$$\mathcal{L}\{y'(t)\} = sY(s) - y_0 \qquad \mathcal{L}\{y''(t)\} = s^2Y(s) - sy_0 - v_0$$

$\mathcal{L}\{C\} = \frac{C}{s}$	Constant
$\mathcal{L}\{t^n\} = \frac{n!}{s^{n+1}}$	Power Func.
$\mathcal{L}\{\sin \omega t\} = \frac{\omega}{\omega^2 + s^2}$	
$\mathcal{L}\{\cos \omega t\} = \frac{s}{\omega^2 + s^2}$	
$\mathcal{L}\{f(\alpha t)\} = \frac{1}{\alpha}F(s/\alpha)$	Argument Scaling
$\mathcal{L}\left\{e^{at}f(t)\right\} = F(s-a)$	First Shift Theorem
$\mathcal{L}\{t^n f(t)\} = (-1)^n \frac{\mathrm{d}^n}{\mathrm{d}s^n}F(s)$	Resonance
$\mathcal{L}\{u_c(t)\} = e^{-sc}\frac{1}{s}$	Heaviside Transfer
$\mathcal{L}\{f(t-c)u_c(t)\} = e^{-sc}F(s)$	Second Shift Theorem
$\mathcal{L}\{f * g\} = F(s)G(s)$	Convolution Theorem
$\mathcal{L}\{\delta(t-c)\} = e^{-sc}$	Delta Transfer