

**Table of  $\mathcal{Z}$  Transforms**

$(x_k)_{k=0}^{\infty}$	$\mathcal{Z}[(x_k)_{k=0}^{\infty}](z)$
$x_k = \begin{cases} 1 & k = 0 \\ 0 & k > 0 \end{cases}$ (unit pulse)	1
$x_k = a^k$	$\frac{z}{z - a}$
$x_k = ka^{k-1}$	$\frac{z}{(z - a)^2}$
$x_k = e^{-kT}$ $= (e^{-T})^k$	$\frac{z}{z - e^{-T}}$
$x_k = \cos k\omega$	$\frac{z(z - \cos \omega)}{z^2 - 2z \cos \omega + 1}$
$x_k = \sin k\omega$	$\frac{z \sin \omega}{z^2 - 2z \cos \omega + 1}$