

$$lg2 \cong 0.3$$

$$lg3 \cong 0.5$$

$$lg5 \cong 0.7$$

### Diagramele Bode generalizate

$H(s) = k$	$[H(jw)]_{dB} = 20 \lg k $	$\phi(w) = \begin{cases} 0; & k > 0 \\ -\pi; & k < 0 \end{cases}$
$H(s) = \frac{1}{s^q}$	$[H(jw)]_{dB} = -20 q \lg(w)$	$\phi(w) = -q \frac{\pi}{2} = -q 90^0$
$H(s) = s^q$	$[H(jw)]_{dB} = 20 q \lg(w)$	$\phi(w) = q \frac{\pi}{2} = q 90^0$
$H(s) = \frac{1}{1 + \frac{s}{w_0}}$	$[H(jw)]_{dB} = \begin{cases} 0; & 0 \leq w \leq  w_0  \\ -20 \lg \frac{w}{ w_0 }; &  w_0  \leq w \end{cases}$	$\phi(w) = \begin{cases} 0 & ; w \ll  w_0  \\ -sgn(w_0)90^0; & w \gg  w_0  \\ -sgn(w_0)45^0; & w \cong  w_0  \end{cases}$
$H(s) = 1 + \frac{s}{w_0}$	$[H(jw)]_{dB} = \begin{cases} 0; & 0 \leq w \leq  w_0  \\ 20 \lg \frac{w}{ w_0 }; &  w_0  \leq w \end{cases}$	$\phi(w) = \begin{cases} 0 & ; w \ll  w_0  \\ sgn(w_0)90^0; & w \gg  w_0  \\ sgn(w_0)45^0; & w \cong  w_0  \end{cases}$
$H(s) = \frac{w_0^2}{s^2 + 2\zeta w_0 s + w_0^2}$	$[H(jw)]_{dB} = \begin{cases} 0; & 0 \leq w \leq  w_0  \\ -40 \lg \frac{w}{ w_0 }; &  w_0  \leq w \end{cases}$	$\phi(w) = \begin{cases} 0 & ; w \ll  w_0  \\ -sgn(w_0)180^0; & w \gg  w_0  \\ -sgn(w_0)90^0; & w \cong  w_0  \end{cases}$
$H(s) = \frac{s^2 + 2\zeta w_0 s + w_0^2}{w_0^2}$	$[H(jw)]_{dB} = \begin{cases} 0; & 0 \leq w \leq  w_0  \\ 40 \lg \frac{w}{ w_0 }; &  w_0  \leq w \end{cases}$	$\phi(w) = \begin{cases} 0 & ; w \ll  w_0  \\ sgn(w_0)180^0; & w \gg  w_0  \\ sgn(w_0)90^0; & w \cong  w_0  \end{cases}$