Τυπολόγιο Μετασχηματισμού Laplace

Συνάρτηση f: [0, +∞) → R	**Μετασχηματισμός Laplace** $\mathscr{L}[f(t)](s) = F(s) = \int_0^{+\infty} e^{-st} f(t)\,dt$
1	$\frac{1}{s}$, Re(s) > 0
t	$\frac{1}{s^2}$, Re(s) > 0
$t^n,\ n \in \mathbb{N}^*$	$\frac{n!}{s^{n+1}}$, Re(s) > 0
$e^{\alpha t}$	$\frac{1}{s-\alpha}$, Re(s) > α
$te^{\alpha t}$	$\frac{1}{(s-\alpha)^2}$, Re(s) > α
$\sin(\alpha t)$	$\frac{\alpha}{s^2+\alpha^2}$, Re(s) > 0
$e^{\lambda t}\sin(\alpha t)$	$\frac{\alpha}{(s-\lambda)^2+\alpha^2}$, Re(s) > λ
$\cos(\alpha t)$	$\frac{s}{s^2+\alpha^2}$, Re(s) > 0
$e^{\lambda t}\cos(\alpha t)$	$\frac{s-\lambda}{(s-\lambda)^2+\alpha^2}$, Re(s) > λ
$\sinh(\alpha t)$	$\frac{\alpha}{s^2-\alpha^2}$, Re(s) > |α|
$\cosh(\alpha t)$	$\frac{s}{s^2-\alpha^2}$, Re(s) > |α|
$t^n f(t)$	$(-1)^n F^{(n)}(s)$
$e^{\lambda t} f(t)$	$F(s-\lambda)$
$f(\lambda t)$	$\mathscr{L}[f(\lambda t)](s) = \frac{1}{\lambda} F\left(\frac{s}{\lambda}\right), \lambda > 0,\ s > c\lambda$
$f'(t)$	$sF(s) - f(0)$
$f''(t)$	$s^2 F(s) - sf(0) - f'(0)$.
$f^{(k)}(t)$	$s^k F(s) - s^{k-1} f(0) - \ldots - sf^{(k-2)}(0) - f^{(k-1)}(0)$
$\int_0^t f(u)\,du$	$\frac{1}{s} F(s)$
$f * g(t) = \int_0^t f(u) g(t-u)\,du$	$F(s) \cdot G(s)$