

Tabla 1: Pares de Transformadas de Laplace

	$f(t)$	$F(s)$
1	impulso unitario $\delta(t)$	1
2	escalón unitario $1(t)$	$\frac{1}{s}$
3	$t$	$\frac{1}{s^2}$
4	$e^{-at}$	$\frac{1}{s+a}$
5	$te^{-at}$	$\frac{1}{(s+a)^2}$
6	$\text{sen}(\omega t)$	$\frac{\omega}{s^2 + \omega^2}$
7	$\text{cos}(\omega t)$	$\frac{s}{s^2 + \omega^2}$
8	$t^n \quad (n = 1, 2, 3, \dots)$	$\frac{n!}{s^{n+1}}$
10	$\frac{1}{b-a}(e^{-at} - e^{-bt})$	$\frac{1}{(s+a)(s+b)}$
11	$\frac{1}{b-a}(be^{-bt} - ae^{-at})$	$\frac{s}{(s+a)(s+b)}$
12	$\frac{1}{ab} \left[ 1 + \frac{1}{a-b}(be^{-at} - ae^{-bt}) \right]$	$\frac{1}{s(s+a)(s+b)}$
13	$e^{-at} \text{sen}(\omega t)$	$\frac{\omega}{(s+a)^2 + \omega^2}$
14	$e^{-at} \text{cos}(\omega t)$	$\frac{s+a}{(s+a)^2 + \omega^2}$
15	$\frac{1}{a^2}(at - 1 + e^{-at})$	$\frac{1}{s^2(s+a)}$
16	$\frac{\omega_n}{\sqrt{1-\zeta^2}} e^{-\zeta\omega_n t} \text{sen}(\omega_n \sqrt{1-\zeta^2} t)$	$\frac{\omega_n^2}{s^2 + 2\zeta\omega_n s + \omega_n^2}$
17	$\frac{-1}{\sqrt{1-\zeta^2}} e^{-\zeta\omega_n t} \text{sen}(\omega_n \sqrt{1-\zeta^2} t + \phi)$ $\phi = \tan^{-1} \frac{\sqrt{1-\zeta^2}}{\zeta}$	$\frac{s}{s^2 + 2\zeta\omega_n s + \omega_n^2}$
18	$1 - \frac{1}{\sqrt{1-\zeta^2}} e^{-\zeta\omega_n t} \text{sen}(\omega_n \sqrt{1-\zeta^2} t + \phi)$ $\phi = \tan^{-1} \frac{\sqrt{1-\zeta^2}}{\zeta}$	$\frac{\omega_n^2}{s(s^2 + 2\zeta\omega_n s + \omega_n^2)}$