Označení	Definice	Vztahy
$H_{x_+^\lambda}$	$T_{x_+^\lambda}$ $\lambda \in \mathbb{C}$, $\operatorname{Re}\lambda > -1$ $\frac{D^k T_{x_+^{\lambda+k}}}{(\lambda+1)\ldots(\lambda+k)}$ $\operatorname{Re}\lambda > -k$, $k \in \mathbb{N}$, $-\lambda \notin \mathbb{N}$	$\operatorname{Res}_{-k} H_{x_+^\lambda} = (-1)^{k-1} \frac{D^{k-1}\delta_0}{(k-1)!}$ $DH_{x_+^\lambda} = \lambda H_{x_+^{\lambda-1}}$ $xH_{x_+^\lambda} = H_{x_+^{\lambda+1}}$ $H_{x_+^0} = T_H$
$H_{x_-^\lambda}$	$T_{(-x)_+^\lambda}$ $\lambda \in \mathbb{C}$, $\operatorname{Re}\lambda > -1$ $\langle H_{x_-^\lambda}, \varphi\rangle = \langle H_{x_+^\lambda}, \varphi(-x)\rangle$ $-\lambda \notin \mathbb{N}$	$\operatorname{Res}_{-k} H_{x_-^\lambda} = \frac{D^{k-1}\delta_0}{(k-1)!}$ $DH_{x_-^\lambda} = -\lambda H_{x_-^{\lambda-1}}$ $-xH_{x_-^\lambda} = H_{x_-^{\lambda+1}}$
$H_{\chi_+^\lambda}$	$\frac{H_{x_+^\lambda}}{\Gamma(\lambda+1)}$ $\lambda \in \mathbb{C}$	$DH_{\chi_+^\lambda} = H_{\chi_+^{\lambda-1}}$ $H_{\chi_+^{-k}} = D^{k-1}\delta_0$ $k \in \mathbb{N}$
$H_{\chi_-^\lambda}$	$\frac{H_{x_-^\lambda}}{\Gamma(\lambda+1)}$ $\lambda \in \mathbb{C}$	$DH_{\chi_-^\lambda} = -H_{\chi_-^{\lambda-1}}$ $H_{\chi_-^{-k}} = (-1)^{k-1}D^{k-1}\delta_0$ $k \in \mathbb{N}$
$H_{\lvert x\rvert^\lambda}$	$H_{x_+^\lambda} + H_{x_-^\lambda}$ $\lambda \in \mathbb{C}$, $-\lambda \notin \mathbb{N}$	
$H_{\lvert x\rvert^\lambda \operatorname{sign} x}$	$H_{x_+^\lambda} - H_{x_-^\lambda}$ $\lambda \in \mathbb{C}$, $-\lambda \notin \mathbb{N}$	
$H_{x^{-2n}}$	$\lim_{\lambda\to-2n} H_{\lvert x\rvert^\lambda}$ $n \in \mathbb{N}$	$H_{x^{-2}} = T_{\text{f.p.}\frac{1}{x^2}}$
$H_{x^{-2n+1}}$	$\lim_{\lambda\to-2n+1} H_{\lvert x\rvert^\lambda \operatorname{sign} x}$ $n \in \mathbb{N}$	$H_{x^{-1}} = T_{\text{p.v.}\frac{1}{x}}$
$H_{(x+\mathrm{i}0)^\lambda}$	$\lim_{y\to0_+} T_{(x+\mathrm{i}y)^\lambda}$ $\operatorname{Re}\lambda > -1$ $H_{x_+^\lambda} + \mathrm{e}^{\mathrm{i}\lambda\pi} H_{x_-^\lambda}$ $\lambda \in \mathbb{C}$, $-\lambda \notin \mathbb{N}$	
$H_{(x-\mathrm{i}0)^\lambda}$	$\lim_{y\to0_-} T_{(x+\mathrm{i}y)^\lambda}$ $\operatorname{Re}\lambda > -1$ $H_{x_+^\lambda} + \mathrm{e}^{-\mathrm{i}\lambda\pi} H_{x_-^\lambda}$ $\lambda \in \mathbb{C}$, $-\lambda \notin \mathbb{N}$	
$H_{(x+\mathrm{i}0)^{-k}}$	$\lim_{\lambda\to-k} H_{(x+\mathrm{i}0)^\lambda}$ $k \in \mathbb{N}$	$H_{(x+\mathrm{i}0)^{-k}}$ $= H_{x^{-k}} - \frac{\mathrm{i}\pi(-1)^{k-1}}{(k-1)!} D^{k-1}\delta_0$ $H_{x^{-k}} = \frac{1}{2}(H_{(x+\mathrm{i}0)^{-k}} + H_{(x-\mathrm{i}0)^{-k}})$
$H_{(x-\mathrm{i}0)^{-k}}$	$\lim_{\lambda\to-k} H_{(x-\mathrm{i}0)^\lambda}$ $k \in \mathbb{N}$	$H_{(x-\mathrm{i}0)^{-k}}$ $= H_{x^{-k}} + \frac{\mathrm{i}\pi(-1)^{k-1}}{(k-1)!} D^{k-1}\delta_0$ $H_{(x+\mathrm{i}0)^{-k}} - H_{(x-\mathrm{i}0)^{-k}}$ $= \frac{-2\mathrm{i}\pi(-1)^{k-1}}{(k-1)!} D^{k-1}\delta_0$