Formulaire lié à la transformation en Z

Signal causal $n \mapsto x(n)$ pour $n \in \mathbb{N}$	Transformée en Z $z \mapsto (Zx)(z)$
$e(n) = 1$	$(Ze)(z) = \dfrac{z}{z-1}$
$\begin{cases} d(0) = & 1 \\ d(n) = & 0 \ si \ n \neq 0 \end{cases}$	$(Zd)(z) = 1$
$r(n) = n$	$(Zr)(z) = \dfrac{z}{(z-1)^2}$
$c(n) = n^2$	$(Zc)(z) = \dfrac{z(z+1)}{(z-1)^3}$
$f(n) = a^n, \ a \in \mathbb{R} - \{0\}$	$(Zf)(z) = \dfrac{z}{z-a}$
$y(n) = a^n x(n), \ a \in \mathbb{R} - \{0\}$	$(Zy)(z) = (Zx)\left(\dfrac{z}{a}\right)$
$y(n) = x(n-n_0)$, $(n-n_0) \in \mathbb{N}$ ou $y(n) = x(n-n_0)e(n-n_0)$	$(Zy)(z) = z^{-n_0}(Zx)(z)$
$y(n) = x(n+1)$	$(Zy)(z) = z\left[(Zx)(z) - x(0)\right]$
$y(n) = x(n+2)$	$(Zy)(z) = z^2\left[(Zx)(z) - x(0) - x(1)z^{-1}\right]$
$y(n) = x(n+n_0)$	$(Zy)(z)$ $=$ $z^{n_0}\left[(Zx)(z) - x(0) - x(1)z^{-1} - x(2)z^{-2} \cdots - x(n_0-1)z^{-(n_0-1)}\right]$