



TEMA: DESPEJE DE FORMULAS

MATERIA: FISICA (1ro Bachillerato)

PROFESOR: ING.VICENTE SARABIA

Despejar las variables solicitadas las ecuaciones siguientes:

N°	Ecuación	Variable	Ecuación	Variable
1	$a = \frac{v}{t}$	t	$s = \frac{d}{t - t_0}$	d
2	$U = \frac{1}{2}kx^2$	k	$\frac{p_1 V_1}{T_1} = \frac{p_2 V_2}{T_2}$	T_2
3	$p = \frac{F}{\pi * r * L}$	L	$W = F * d * \cos(\phi)$	d
4	$x = \frac{1}{2}gt^2$	t^2	$A_1 v_1 = A_2 v_2$	v_2
5	$V = \pi r^2 h$	h	$\tau = F * r * \sin(\phi)$	r
6	$\rho = \frac{m}{(1/3)\pi r^2 h}$	h	$\frac{F_1}{(1/2)b_1 h_1} = \frac{F_2}{(1/2)b_2 h_2}$	h_2

N°	Ecuación	Variable	Ecuación	Variable
7	$ma = mg - bv$	b	$F = mg \cos \theta - kx$	m
8	$v = v_0 + at$	a	$M\mu = m_1 + m_2$	μ
9	$x = v_0 t + \frac{1}{2}at^2$	v_0	$W = Fd \cos \theta - \mu Nd$	F
10	$E = \frac{1}{2}mv^2 + mgh$	h	$\Delta K = \frac{1}{2}mv_1^2 + \frac{1}{2}mv_2^2$	v_2^2
11	$F = mg \sin \theta - \mu N$	N	$W = \frac{1}{2}kx^2 - \frac{1}{2}kx_0^2$	x^2

N°	Ecuación	Variable	Ecuación	Variable
12	$v^2 = v_0^2 + 2a(x - x_0)$	x	$p = \frac{F_1 + F_2 + mg}{A}$	m
13	$F = k(x - x_0)$	x_0	$ma = mg(\cos \phi - \mu \sin \phi)$	μ
14	$v = \frac{d}{t - t_0}$	t	$a = \frac{v - v_0}{t - t_0}$	t_0
15	$W = F_1 d + d(F_2 - F_3)$	F_2	$\Delta K = \frac{1}{2}m(v_2^2 - v_1^2)$	v_2^2
16	$U = mg(y - y_1)$	y_1	$W = \frac{1}{2}k(x^2 - x_0^2)$	x^2



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N°	Ecuación	Variable	Ecuación	Variable
17	$v^2 = v_0^2 + 2ax - 2ax_0$	a	$p = \rho gh - \rho gh_0$	ρ
18	$F = -F_0 + kx - kx_0$	k	$F = mg \cos \phi - mg \mu \sin \phi$	m
19	$x = \frac{1}{2}vt + \frac{1}{2}v_0t$	t	$p = \frac{1}{2}\rho v^2 - \frac{1}{2}\rho v_1^2$	ρ
20	$W = F_1d + d(F_2 - F_3)$	d	$\Delta K = \frac{1}{2}mv_2^2 - \frac{1}{2}mv_1^2$	m
21	$U = g(my - my_1)$	m	$W = (1/2)kx^2 - (1/2)kx_0^2$	k

N°	Ecuación	Variable	Ecuación	Variable
22	$W = F * d * \cos(\phi)$	ϕ	$\frac{\sin(\phi_1)}{\sin(\phi_2)} = \frac{v_1}{v_2}$	ϕ_2
23	$\tau = F * r * \sin(\phi)$	ϕ	$n_1 \sin(\phi_1) = n_2 \sin(\phi_2)$	ϕ_1
24	$F = mg \sin(\theta) - \mu N$	θ	$N = N_0 e^{-\lambda t}$	t
25	$W = Fd \cos(\theta) - \mu Nd$	θ	$W = nRT \ln \left(\frac{V_2}{V_1} \right)$	V_2
26	$F = -kx + mg \cos(\theta)$	θ	$W = nRT \ln \left(\frac{V_2}{V_1} \right)$	V_1

N°	Ecuación	Variable	Ecuación	Variable
27	$\rho = \frac{m}{\frac{1}{3}\pi r^2 h}$	r	$x = \frac{1}{2}gt^2$	t
28	$\Delta K = \frac{1}{2}mv_2^2 - \frac{1}{2}mv_1^2$	v_2	$x = v_0t + \frac{1}{2}at^2$	t^{***}
29	$v^2 = v_0^2 + 2ax - 2ax_0$	v_0	$p = \frac{1}{2}\rho v^2 - \frac{1}{2}\rho v_1^2$	v_1^2
30	$E = \frac{1}{2}mv^2 + mgh$	v	$U = \frac{1}{2}kx^2$	x
31	$V = \pi r^2 h$	r	$\Delta K = \frac{1}{2}m \left(\frac{x}{t} \right)^2 - \frac{1}{2}mv_0^2$	t

***formula cuadrática $\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$, $at^2 + bt + c$

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N°	Ecuación	Variable	Ecuación	Variable
32	$\rho = \frac{m}{\frac{4}{3}\pi r^2 h}$	r	$x = \frac{1}{2}gt^2$	t

33	$\Delta K = \frac{1}{2}mv_2^2 - \frac{1}{2}mv_1^2$	v_2	$x = v_0t + \frac{1}{2}at^2$	t^{***}
34	$v^2 = v_0^2 + 2ax - 2ax_0$	v_0	$p = \frac{1}{2}\rho v^2 - \frac{1}{2}\rho v_1^2$	v_1^2
35	$E = \frac{1}{2}mv^2 + mgh$	v	$U = \frac{1}{2}kx^2$	x
36	$V = \pi r^2 h$	r	$\Delta K = \frac{1}{2}m\left(\frac{x}{t}\right)^2 - \frac{1}{2}mv_0^2$	t