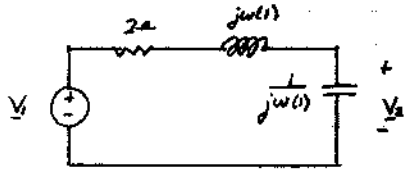


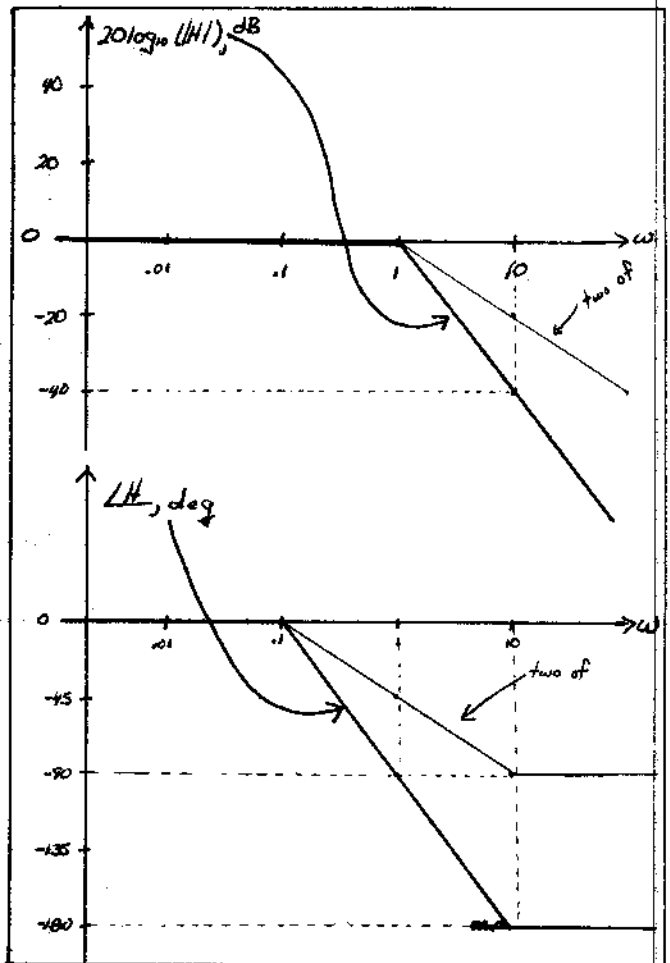
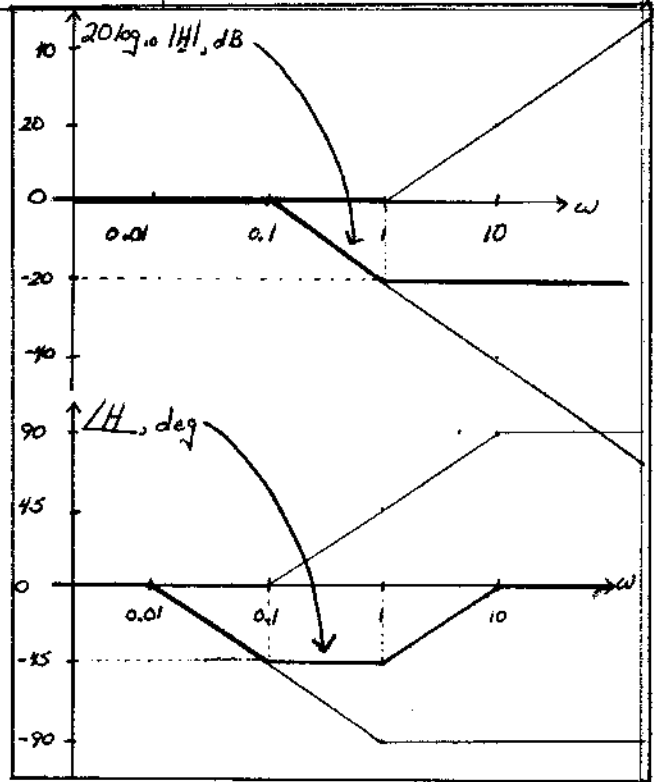
DE 10.3 $H(j\omega) = \frac{1+j\omega}{1+j\omega 10} = \frac{1+j(\frac{\omega}{0.1})}{1+j(\frac{\omega}{10})}$

DE 10.4



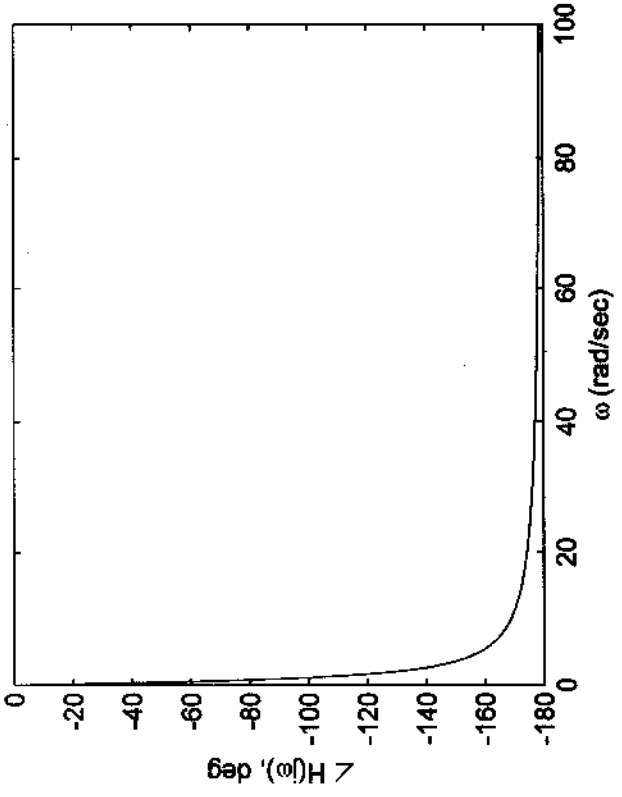
$V_2 = \frac{V_1 (\frac{1}{j\omega})}{2+j\omega + \frac{1}{j\omega}} = \frac{V_1}{j\omega 2 + (j\omega)^2 + 1}$

$\Rightarrow H(j\omega) = \frac{V_2}{V_1} = \frac{1}{(j\omega + 1)^2}$

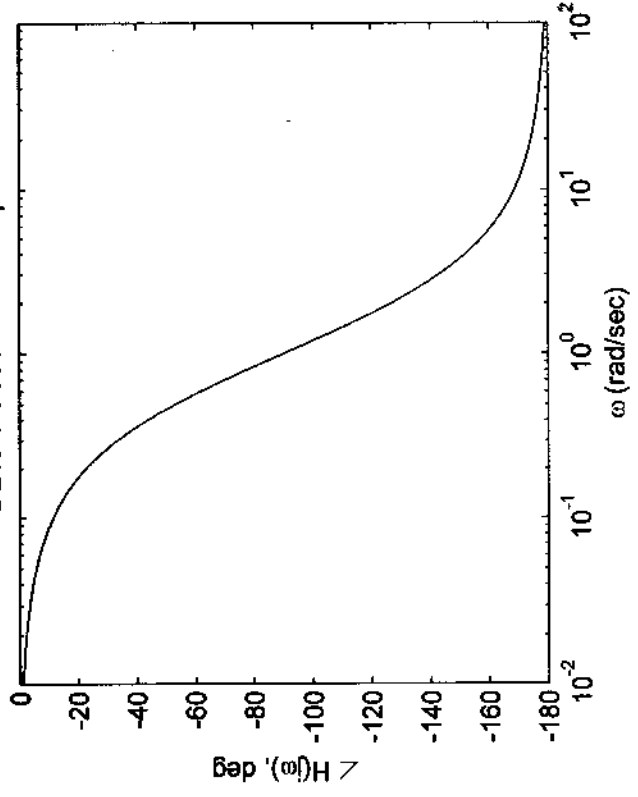


see matlab plots as well

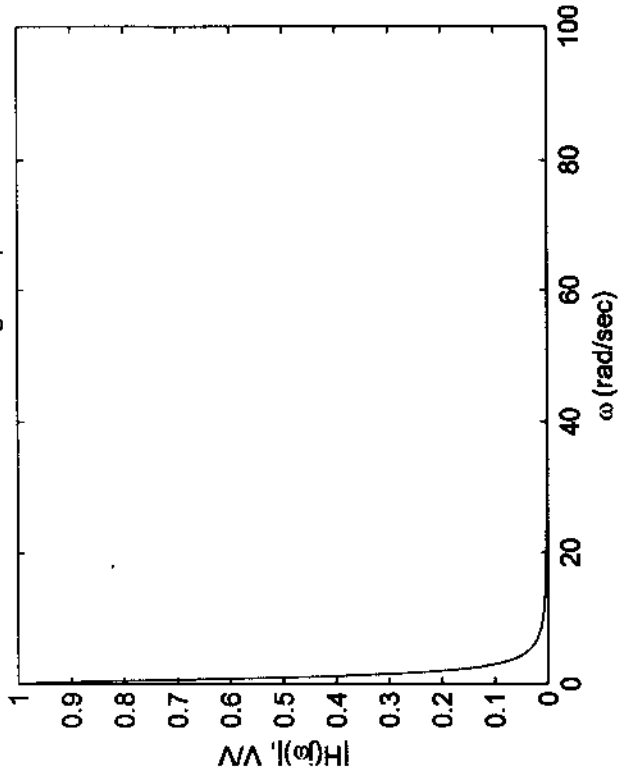
DE10.4: Phase Resp



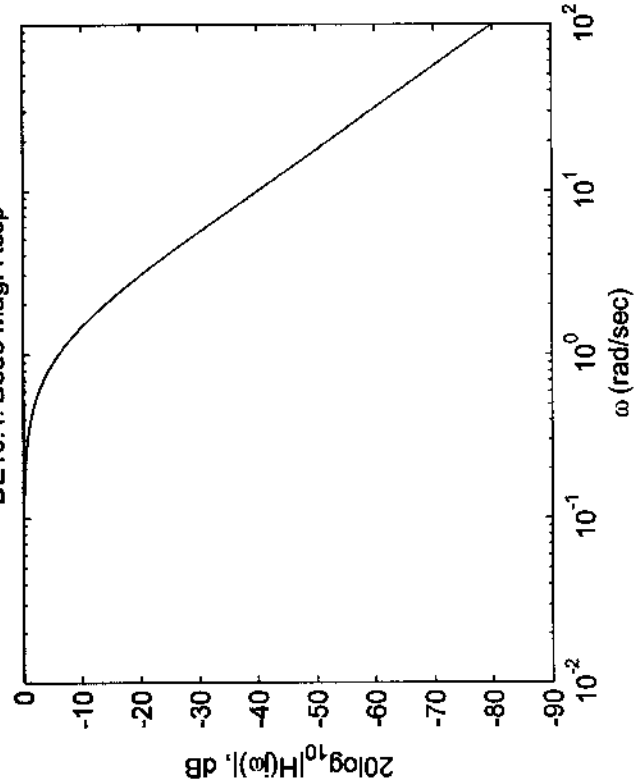
DE10.4: Bode Phase Resp



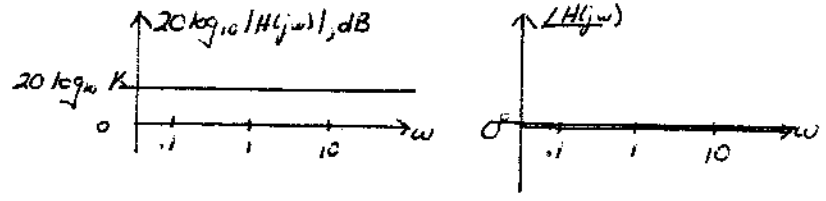
DE10.4: Mag. Resp



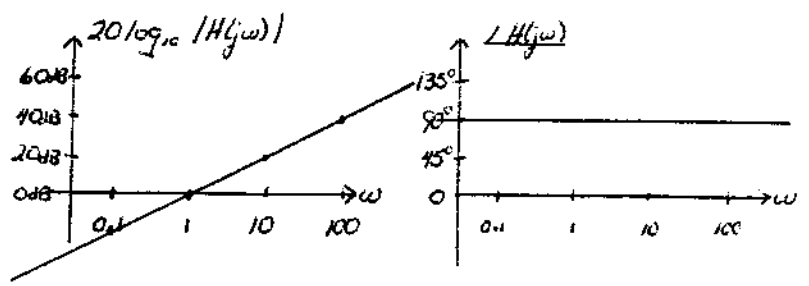
DE10.4: Bode Mag. Resp



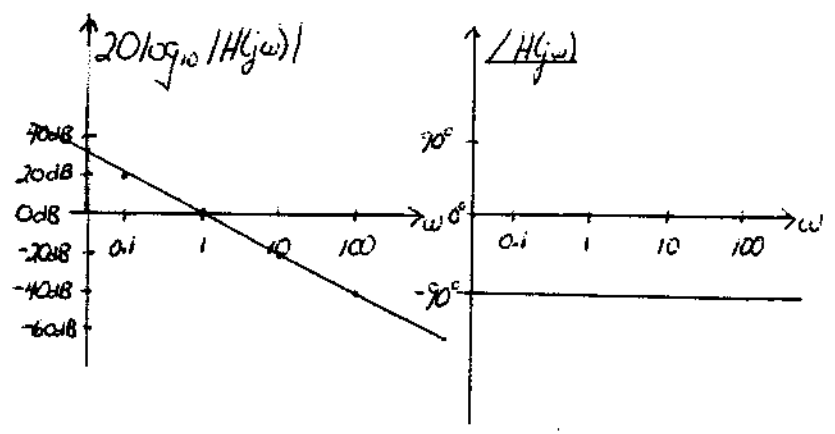
10.11 a) $H(j\omega) = K$ (assume $K > 0$)



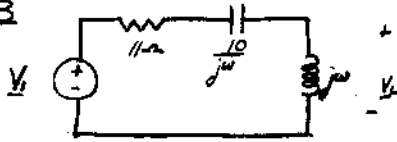
b) $H(j\omega) = j\omega$



c) $H(j\omega) = \frac{1}{j\omega}$



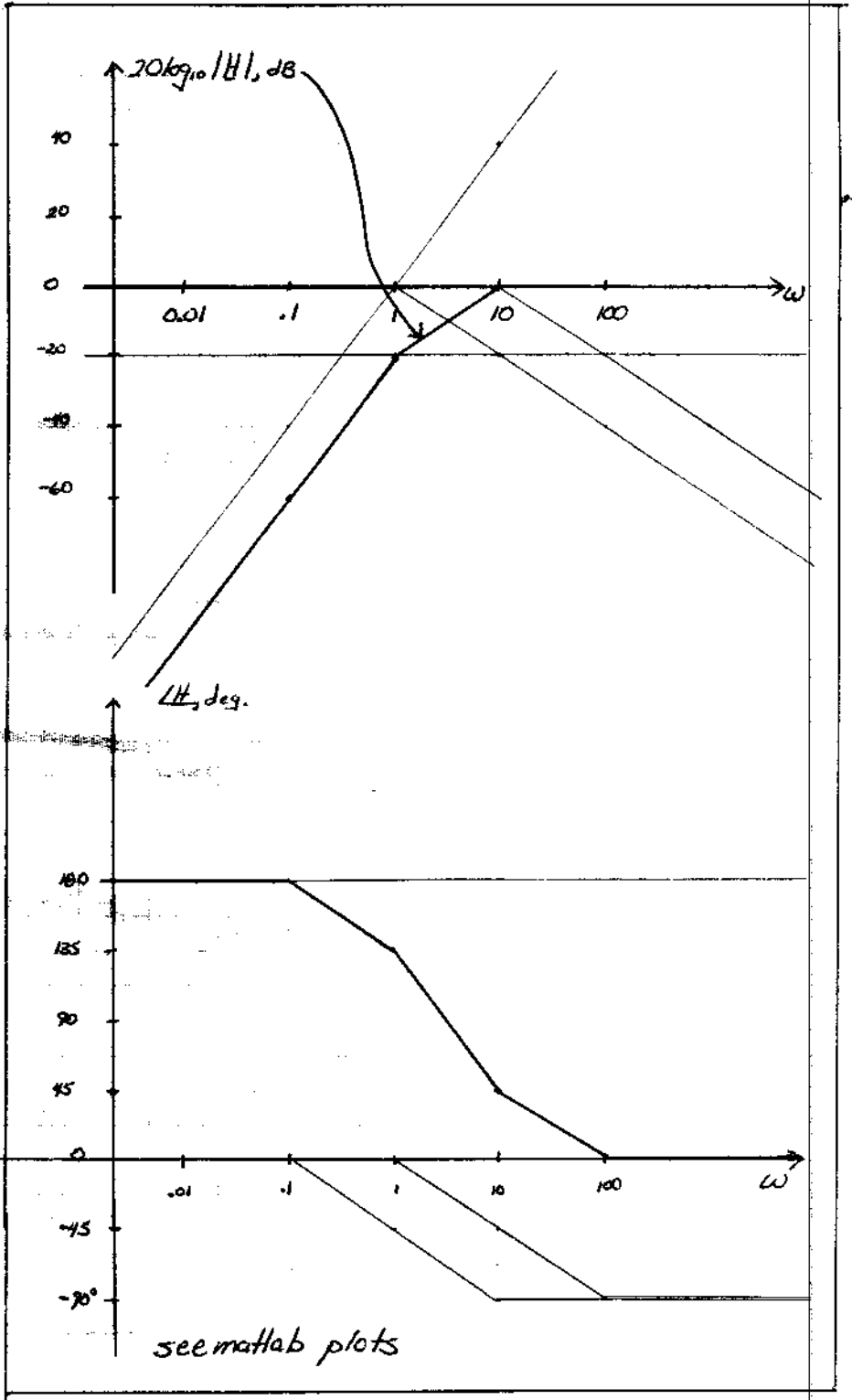
PR10.13



$$V_o = \frac{V_i(j\omega)}{11 + \frac{10}{j\omega} + j\omega}$$

$$= \frac{V_i(j\omega)^2}{11j\omega + 10 + (j\omega)^2}$$

$$\Rightarrow H(j\omega) = \frac{V_o}{V_i} = \frac{(j\omega)^2}{(j\omega + 10)(j\omega + 1)} = \frac{\left(\frac{1}{10}\right)(j\omega)^2}{\left(1 + \frac{j\omega}{10}\right)\left(1 + \frac{j\omega}{1}\right)}$$



22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS



