Short Table of Laplace Transforms

	$f(t) = \mathscr{L}^{-1}\{F(s)\}$	$F(s) = \mathscr{L}\{f(t)\}$
1.	1	$\frac{1}{s}$
2.	e^{at}	$\frac{1}{s-a}$
3.	$t^n,\ n = 1,2,\ldots$	$\frac{n!}{s^{n+1}}$
4.	$\sin(bt)$	$\frac{b}{s^2+b^2}$
5.	$\cos(bt)$	$\frac{s}{s^2+b^2}$
6.	$\sinh(bt)$	$\frac{b}{s^2-b^2}$
7.	$\cosh(bt)$	$\frac{s}{s^2-b^2}$
8.	$e^{at}t^n,\ n = 1,2,\ldots$	$\frac{n!}{(s-a)^{n+1}}$
9.	$e^{at}\sin(bt)$	$\frac{b}{(s-a)^2+b^2}$
10.	$e^{at}\cos(bt)$	$\frac{s-a}{(s-a)^2+b^2}$
11.	$e^{at}f(t)$	$F(s-a)$
12.	$f'(t)$	$sF(s) - f(0)$
13.	$f''(t)$	$s^2F(s) - sf(0) - f'(0)$
14.	$f^{(n)}(t)$	$s^nF(s) - s^{(n-1)}f(0) - \cdots - f^{(n-1)}(0)$
15.	$t^nf(t)$	$(-1)^nF^{(n)}(s)$
16.	$f(t-a)\,u(t-a)$	$e^{-as}F(s)$
17.	$u(t-a)$	$\frac{e^{-as}}{s}$
18.	$\Pi_{a,b}(t)$	$\frac{e^{-as}-e^{-bs}}{s}$
19.	$\int_0^t f(t-\tau)\,g(\tau)\,d\tau$	$F(s)\,G(s)$
20.	$\delta(t-a)$	e^{-as}