

**TABLA DE LA TRANSFORMADA DE LAPLACE**

	$f(t) = \mathcal{L}^{-1}[F(s)] \quad , \quad t \geq 0$	$F(s) = \mathcal{L}[f(t)] = \int_0^{\infty} e^{-st} f(t) dt$
1	$af(t) + bg(t)$	$aF(s) + bG(s)$
2	1	$\frac{1}{s}$
3	$t$	$\frac{1}{s^2}$
4	$t^n$	$\frac{n!}{s^{n+1}} \quad , \quad n \in \mathbb{N}$
5	$\cos(at)$	$\frac{s}{s^2 + a^2}$
6	$\text{sen}(at)$	$\frac{a}{s^2 + a^2}$
7	$\cosh(at)$	$\frac{s}{s^2 - a^2}$
8	$\sinh(at)$	$\frac{a}{s^2 - a^2}$
9	$e^{at}$	$\frac{1}{s - a}$
10	$te^{at}$	$\frac{1}{(s - a)^2}$
11	$f'(t)$	$sF(s) - f(0)$
12	$f''(t)$	$s^2F(s) - sf(0) - f'(0)$
13	$f^{(n)}(t)$	$s^nF(s) - s^{n-1}f(0) - s^{n-2}f'(0) - \dots - f^{(n-1)}(0)$
14	$e^{at}f(t)$	$F(s - a)$
15	$f(t - a)u(t - a)$	$e^{-as}F(s)$
16	$f(at)$	$\frac{1}{a}F(s/a)$

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17	$t^n f(t)$	$(-1)^n F^{(n)}(s)$
18	$(f * g)(t) = \int_0^t f(u) g(t-u) du$	$F(s) G(s)$
19	$\frac{f(t)}{t}$	$\int_s^{\infty} F(z) dz$
20	$\int_0^t f(u) du$	$\frac{F(s)}{s}$
21	$f(t+T) = f(t) \quad (\text{periódica})$	$\frac{1}{1-e^{-sT}} \int_0^T e^{-st} f(t) dt$
22	$\int_t^{\infty} \frac{f(u)}{u} du$	$\frac{1}{s} \int_0^s F(z) dz$
23	$u(t)$	$\frac{1}{s}$
24	$u(t-a)$	$\frac{e^{-as}}{s}$
25	$\delta(t)$	1
26	$\delta(t-a)$	$e^{-as}$