

TABLA DE TRANSFORMADA DE LAPLACE

Nº	$L\{f(t)\} = F(s)$	Nº	$L\{f(t)\} = F(s)$
1	$L\{1\} = \frac{1}{s} ; s > 0$	11	$L\{e^{at}f(t)\} = F(s-a)$
2	$L\{t\} = \frac{1}{s^2} ; s > 0$	12	$L\{t^n f(t)\} = (-1)^n F^{(n)}(s)$
3	$L\{t^n\} = \frac{n!}{s^{n+1}} ; n=1,2,3,\dots; s > 0$	13	$L\{U(t-a)\} = \frac{e^{-as}}{s}$
4	$L\{e^{at}\} = \frac{1}{s-a} ; s > a$	14	$L\{f(t-a)U(t-a)\} = e^{-as}F(s) ; a \geq 0$
5	$L\{\text{sen}(kt)\} = \frac{k}{s^2 + k^2} ; s > 0$	15	$L\{f(t)U(t-a)\} = e^{-as}L\{f(t+a)\}$ con $a \geq 0$
6	$L\{\cos(kt)\} = \frac{s}{s^2 + k^2} ; s > 0$	16	$L\{\delta(t-a)\} = e^{-as}$
7	$L\{t\text{sen}(kt)\} = \frac{2ks}{(s^2 + k^2)^2} ; s > 0$	17	$L\left\{\int_0^t f(u)g(t-u)du\right\} = F(s)G(s)$
8	$L\{t\cos(kt)\} = \frac{s^2 - k^2}{(s^2 + k^2)^2} ; s > 0$	18	$L\left\{\int_0^t f(u)du\right\} = \frac{F(s)}{s}$
9	$L\{\text{senh}(kt)\} = \frac{k}{s^2 - k^2} ; s > k $	19	$L\{f(t)\} = \frac{1}{1 - e^{-sT}} \int_0^T e^{-st} f(t)dt$ $f(t)$ función periódica, de periodo T
10	$L\{\cosh(kt)\} = \frac{s}{s^2 - k^2} ; s > k $	20	$L\{y(t)\} = Y(s)$ $L\{y'(t)\} = sY(s) - y(0)$ $L\{y''(t)\} = s^2Y(s) - sy(0) - y'(0)$ \dots $L\{y^{(n)}(t)\} = s^nY(s) - s^{n-1}y(0) - \dots - y^{(n-1)}(0)$
	$2\text{sen}A\cos B = \text{sen}(A+B) + \text{sen}(A-B)$ $2\text{sen}A\text{sen}B = \cos(A-B) - \cos(A+B)$		$2\cos A\cos B = \cos(A+B) + \cos(A-B)$ $2\cos A\text{sen}B = \text{sen}(A+B) - \text{sen}(A-B)$