Laplace Transforms

	$f(t) = \mathscr{L}^{-1}\{F(s)\}$	$F(s) = \mathscr{L}\{f(t)\}$
1.	1	$\dfrac{1}{s}$
2.	e^{-at}	$\dfrac{1}{s+a}$
3.	$\cos(at)$	$\dfrac{s}{s^2 + a^2}$
4.	$\sin(at)$	$\dfrac{a}{s^2 + a^2}$
5.	$t^{n-1}e^{-at}$	$\dfrac{(n-1)!}{(s+a)^n}$
6.	$t\sin(at)$	$\dfrac{2as}{(s^2 + a^2)^2}$
7.	$t\cos(at)$	$\dfrac{s^2 - a^2}{(s^2 + a^2)^2}$
8.	$e^{-at}\sin(bt)$	$\dfrac{b}{(s+a)^2 + b^2}$
9.	$e^{-at}\cos(bt)$	$\dfrac{s+a}{(s+a)^2 + b^2}$
10.	$u(t-a)$	$\dfrac{e^{-as}}{s}$
11.	$\delta(t-a)$	e^{-as}
12.	$f(t)u(t-a)$	$e^{-as}\mathscr{L}\{f(t+a)\}$
13.	$f(t-a)u(t-a)$	$e^{-as}F(s)$
14.	$y^{(n)}$	$s^n\mathscr{L}\{y\} - s^{n-1}y(0) - s^{n-2}y'(0) - \cdots - y^{(n-1)}(0)$