Tabeleau transformée de Fourier

Pour $\omega \in \mathbb{R}$:

		$f(y), \quad y \in \mathbb{R}$	$\mathfrak{F}[f](\alpha) = \hat{f}(\alpha), \quad a \in \mathbb{R}$
1		$f(y) = \begin{cases} 1 & \text{if } \lvert y\rvert < \lvert b\rvert \\ 0 & \text{otherwise} \end{cases}$	$\hat{f}(\alpha) = \sqrt{\frac{2}{\pi}} \frac{\sin(\lvert b\rvert\alpha)}{\alpha}$
2		$f(y) = \begin{cases} 1 & \text{if } b < y < c \\ 0 & \text{otherwise} \end{cases}$	$\hat{f}(\alpha) = \frac{e^{-ib\alpha} - e^{-ic\alpha}}{i\alpha\sqrt{2\pi}}$
3		$f(y) = \begin{cases} e^{-\omega y} & \text{if } y > 0 \\ 0 & \text{otherwise} \end{cases} \quad (\omega > 0)$	$\hat{f}(\alpha) = \frac{1}{\sqrt{2\pi}} \frac{1}{(\omega + i\alpha)}$
4		$f(y) = \begin{cases} e^{-\omega y} & \text{if } b < y < c \\ 0 & \text{otherwise} \end{cases}$	$\hat{f}(\alpha) = \frac{1}{\sqrt{2\pi}} \frac{e^{-(\omega+i\alpha)b} - e^{-(\omega+i\alpha)c}}{(\omega + i\alpha)}$
5		$f(y) = \begin{cases} e^{-i\omega y} & \text{if } b < y < c \\ 0 & \text{otherwise} \end{cases}$	$\hat{f}(\alpha) = \frac{1}{i\sqrt{2\pi}} \frac{e^{-i(\omega+\alpha)b} - e^{-i(\omega+\alpha)c}}{\omega + \alpha}$
6		$f(y) = \frac{1}{y^2 + \omega^2} \quad (\omega \neq 0)$	$\hat{f}(\alpha) = \sqrt{\frac{\pi}{2}} \frac{e^{-\lvert\omega\alpha\rvert}}{\lvert\omega\rvert}$
7		$f(y) = \frac{e^{-\lvert\omega y\rvert}}{\lvert\omega\rvert} \quad (\omega \neq 0)$	$\hat{f}(\alpha) = \sqrt{\frac{2}{\pi}} \frac{1}{\omega^2 + \alpha^2}$
8		$f(y) = e^{-\omega^2 y^2} \quad (\omega \neq 0)$	$\hat{f}(\alpha) = \frac{1}{\sqrt{2}\lvert\omega\rvert} e^{-\frac{\alpha^2}{4\omega^2}}$
9		$f(y) = ye^{-\omega^2 y^2} \quad (\omega \neq 0)$	$\hat{f}(\alpha) = \frac{-i\alpha}{2\sqrt{2}\lvert\omega\rvert^3} e^{-\frac{\alpha^2}{4\omega^2}}$
10		$f(y) = \frac{4y^2}{(\omega^2 + y^2)^2} \quad (\omega \neq 0)$	$\hat{f} = \sqrt{2\pi} \left(\frac{1}{\lvert\omega\rvert} - \lvert\alpha\rvert \right) e^{-\lvert\omega\alpha\rvert}$

Tableau transformée de Laplace

Pour $a > 0$, $\omega \in \mathbb{R}$, $z_0 \in \mathbb{C}$:

		$f(t), \quad t \geq 0$	$\mathcal{L}[f](z) = F(z)$
1		$f_a(t) = \begin{cases} 1/a & \text{if } t \in [0,a] \\ 0 & \text{otherwise} \end{cases}$	$F_a(z) = \dfrac{1 - e^{-az}}{az} \xrightarrow{a \to 0} 1 \quad \forall z \in \mathbb{C}$
2		$f(t) = 1$	$F(z) = \dfrac{1}{z}, \quad \mathrm{Re}(z) > 0$
3		$f(t) = e^{-z_0 t}$	$F(z) = \dfrac{1}{z + z_0}, \quad \mathrm{Re}(z + z_0) > 0$
4		$f(t) = \dfrac{t^n}{n!}$	$F(z) = \dfrac{1}{z^{n+1}}, \quad \mathrm{Re}(z) > 0$
5		$f(t) = te^{-z_0 t}$	$F(z) = \dfrac{1}{(z + z_0)^2}, \quad \mathrm{Re}(z + z_0) > 0$
6		$f(t) = \sin(\omega t)$	$F(z) = \dfrac{\omega}{z^2 + \omega^2}, \quad \mathrm{Re}(z) > 0$
7		$f(t) = \cos(\omega t)$	$F(z) = \dfrac{z}{z^2 + \omega^2}, \quad \mathrm{Re}(z) > 0$
8		$f(t) = e^{-z_0 t} \sin(\omega t)$	$F(z) = \dfrac{\omega}{(z + z_0)^2 + \omega^2}, \quad \mathrm{Re}(z + z_0) > 0$
9		$f(t) = e^{-z_0 t} \cos(\omega t)$	$F(z) = \dfrac{z + z_0}{(z + z_0)^2 + \omega^2}, \quad \mathrm{Re}(z + z_0) > 0$
10		$f(t) = \sinh(\omega t)$	$F(z) = \dfrac{\omega}{z^2 - \omega^2}, \quad \mathrm{Re}(z) > \lvert\omega\rvert$
11		$f(t) = \cosh(\omega t)$	$F(z) = \dfrac{z}{z^2 - \omega^2}, \quad \mathrm{Re}(z) > \lvert\omega\rvert$
12		$f(t) = e^{-z_0 t} \sinh(\omega t)$	$F(z) = \dfrac{\omega}{(z + z_0)^2 - \omega^2} \quad \mathrm{Re}(z + z_0) > \lvert\omega\rvert$
13		$f(t) = e^{-z_0 t} \cosh(\omega t)$	$F(z) = \dfrac{z + z_0}{(z + z_0)^2 - \omega^2} \quad \mathrm{Re}(z + z_0) > \lvert\omega\rvert$
14		$f(t) = t \cos(\omega t)$	$F(z) = \dfrac{z^2 - \omega^2}{(z^2 + \omega^2)^2}, \quad \mathrm{Re}(z) > 0$