1 Formulário

$E_x = \int_{-\infty}^{\infty} x^2(t)dt$	$P_x = \lim\limits_{T\to\infty} \frac{1}{T}\int_{-T/2}^{T/2} x^2(t)dt$	$x(t) * h(t) = \int_{-\infty}^{\infty} x(\tau)h(t-\tau)d\tau$
$\sum_{n=0}^{\infty} \alpha^n = \frac{1}{1-\alpha}, \lvert\alpha\rvert < 1$	$\sum_{n=0}^{N} \alpha^n = \frac{1-\alpha^{N+1}}{1-\alpha}$	$\alpha^n u[n] \rightleftharpoons \frac{1}{1-\alpha e^{-j\Omega}}$
$X[r] = \sum_{n=0}^{N-1} x[n]e^{-j\frac{2\pi}{N}nr}$	$x[n] = \frac{1}{N}\sum_{r=0}^{N-1} X[r]e^{j\frac{2\pi}{N}nr}$	$x[n-n_o] \rightleftharpoons e^{-j\omega n_o}X(e^{-j\omega})$
$\mathcal{F}\{e^{\lambda t}u(t)\} = \frac{1}{j\omega-\lambda}$	$x(t) = \sum_{k=-\infty}^{\infty} a_k e^{jk\omega_o t}$	$a_k = \frac{1}{T}\int_T x(t)e^{-jk\omega_o t}dt$
$X(\omega) \rightleftharpoons x(t)$	$X(\omega) = \int_{-\infty}^{\infty} x(t)e^{-j\omega t}dt$	$x(t) = \frac{1}{2\pi}\int_{-\infty}^{\infty} X(\omega)e^{j\omega t}d\omega$
$X(t) \rightleftharpoons 2\pi x(-\omega)$	$e^{-a\lvert t\rvert} \rightleftharpoons \frac{2a}{a^2+\omega^2}$	$E_x = \frac{1}{2\pi}\int_{-\infty}^{\infty} \lvert X(\omega)\rvert^2 d\omega$
$y_o(t) = \sum_{k=1}^{N} c_k e^{\lambda_k t}$	$x[n] * h[n] = \sum_{k=-\infty}^{\infty} x[k]h[n-k]$	$a^n u[n] \rightleftharpoons \frac{1}{1-az^{-1}},\ \lvert z\rvert > \lvert a\rvert$
$e^{at}u(t) \rightleftharpoons \frac{1}{s-a}$	$u(t) \rightleftharpoons \frac{1}{s}$	$X(e^{j\omega}) = \sum_{n=-\infty}^{\infty} x[n]e^{-j\omega n}$
$x(t-t_0) \rightleftharpoons e^{-t_o s}X(s)$	$\frac{dx}{dt} \rightleftharpoons sX(s) - x(0^-)$	$t^n e^{\lambda t}u(t) \rightleftharpoons \frac{n!}{(s-\lambda)^{n+1}}$
$y_o(t) = \sum_{k=1}^{N} C_k e^{\lambda_k t}$	$\delta[n] \rightleftharpoons 1$	$\delta[n-1] \rightleftharpoons z^{-1}$
$tx(t) \rightleftharpoons j\frac{d}{d\omega}X(j\omega)$	$\delta[n-n_o] \rightleftharpoons e^{-jn_o\omega}$	$\frac{d}{dt}x(t) \rightleftharpoons j\omega X(j\omega)$

$$A\cos(\omega_o t + \phi) \rightleftharpoons A\pi\delta(\omega - \omega_o)e^{j\phi} + A\pi\delta(\omega + \omega_o)e^{-j\phi}$$