Table of Laplace Transforms

$f(t) = \mathcal{L}^{-1}\{F(s)\}$	$F(s) = \mathcal{L}\{f(t)\}$
1. 1	$\frac{1}{s}, \quad s > 0$
2. e^{at}	$\frac{1}{s-a}, \quad s > a$
3. t^n (n a positive integer)	$\frac{n!}{s^{n+1}}, \quad s > 0$
4. $\sin(bt)$	$\frac{b}{s^2+b^2}, \quad s > 0$
5. $\cos(bt)$	$\frac{s}{s^2+b^2}, \quad s > 0$
6. $e^{at}\sin(bt)$	$\frac{b}{(s-a)^2+b^2}, \quad s > a$
7. $e^{at}\cos(bt)$	$\frac{s-a}{(s-a)^2+b^2}, \quad s > a$
8. $t^n e^{at}$ (n a positive integer)	$\frac{n!}{(s-a)^{n+1}}, \quad s > a$
9. $e^{ct}f(t)$	$F(s-c)$
10. $f^{(n)}(t)$	$s^nF(s) - s^{n-1}f(0) - \cdots - f^{(n-1)}(0)$

1	$\frac{1}{s}, s>0$
e^{at}	$\frac{1}{s-a}, s>a$
t^n	$\frac{n!}{s^{n+1}}, s>0$
$\sin(bt)$	$\frac{b}{s^2+b^2}, s>0$
$\cos(bt)$	$\frac{s}{s^2+b^2}, s>0$
$\cosh(bt)$	$\frac{s}{s^2-b^2}$
$\sinh(bt)$	$\frac{b}{s^2-b^2}$
$e^{at}\sin(bt)$	$\frac{b}{(s-a)^2+b^2}, s>a$
$e^{at}\cos(bt)$	$\frac{s-a}{(s-a)^2+b^2}, s>a$
$t^n e^{at}$	$\frac{n!}{(s-a)^{n+1}}, s>a$
$e^{ct}f(t)$	$F(s-c)$
$f^{(n)}(t)$	$s^nF(s) - s^{n-1}f(0) - \cdots - f^{(n-1)}(0)$