

C Table of Standard Laplace Transforms

$y(t)$	$\bar{y}(s)$
1	$\frac{1}{s}$
t^n	$\frac{n!}{s^{n+1}}$
$e^{\alpha t}$	$\frac{1}{s - \alpha}$
$\cos(\alpha t)$	$\frac{s}{s^2 + \alpha^2}$
$\sin(\alpha t)$	$\frac{\alpha}{s^2 + \alpha^2}$
$f'(t)$	$s\bar{f}(s) - f(0)$
$f''(t)$	$s^2\bar{f}(s) - sf(0) - f'(0)$
$f^{(n)}(t)$	$s^n\bar{f}(s) - s^{n-1}f(0) - s^{n-2}f'(0) - \dots - f^{(n-1)}(0)$
$e^{\alpha t}f(t)$	$\bar{f}(s - \alpha)$
$u_c(t)$	$\frac{e^{-cs}}{s}$
$u_c(t)f(t - c)$	$e^{-cs}\bar{f}(s)$
$\delta(t - c)$	e^{-cs}
$f * g(t)$	$\bar{f}(s)\bar{g}(s)$