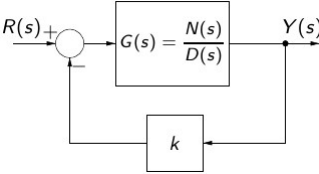


Resumo

Tabela de transformadas:		Propriedades da transformada de Laplace:
$f(t)$	$F(s) = \mathcal{L}\{f(t)\}$	Linearidade: $\mathcal{L}\{af_1(t) + bf_2(t)\} = aF_1(s) + bF_2(s)$
Impulso: $\delta(t)$	1	Derivada de 1ª ordem: $\mathcal{L}\{\dot{f}(t)\} = \mathcal{L}\left\{\frac{df(t)}{dt}\right\} = sF(s) - f(0)$
Degrau: $1(t)$	$\frac{1}{s}$	Derivada de 2ª ordem: $\mathcal{L}\{\ddot{f}(t)\} = \mathcal{L}\left\{\frac{d^2f(t)}{dt^2}\right\} = s^2F(s) - sf(0) - \dot{f}(0)$
t	$\frac{1}{s^2}$	Teorema do Valor inicial: $f(0) = \lim_{s \rightarrow \infty} s \cdot F(s)$
$\frac{t^{n-1}}{(n-1)!}$, $n = 1, 2, \dots$	$\frac{1}{s^n}$	Teorema do Valor final: $f(\infty) = \lim_{s \rightarrow 0} s \cdot F(s)$
e^{-at}	$\frac{1}{s+a}$	Translação no eixo complexo: $\mathcal{L}\{e^{-at}f(t)\} = F(s+a)$
e^{-at}	$\frac{1}{(s+a)^2}$	Integral: $\mathcal{L}\left\{\int_0^t f(\tau)d\tau\right\} = \frac{1}{s}F(s)$
$\text{sen}(\omega t)$	$\frac{\omega}{s^2 + \omega^2}$	Álgebra de blocos:  <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> <div style="text-align: center;"> $G_{ma}(s) = kG(s)$ </div> <div style="text-align: center;"> $G_{mf}(s) = \frac{G(s)}{1 + G_{ma}(s)} = \frac{N(s)}{D(s) + kN(s)}$ </div> </div>
$\text{cos}(\omega t)$	$\frac{s}{s^2 + \omega^2}$	
$e^{-at}\text{sen}(\omega t)$	$\frac{\omega}{(s+a)^2 + \omega^2}$	
$e^{-at}\text{cos}(\omega t)$	$\frac{s}{(s+a)^2 + \omega^2}$	

Frações parciais (com polos distintos):

$$G(s) = \frac{b_ms^m + b_{m-1}s^{m-1} + b_1s + b_0}{(s-p_1)(s-p_2)\dots(s-p_n)} = \frac{a_1}{s-p_1} + \frac{a_2}{s-p_2} + \dots + \frac{a_n}{s-p_n}, \text{ com } a_i = [(s-p_i)G(s)]_{s=p_i}$$