Time domain $x(t)$	Laplace transform $X(s)$	ROC
Dirac delta function		
$x(t) = \delta(t)$	$X(s) = 1$	All s
Unit step		
$x(t) = u(t)$	$X(s) = \frac{1}{s}$	$\mathrm{Re}\{s\} > 0$
Exponential		
$x(t) = e^{-at}u(t)$	$X(s) = \frac{1}{a+s}$	$\mathrm{Re}\{s\} > -a$
Ramp		
$x(t) = tu(t)$	$X(s) = \frac{1}{s^2}$	$\mathrm{Re}\{s\} > 0$
Higher order ramp		
$x(t) = t^n u(t)$	$X(s) = \frac{n!}{s^{n+1}}$	$\mathrm{Re}\{s\} > 0$
Cosine		
$x(t) = \cos(\omega_0 t)u(t)$	$X(s) = \frac{s}{\omega_0^2 + s^2}$	$\mathrm{Re}\{s\} > 0$
Sine		
$x(t) = \sin(\omega_0 t)u(t)$	$X(s) = \frac{\omega_0}{\omega_0^2 + s^2}$	$\mathrm{Re}\{s\} > 0$
Decaying cosine		
$x(t) = e^{-at}\cos(\omega_0 t)u(t)$	$X(s) = \frac{a+s}{(a+s)^2 + \omega_0^2}$	$\mathrm{Re}\{s\} > -a$
Decaying sine		
$x(t) = e^{-at}\sin(\omega_0 t)u(t)$	$X(s) = \frac{\omega_0}{(a+s)^2 + \omega_0^2}$	$\mathrm{Re}\{s\} > -a$