TABLE 1. Elementary Laplace Transforms

$f(t) = \mathcal{L}^{-1}\{F(s)\}$	$F(s) = \mathcal{L}\{f(t)\}$
$f(t)$	$\displaystyle\int_0^\infty e^{-st} f(t)dt$
$u_c(t)$	$\dfrac{e^{-cs}}{s}, \qquad s > 0$
e^{at}	$\dfrac{1}{s-a}, \qquad s > a$
t^n, $n =$ positive integer	$\dfrac{n!}{s^{n+1}}, \qquad s > 0$
$\sin(at)$	$\dfrac{a}{s^2+a^2}, \qquad s > 0$
$\cos(at)$	$\dfrac{s}{s^2+a^2}, \qquad s > 0$
$\sinh(at)$	$\dfrac{a}{s^2-a^2}, \qquad s > \lvert a\rvert$
$\cosh(at)$	$\dfrac{s}{s^2-a^2}, \qquad s > \lvert a\rvert$
$u_c(t)f(t-c)$	$e^{-cs}F(s)$
$e^{ct}f(t)$	$F(s-c),$
$f(ct), \quad c > 0$	$\dfrac{1}{c}F\left(\dfrac{s}{c}\right)$
$h(t) = \displaystyle\int_0^t f(t-\tau)g(\tau)d\tau$	$H(s) = F(s)G(s)$
$\delta(t-c)$	e^{-cs}
$f^{(n)}(t)$	$s^nF(s) - s^{n-1}f(0) - \cdots - f^{(n-1)}(0)$
$(-t)^n f(t)$	$F^{(n)}(s)$