{h}{m\lambda}$
11	$I = \frac{\varepsilon_a - \varepsilon_b}{R + r_a + r_b}$	ε_b, r_a	$\varepsilon_b = \varepsilon_a - IR - I r_a - I r_b$ $r_a = \frac{\varepsilon_a - \varepsilon_b - I r_b - IR}{I}$
12	$a_n = \frac{v^2}{r}$	v	$v = \sqrt{a_n r}$
13	$T = 2\pi \sqrt{\frac{l}{g}}$	l	$l = \frac{gT^2}{4\pi^2}$
14	$S = 4\pi r^2$	r	$r = \frac{1}{2} \sqrt{\frac{S}{\pi}}$
15	$E = \frac{q}{4\pi \varepsilon r^2}$	q, r	$q = 4\pi r^2 \varepsilon E; \quad r = \frac{1}{2} \sqrt{\frac{q}{\pi \varepsilon E}}$
16	$\Delta E = -A \left[\frac{1}{n_f^2} - \frac{1}{n_i^2} \right]$	A, n_i, n_f	$A = \frac{\Delta E n_f^2 n_i^2}{n_f^2 - n_i^2}; \quad n_f = \frac{n_i \sqrt{A}}{\sqrt{A - \Delta E n_i^2}};$ $n_i = \frac{n_f \sqrt{A}}{\sqrt{A + \Delta E n_f^2}}$