

TABLA DE LAPLACE

Función f(t)	Transformada F(s)
$\delta(t)$	1
1	$\frac{1}{s}$
t	$\frac{1}{s^2}$
t^n	$\frac{n!}{s^{n+1}}$
e^{at}	$\frac{1}{s-a}$
Sen kt	$\frac{k}{s^2+k^2}$
Cos kt	$\frac{s}{s^2+k^2}$
Sen h kt	$\frac{k}{s^2-k^2}$
Cos h kt	$\frac{s}{s^2-k^2}$
e^{at} Sen bt	$\frac{b}{(s-a)^2+b^2}$
e^{at} Cos bt	$\frac{(s-a)}{(s-a)^2+b^2}$
$t^n e^{at}$	$\frac{n!}{(s-a)^{n+1}}$
$\frac{1}{\sqrt{t}}$	$\sqrt{\pi} \frac{1}{s}$
$u(t-a)$	$\frac{e^{-as}}{s}$

$$L\{\delta(t-a)\}$$

$$L\{r(t-a)\}$$

$$e^{-as}$$

$$\frac{1}{s^2} e^{-as}$$

$$\operatorname{sen} x = \frac{1}{i} \operatorname{sen} h(ix)$$

$$\cos x = \cosh(ix)$$

$$\operatorname{sen}^2(at) = \frac{1}{2} - \frac{1}{2} \cos(2at)$$

$$\cos^2(\theta) = \frac{1}{2} + \frac{1}{2} \cos(2\theta)$$

$$\operatorname{sen} A \cdot \cos B = \frac{1}{2} (\operatorname{sen}(A+B) + \operatorname{sen}(A-B))$$

$$\cos A \cdot \cos B = \frac{1}{2} (\cos(A+B) + \cos(A-B))$$

$$\mathcal{L}\{x'\} = s\mathcal{L}\{x\} - x_0 \rightarrow \mathcal{L}\{x\} = \frac{1}{s}$$

$$\mathcal{L}\{x''\} = s^2\mathcal{L}\{x\} - s x(0) - x'(0)$$

$$\mathcal{L}\{x'''\} = s^3\mathcal{L}\{x\} - s^2 x(0) - s x'(0) - x''(0)$$

$$\mathcal{L}^{-1} \left\{ \frac{1}{(s-a)(s-b)} \right\} = \frac{1}{a-b} (e^{at} - e^{bt})$$