Tabelul 3.1 Proprietăţile seriei Fourier exponenţiale

Semnalul periodic	Coeficienţii seriei Fourier exponenţiale
$x(t) = x(t+T)$	$\{c_k^x\}$
$y(t) = y(t+T)$	$\{c_k^y\}$
$a\,x(t) + b\,y(t)$	$\{a\,c_k^x + b\,c_k^y\}$
$x(t-t_o) \quad , \quad t_o \in \mathbb{R}$	$\{e^{-jk\omega_o t_o}\,c_k^x\} \qquad \omega_o = \frac{2\pi}{T}$
$e^{jk_o\omega_o t}\,x(t) \quad , \quad k_o \in Z,\ \omega_o = \frac{2\pi}{T}$	$\{c_{k-k_o}^x\}$
$x^*(t)$	$\{(c_{-k}^x)^*\}$
$x(-t)$	$\{c_{-k}^x\}$
$x(at) \quad ; \quad a \in R_+^*$ *perioada fiind T/a*	$\{c_k^x\}$
$\int_T x(\tau)\,y(t-\tau)\,d\tau$	$\{T c_k^x\,c_k^y\}$
$\frac{1}{T}\int_T x^*(\tau)\,y(t+\tau)\,d\tau$	$\{(c_k^x)^*\,c_k^y\}$

Semnalul periodic	Coeficienţii seriei Fourier exponenţiale
$x(t)\ y(t)$	$\{c_k^x * c_k^y\} = \{\sum_{n=-\infty}^{\infty} c_{k-n}^x c_n^y\}$
$\frac{dx(t)}{dt}$	$\{jk\omega_o c_k^x\}$
$\int_0^t x(\tau)\,d\tau \quad c_o = 0\ !$	$\left\{\frac{c_k^x}{jk\omega_o}\right\}$
$x(t) \in \mathbb{R}$	$c_k^x = (c_{-k}^x)^*$ $\lvert c_k^x\rvert = \lvert c_{-k}^x\rvert\ ;\ Arg\, c_k^x = -Arg\, c_{-k}^x$ $Re\{c_k\} = Re\{c_{-k}\}\ ;\ Im\{c_k\} = -Im\{c_{-k}\}$
$x_p(t)\quad , x(t) \in \mathbb{R}$	$\{Re\{c_k^x\}\}$
$x_i(t)\quad , x(t) \in \mathbb{R}$	$\{jIm\{c_k^x\}\}$
$\frac{1}{T}\int_T \lvert x(t)\rvert^2 dt = \sum_{k=-\infty}^{\infty} \lvert c_k^x\rvert^2$	