Tabuľka Fourierovej transformácie

$L^1(\boldsymbol{R})$ - originál	Fourierova transformácia
$f(t)$	$F(p) = \mathcal{F}[f(t)] = \int_{-\infty}^{\infty} f(t)\, e^{-ipt} dt$
$f_a(t) = \begin{cases} 1 & t \in \langle -a, a \rangle \\ 0 & t \notin \langle -a, a \rangle \end{cases}, \ a > 0$	$\mathcal{F}(f_a)(p) = 2\frac{\sin ap}{p}$
$\alpha f(t) + \beta g(t)$	$\mathcal{F}[\alpha f(t) + \beta g(t)] = \alpha \mathcal{F}[f(t)] + \beta \mathcal{F}[g(t)]$
e^{-at^2}	$\sqrt{\frac{\pi}{a}} e^{-\frac{p^2}{4a}}$
$\begin{cases} e^{-\alpha t} & t \geq 0 \\ 0 & t < 0 \end{cases}, \ \alpha > 0$	$\frac{1}{(\alpha + ip)}$
$\frac{P(t)}{Q(t)}$	$2\pi i \sum_{\{z: Q(z)=0, \mathrm{Im}\, z > 0\}} res \frac{P(z)}{Q(z)} e^{iz}$
$f(at)$	$\mathcal{F}\{f(at)\} = \frac{1}{\lvert a \rvert} \mathcal{F}\{f(\frac{t}{a})\}$
Posun v origináli: $f(t-a)$	$\mathcal{F}\{f(t-a)\} = e^{-ipa} \hat{f}(p) = e^{-ipa} F(p)$
Zmena mierky, scaling: $f(at), a \neq 0$	$\mathcal{F}\{f(at)\} = \frac{1}{\lvert a \rvert} \hat{f}(\frac{p}{a}) = \frac{1}{\lvert a \rvert} F\left(\frac{p}{a}\right)$
Pravidlo konjugácie: $\overline{f(-t)}$	$\mathcal{F}\{\overline{f(-t)}\} = \overline{\hat{f}(p)} = \overline{F(p)}$
Posun v obraze: $e^{iat} f(t)$	$\mathcal{F}\{e^{iat} f(t)\} = \hat{f}(p-a) = F(p-a)$
Obraz derivácie: $f'(t)$, f spojite dif. a $f, f' \in L^1(\boldsymbol{R})$	$\mathcal{F}\{f'(t)\}(p) = ip\hat{f}(p) \wedge \lim_{\lvert p \rvert \to \infty} p\hat{f}(p) = 0$
Derivácia obrazu: $tf(t)$, $f(t) \in L^1(\mathbf{R}) \wedge tf(t) \in L^1(\mathbf{R})$	$\mathcal{F}\{tf(t)\}(p) = i\frac{d}{dp}\mathcal{F}[f(t)] = i\frac{d}{dp}\hat{f}(p)$
$(f * g)(t) = \int_{-\infty}^{\infty} f(s)\, g(t-s)\, ds$	$\mathcal{F}[(f * g)(t)] = \mathcal{F}[f(t)]\, \mathcal{F}[g(t)]$
Inverzná Fourierova transformácia	$\mathcal{F}^{-1}\{f(t)\} = \check{f}(p) = \frac{1}{2\pi} \int_{-\infty}^{\infty} f(t) e^{ipt} dt, p \in \mathbf{R},$