FORMULÁRIO:

$$G(s)=\frac{A\omega_n^2}{s^2+2\xi\omega_n s+\omega_n^2} \qquad PO=100\,\frac{M_P-V_{ss}}{V_{ss}}=100\;e^{-\left(\pi\xi/\sqrt{1-\xi^2}\right)} \qquad t_r\approx\frac{0.8+2.5\xi}{\omega_n} \qquad t_d\approx\frac{1+0.7\xi}{\omega_n}$$

$$V_P=M_P=V_{ss}\,(1+e^{-\left(\pi\xi/\sqrt{1-\xi^2}\right)}) \qquad t_s\,(\pm 2\%)\approx\frac{4}{\xi\omega_n},\quad se\ \xi<0.7 \qquad t_P=\frac{\pi}{\omega_n\sqrt{1-\xi^2}}$$

$$T(s)=\frac{\sum_n T_n\Delta_n}{1-\sum_i L_{1i}+\sum_j L_{2j}-\sum_k L_{3k}+\cdots},\quad \sigma_o=\frac{\sum_{i=1}^{n}\mathrm{Re}[p_i]-\sum_{j=1}^{m}\mathrm{Re}[z_j]}{n-m},\quad \gamma=\frac{180^{\circ}\,(2x+1)}{n-m},\quad x=0,\pm1,\ldots$$

$$\mathscr{L}^{-1}\left\{\frac{1}{s}\right\}=\begin{cases}1 & ,se\ t\geq 0\\ 0 & ,se\ t<0\end{cases},\qquad \mathscr{L}^{-1}\left\{\frac{1}{s^2}\right\}=\begin{cases}t & ,se\ t\geq 0\\ 0 & ,se\ t<0\end{cases},\qquad \mathscr{L}^{-1}\{X(s+a)\}=e^{-at}\mathscr{L}^{-1}\{X(s)\}$$