

Laplace transform tables.

$f(t)$	$\mathcal{L}\{f(t)\}$
t^n	$\frac{n!}{s^{n+1}}$
$\sin kt$	$\frac{k}{s^2 + k^2}$
$\cos kt$	$\frac{s}{s^2 + k^2}$
e^{at}	$\frac{1}{s - a}$
$\sinh kt$	$\frac{k}{s^2 - k^2}$
$\cosh kt$	$\frac{s}{s^2 - k^2}$

Useful formulas.

$$\cos(A \pm B) = \cos A \cos B \mp \sin A \sin B$$

$$\sin(A \pm B) = \sin A \cos B \pm \sin B \cos A$$

$$\cos A \cos B = [\cos(A + B) + \cos(A - B)]/2$$

$$\sin A \sin B = [\cos(A - B) - \cos(A + B)]/2$$

$$\cos^2 x + \sin^2 x = 1$$

$$\cos x = \frac{e^{ix} + e^{-ix}}{2}$$

$$\sin x = \frac{e^{ix} - e^{-ix}}{2i}$$

$$\cosh x = \frac{e^x + e^{-x}}{2}$$

$$\sinh x = \frac{e^x - e^{-x}}{2}$$