

\mathcal{F}	\mathcal{L}	\mathcal{Z}
$F(\omega) = \int_{-\infty}^{\infty} f(t) e^{-i\omega t} dt$	$L(s) = \int_0^{\infty} f(t) e^{-st} dt$	$X(z) = \sum_{n=0}^{\infty} x[n] z^{-n}$
$f(t) = \frac{1}{2\pi} \int_{-\infty}^{\infty} F(\omega) e^{i\omega t} d\omega$	$f(t) = \frac{1}{2\pi i} \int_{\text{Br}} L(s) e^{st} ds$	$x[n] = \frac{1}{2\pi i} \oint_C X(z) z^{n-1} dz$
	$f(t) = 0 \ (t < 0)$	$x[n] = 0 \ (n < 0)$
$\mathcal{F}[f(t)] = F(\omega)$	$\mathcal{L}[f(t)] = L(s)$	$\mathcal{Z}[x[n]] = X(z)$
$\mathcal{F}[F(t)] = 2\pi f(-\omega)$		
$\mathcal{F}[f(at)] = \frac{1}{ a } F\left(\frac{\omega}{a}\right)$	$\mathcal{L}[f(at)] = \frac{1}{ a } L\left(\frac{s}{a}\right)$	
$\mathcal{F}[f(t)e^{i\omega_0 t}] = F(\omega - \omega_0)$	$\mathcal{L}[f(t)e^{s_0 t}] = L(s - s_0)$	
$\mathcal{F}[f(t - t_0)] = F(\omega) e^{-i\omega t_0}$	$\mathcal{L}[f(t - t_0)] = L(s) e^{-t_0 s}$	$\mathcal{Z}[x[n - n_0]] = X(z) z^{-n_0}$
$\mathcal{F}\left[\frac{d^n f(t)}{dt^n}\right] = (2\pi i \omega)^n F(\omega)$	$\mathcal{L}\left[\frac{d^n f(t)}{dt^n}\right] = s^n L(s) - \sum_{k=0}^{n-1} s^{n-k-1} f^{(k)}(+0)$	
$\mathcal{F}[t^n f(t)] = i^n \frac{d^n F(\omega)}{d\omega^n}$		
$\mathcal{F}[f(t) * g(t)] = F(\omega) G(\omega)$	$\mathcal{L}[f(t) * g(t)] = L(s) G(s)$	$\mathcal{Z}[x[n] * y[n]] = X(z) Y(z)$
$\mathcal{F}[f(t)g(t)] = \frac{1}{2\pi} F(\omega) * G(\omega)$		
$\mathcal{F}[\delta(t)] = 1$	$\mathcal{L}[\delta(t)] = 1$	$\mathcal{Z}[\delta[n]] = 1$
$\mathcal{F}[1] = 2\pi \delta(\omega)$	$\mathcal{L}[1] = \frac{1}{s}$	$\mathcal{Z}[1] = \frac{1}{1 - z^{-1}}$
$\mathcal{F}[t] = -2\pi i \frac{\delta(\omega)}{\omega}$	$\mathcal{L}[t] = \frac{1}{s^2}$	$\mathcal{Z}[nT] = \frac{T z^{-1}}{(1 - z^{-1})^2}$
$\mathcal{F}[t^l] = 2\pi i^l \delta^{(l)}(\omega)$	$\mathcal{L}[t^l] = \frac{l!}{s^{l+1}}$	$\mathcal{Z}[(nT)^l] = \left[\frac{d^l}{ds^l} \frac{1}{(1 - z^{-1} e^{sT})} \right] \Big _{s=0}$
$\mathcal{F}[e^{i\omega_0 t}] = 2\pi \delta(\omega - \omega_0)$	$\mathcal{L}[e^{s_0 t}] = \frac{1}{s - s_0}$	$\mathcal{Z}[e^{\alpha n T}] = \frac{1}{1 - z^{-1} e^{\alpha T}}$
$\mathcal{F}[\sin \beta t] = -i\pi (\delta(\omega - \beta) - \delta(\omega + \beta))$	$\mathcal{L}[\sin \beta t] = \frac{\beta}{s^2 + \beta^2}$	$\mathcal{Z}[\sin \beta n T] = \frac{z^{-1} \sin \beta T}{1 - 2z^{-1} \cos \beta T + z^{-2}}$
$\mathcal{F}[\cos \beta t] = \pi (\delta(\omega - \beta) + \delta(\omega + \beta))$	$\mathcal{L}[\cos \beta t] = \frac{s}{s^2 + \beta^2}$	$\mathcal{Z}[\cos \beta n T] = \frac{1 - z^{-1} \cos \beta T}{1 - 2z^{-1} \cos \beta T + z^{-2}}$
$\mathcal{F}[\Pi(t/T)] = T \sin \frac{\omega T}{2} \Big/ \frac{\omega T}{2}$	$\mathcal{L}[\Pi_{T_1}^{T_2}(t)] = \frac{1}{s} (e^{-sT_1} - e^{-sT_2})$	