

Laplaceova transformace	Fourierova transformace
$\mathcal{L}[f(ct)](p) = \frac{1}{c} \mathcal{L}[f(t)]\left(\frac{p}{c}\right)$	$\mathcal{F}[f(cx)](\xi) = \frac{1}{ c ^n} \mathcal{F}[f(t)]\left(\frac{\xi}{c}\right)$
$\mathcal{L}[(-t)^n f(t)](p) = \frac{d^n}{dp^n} \mathcal{L}[f(t)](p)$	$\mathcal{F}[(ix)^\alpha f(x)](\xi) = \mathcal{D}^\alpha \mathcal{F}[f(x)](\xi)$
$\mathcal{L}[\dot{f}(t)](p) = p \mathcal{L}[f(t)](p) - f(0_+)$ , kde ozn člen není v zob. $\mathcal{L}$	$\mathcal{F}[\mathcal{D}^\alpha(f(x))](\xi) = (-i\xi)^\alpha \mathcal{F}[f(x)](\xi)$
$\mathcal{L}[\Theta(t) \int_0^t f(\tau) d\tau](p) = \frac{1}{p} \mathcal{L}[f(t)](p)$	$\mathcal{F}[1](\xi) = (2\pi)^n \delta(\xi)$
$\mathcal{L}\left[\frac{f(t)}{t}\right](p) = \int_p^\infty \mathcal{L}[f(t)](q) dq$	$\mathcal{F}\mathcal{F}[f(x)] = (2\pi)^n f(-x)$
$e^{ap} \mathcal{L}[f(t)](p) = \mathcal{L}[f(t+a)](p)$	$e^{i\mu\xi} \mathcal{F}[f(x)](\xi) = \mathcal{F}[f(x-\mu)](\xi)$
$\mathcal{L}[e^{at} f(t)](p) = \mathcal{L}[f(t)](p-a)$	$\mathcal{F}[e^{i\mu x} f(x)](\xi) = \mathcal{F}[f(x)](\xi + \mu)$
$\int_0^\infty f(\tau) d\tau = \lim_{p \rightarrow 0^+} \mathcal{L}[f(t)](p)$	$\lim_{ \xi  \rightarrow \infty} \mathcal{F}[f(x)](\xi) = 0$
$\mathcal{L}[f(t) \star g(t)] = \mathcal{L}[f(t)] \cdot \mathcal{L}[g(t)]$	$\mathcal{F}[f(x) \star g(x)] = \mathcal{F}[f(x)] \cdot \mathcal{F}[g(x)]$
$\int_0^\infty f(t) \mathcal{L}[g(\tau)](t) dt = \int_0^\infty \mathcal{L}[f(\tau)](t) g(t) dt$	$\int_{-\infty}^\infty f(x) \mathcal{F}[g(y)](x) dx = \int_{-\infty}^\infty \mathcal{F}[f(y)](x) g(x) dx$
	$\mathcal{F} : \mathcal{S} \mapsto \mathcal{S}$ i $\mathcal{F} : \mathcal{S}' \mapsto \mathcal{S}'$ jsou spojitě

Laplaceův vzor	Laplaceův obraz
$\delta(t - \tau)$	$e^{-p\tau}$
$\Theta(t)$	$\frac{1}{p}$
$\Theta(t) t^n \quad (n \in \mathbf{N}_0)$	$\frac{n!}{p^{n+1}}$
$\Theta(t) t^\alpha \quad (\alpha > -1)$	$\frac{\Gamma(\alpha+1)}{p^{\alpha+1}}$
$\Theta(t) e^{\mu t}$	$\frac{1}{p-\mu}$
$\Theta(t) \sin(\beta t)$	$\frac{\beta}{p^2 + \beta^2}$
$\Theta(t) \cos(\beta t)$	$\frac{p}{p^2 + \beta^2}$
$\Theta(t) (\sin(t) - t \cos(t))$	$\frac{2}{(1+p^2)^2}$
$\Theta(t) e^{\mu t} \cos(\omega t)$	$\frac{p-\mu}{(p-\mu)^2 + \omega^2}$
$\Theta(t) e^{\mu t} \sin(\omega t)$	$\frac{\omega}{(p-\mu)^2 + \omega^2}$
$\Theta(t) \sinh(\omega t)$	$\frac{\omega}{p^2 - \omega^2}$
$\Theta(t) \cosh(\omega t)$	$\frac{p}{p^2 - \omega^2}$

Fourieův vzor	Fourieův obraz	Obor
$e^{-a\ x\ ^2}$	$\left(\frac{\pi}{a}\right)^{n/2} e^{-\frac{\ \xi\ ^2}{4a}}$	$\mathbf{R}^n$
$\Theta(x) e^{-ax}, \operatorname{Re}(a) > 0$	$\frac{1}{a-i\xi} = \frac{i}{\xi+ia}$	$\mathbf{R}$
$\Theta(x) e^{-a x }, \operatorname{Re}(a) > 0$	$\frac{2a}{a^2 + \xi^2}$	$\mathbf{R}$
$\delta(x - \mu)$	$e^{i\xi\mu}$	$\mathbf{R}^n$
$\Theta(x)$	$\pi\delta(\xi) + i\mathcal{P}\frac{1}{\xi}$	$\mathbf{R}$
$\Theta(-x)$	$\pi\delta(\xi) - i\mathcal{P}\frac{1}{\xi}$	$\mathbf{R}$
$\operatorname{sgn}(x)$	$2i\mathcal{P}\frac{1}{\xi}$	$\mathbf{R}$
1	$(2\pi)^n \delta(\xi)$	$\mathbf{R}^n$
$\mathcal{P}\frac{1}{x}$	$i\pi \operatorname{sgn}(\xi)$	$\mathbf{R}$
$\mathcal{P}\frac{1}{x^2}$	$-\pi  \xi $	$\mathbf{R}$
$e^{ix^2}$	$\sqrt{\pi} e^{-\frac{i}{4}(\xi^2 - \pi)}$	$\mathbf{R}$
$\Theta(\mathbf{R} -  x )$	$2 \frac{\sin(\mathbf{R}\xi)}{\xi}$	$\mathbf{R}$
$\frac{\Theta(\mathbf{R} - \ x\ )}{\sqrt{\mathbf{R}^2 - \ x\ ^2}}$	$2\pi \frac{\sin(\mathbf{R}\ \xi\ )}{\ \xi\ }$	$\mathbf{R}^2$
$\delta_{S_{\mathbf{R}}}(x)$	$4\pi\mathbf{R} \frac{\sin(\mathbf{R}\ \xi\ )}{\ \xi\ }$	$\mathbf{R}^3$
$x^\alpha$	$(-i)^{ \alpha } (2\pi)^n \delta^{(\alpha)}(\xi)$	$\mathbf{R}^n$
$e^{icx}$	$2\pi\delta(\xi + c)$	$\mathbf{R}$
$\cos(cx)$	$\pi(\delta(\xi - c) + \delta(\xi + c))$	$\mathbf{R}$
$\sin(cx)$	$i\pi(\delta(\xi - c) - \delta(\xi + c))$	$\mathbf{R}$