Tabela de Transformadas de Laplace

Função	Transformada de Laplace	Domínio
1. k, constante	$\frac{k}{s}$	$s > 0$
2. $t^n,\ n = 1, 2, 3, ...$	$\frac{n!}{s^{n+1}}$	$s > 0$
3. $t^{-1/2}$	$\sqrt{\frac{\pi}{s}}$	$s > 0$
4. $e^{k\,t}$	$\frac{1}{s-k}$	$s > k$
5. $\sin(k\,t)$	$\frac{k}{s^2+k^2}$	$s > 0$
6. $\cos(k\,t)$	$\frac{s}{s^2+k^2}$	$s > 0$
7. $\sinh(k\,t)$	$\frac{k}{s^2-k^2}$	$s > \lvert k \rvert$
8. $\cosh(k\,t)$	$\frac{s}{s^2-k^2}$	$s > \lvert k \rvert$
9. $e^{k\,t}\,f(t)$	$F(s-k) = \mathcal{L}\{f(t)\}_{s=s-k}$	$s - k \in D_F$
10. $f(t-a)\,U(t-a)$	$e^{-a\,s}\,F(s)$	$s \in D_F$
11. $f(t)\,U(t-a)$	$e^{-a\,s}\,\mathcal{L}\{f(t+a)\}$	
12. $t^n\,f(t),\ n = 1, 2, ...$	$(-1)^n\,\frac{d^n F(s)}{d\,s^n}$	
13. $f^{(n)}(t),\ n = 1, 2, ...$	$s^n\,F(s) - s^{n-1}\,f(0) - s^{n-2}\,f'(0) - ... - f^{(n-1)}(0)$	$s \in D_F$
14. $\int_0^t f(y)\,g(t-y)\,dy$	$F(s)\,G(s)$	$s \in D_F \cap D_G$
15. $f(k\,t),\ k \in \mathbb{R}^+$	$\frac{1}{k}\,F\left(\frac{s}{k}\right)$	$\frac{s}{k} \in D_F$

Observação:

$F(s) = \mathcal{L}\{f(t)\}$ designa a Transformada de Laplace da função $f(t)$, D_F designa o domínio de F e $U(t-a)$ representa a função de Heaviside.