Tabelul 9.1 Proprietăţile transformării Z

- Părţile marcate corespund numai transformării unilaterale. În rest, proprietăţile celor două transformate sunt identice.

Semnalul	Transformata	Domeniul de convergenţă
$x[n]$	$X(z)$	$R_-^x < \|z\| < R_+^x$
$y[n]$	$Y(z)$	$R_-^y < \|z\| < R_+^y$
$a\,x[n] + b\,y[n]$	$a\,X(z) + b\,Y(z)$	$\max\{R_-^x, R_-^y\} < \|z\| < \min\{R_+^x, R_+^y\}$
$x[n-n_o]\ ,\ n_o \in \mathrm{Z}$	$z^{-n_o} X(z)$	$R_-^x < \|z\| < R_+^x$
* $x[n-n_o]\ ,\ n_o \in \mathbb{N}$	$z^{-n_o}\left(X(z) + \sum_{n=-n_o}^{-1} x[n]\, z^{-n} \right)$	$R_-^x < \|z\|$
* $x[n+n_o]\ ,\ n_o \in \mathbb{N}$	$z^{n_o}\left(X(z) - \sum_{n=0}^{n_o-1} x[n]\, z^{-n} \right)$	$R_-^x < \|z\|$
$e^{j\Omega_o n} x[n]$	$X\left(e^{-j\Omega_o} z\right)$	$R_-^x < \|z\| < R_+^x$
$x[-n]$	$X(1/z)$ *numai pentru transformarea bilaterala*	$\frac{1}{R_+^x} < \|z\| < \frac{1}{R_-^x}$
$x[n] - x[n-1]$	$\left(1 - z^{-1}\right) X(z)$	$R_-^x < \|z\| < R_+^x$
* $x[n] - x[n-1]$	$\left(1 - z^{-1}\right) X(z) - x[-1]$	$R_-^x < \|z\|$
$\sum_{k=-\infty}^{n} x[k]$	$\frac{X(z)}{1 - z^{-1}}$	$R_-^x < \|z\| < R_+^x$
* $\sum_{k=-\infty}^{n} x[k]$	$\frac{X(z) + \sum_{k=-\infty}^{-1} x[k]}{1 - z^{-1}}$	$R_-^x < \|z\|$
$n x[n]$	$-z \frac{d}{dz} X(z)$	$R_-^x < \|z\| < R_+^x$
$x[n]\ ;\ x[n] \equiv 0\ \ n < 0$	$\lim_{z \to \infty} X(z) = x[0]$	$R_-^x < \|z\|$

Semnalul	Transformata	Domeniul de convergenţă
$x[n]\ ;\ x[n] \equiv 0\ \ n < 0$	$\lim_{z \to 1}(z-1)\,X(z) = x[\infty]$	$R_-^x < \lvert z \rvert$
$x^*[n]$	$X^*(z^*)$	$R_-^x < \lvert z \rvert < R_+^x$
$x[n] * y[n]$	$X(z)\,Y(z)$	$\max\{R_-^x, R_-^y\} < \lvert z \rvert < \min\{R_+^x, R_+^y\}$
$x[n]\,y[n]$	$\frac{1}{2\pi j}\int_\Gamma X(u)\,Y\left(\frac{z}{u}\right)\frac{du}{u}$	$R_-^x R_-^y < \lvert z \rvert < R_+^x R_+^y$
$\sum_{n=-\infty}^{\infty} \lvert x[n] \rvert^2 = \frac{1}{2\pi j}\oint_\Gamma X(u)\,X^*(1/u^*)\frac{du}{u}$		

Tabelul 9.2 Perechile semnal-transformată Z

- Cu excepţia semnalelor marcate * ce nu au transformată unilaterală, cele 2 transformate sunt identice.

Semnalul	Transformata Z	Domeniul de convergenţă
$\delta[n]$	$1\ (constanta)$	$\forall\ z \in \mathbb{C}$
$\sigma[n]$	$\frac{1}{1-z^{-1}} = \frac{z}{z-1}$	$\lvert z \rvert > 1$
* $\sigma[n-1]$	$\frac{1}{1-z^{-1}} = \frac{z}{z-1}$	$\lvert z \rvert < 1$
$\delta[n-n_o]$	z^{-n_o}	$\forall z \in \mathbb{C} \setminus \{0\}$ *daca* $n_o > 0$ *sau* $\forall z \in \mathbb{C} \setminus \{\infty\}$ *daca* $n_o < 0$.
$a^n\,\sigma[n]$	$\frac{1}{1-a z^{-1}} = \frac{z}{z-a}$	$\lvert z \rvert > \lvert a \rvert$
* $-a^n\,\sigma[-n-1]$	$\frac{1}{1-a z^{-1}} = \frac{z}{z-a}$	$\lvert z \rvert < \lvert a \rvert$
$n\,a^n\,\sigma[n]$	$\frac{a z^{-1}}{(1-a z^{-1})^2} = \frac{a z}{(z-a)^2}$	$\lvert z \rvert > \lvert a \rvert$
* $-n\,a^n\,\sigma[-n-1]$	$\frac{a z^{-1}}{(1-a z^{-1})^2} = \frac{a z}{(z-a)^2}$	$\lvert z \rvert < \lvert a \rvert$