For any constants C, a, ω, and $k \in \mathbb{N}$ we have the Laplace Transforms of the following functions $y(t)$:

$y(t) = C$	$\mathcal{L}\{C\} = \dfrac{C}{s}$	Constant
$y(t) = e^{at}$	$\mathcal{L}\left\{e^{at}\right\} = \dfrac{1}{s-a}$	Exponential Function
$y(t) = \cos(\omega t)$	$\mathcal{L}\{\cos \omega t\} = \dfrac{s}{s^2+\omega^2}$	Cosine
$y(t) = \sin(\omega t)$	$\mathcal{L}\{\sin \omega t\} = \dfrac{\omega}{s^2+\omega^2}$	Sine
$y(t) = t^k$	$\mathcal{L}\left\{t^k\right\} = \dfrac{k!}{s^{k+1}}$	Power Function
$y(t) = e^{at} f(t)$	$\mathcal{L}\left\{e^{at} f(t)\right\} = F(s-a)$	First Shift Theorem
$y(t) = t^k f(t)$	$\mathcal{L}\left\{t^k f(t)\right\} = (-1)^k \dfrac{\mathrm{d}^k}{\mathrm{d}s^k} F(s)$	Resonance

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$\mathcal{L}\{y'\} = sY(s) - y(0)$ $\qquad$ $\mathcal{L}\{y''\} = s^2 Y(s) - sy(0) - y'(0)$