Table of Laplace Transforms

$f(t)$	$F(s)$	Notes
1. 1	$\frac{1}{s} \quad s > 0$	Sect 6.1
2. e^{at}	$\frac{1}{s-a} \quad s > a$	Sect 6.1
3. t^n, n pos int	$\frac{n!}{s^{n+1}}, \quad s > 0$	Sect 6.1
4. $\sin(at)$	$\frac{a}{s^2+a^2}, \quad s > 0$	Sect 6.1
5. $\cos(at)$	$\frac{s}{s^2+a^2}, \quad s > 0$	Sect 6.1
6. $\mathrm{e}^{at}\sin(bt)$	$\frac{b}{(s-a)^2+b^2}, \quad s > a$	Sect 6.1
7. $\mathrm{e}^{at}\cos(bt)$	$\frac{s-a}{(s-a)^2+b^2}, \quad s > a$	Sect 6.1
8. $t^n\mathrm{e}^{at}$, n pos int	$\frac{n!}{(s-a)^{n+1}}, \quad s > a$	Sect 6.1
9. $u_c(t)$ or $u(t-c)$	$\frac{\mathrm{e}^{-cs}}{s}$	Sect 6.3
10. $u_c(t)f(t-c)$	$\mathrm{e}^{-cs}F(s)$	Sect 6.3
11. $\mathrm{e}^{ct}f(t)$	$F(s-c)$	Sect 6.3
12. $f(t) * g(t)$	$F(s)G(s)$	Sect 6.6
13. $\delta(t-c)$	e^{-cs}	Sect 6.5
14. $f^{(n)}(t)$	$s^nF(s) - s^{n-1}f(0) - \ldots - f^{n-1}(0)$	Sect 6.2
15. $(-t)^n f(t)$	$F^{(n)}(s)$	Sect 6.2

Note: $u_c(t)$ is the Heaviside function, and the asterisk $(*)$ denotes convolution.