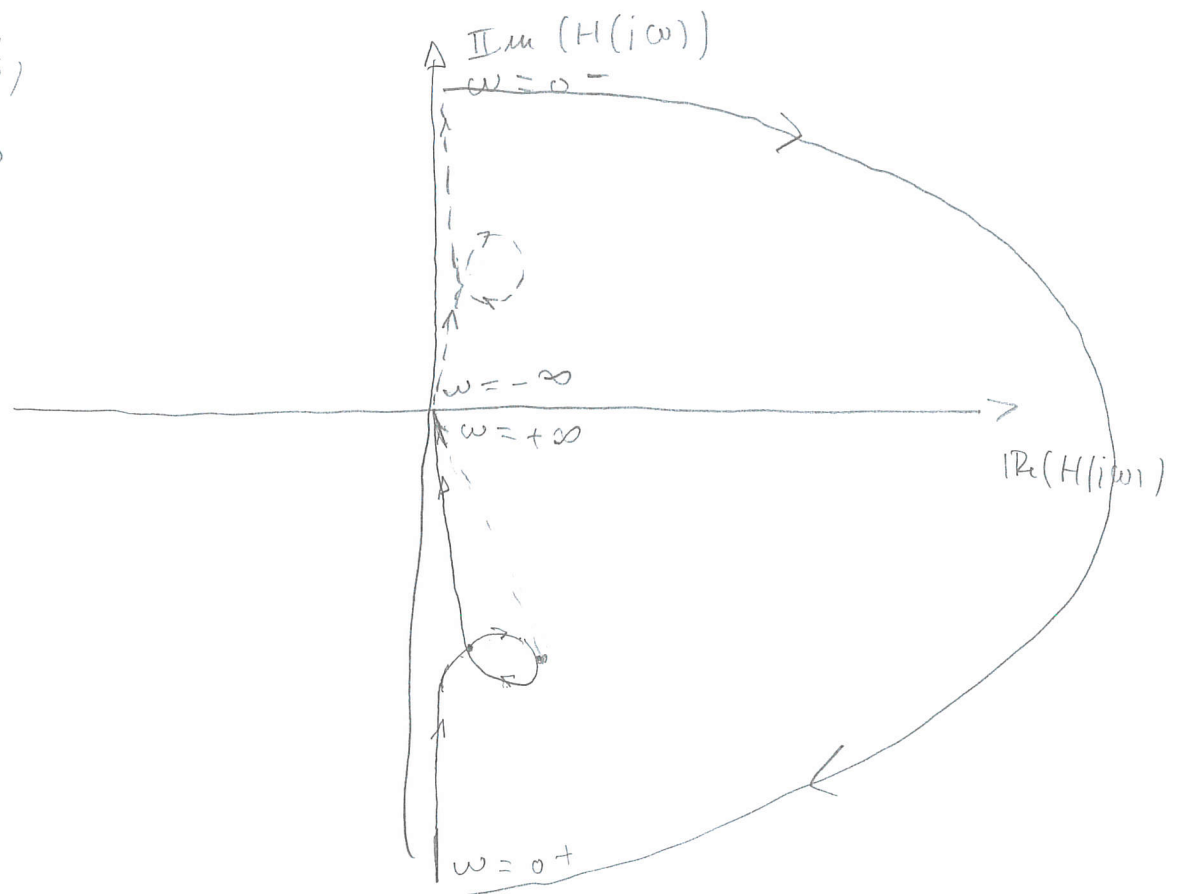
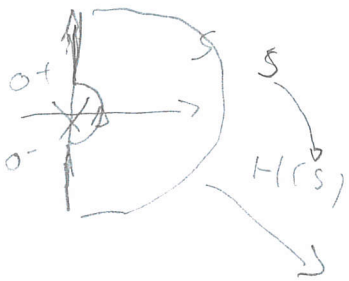
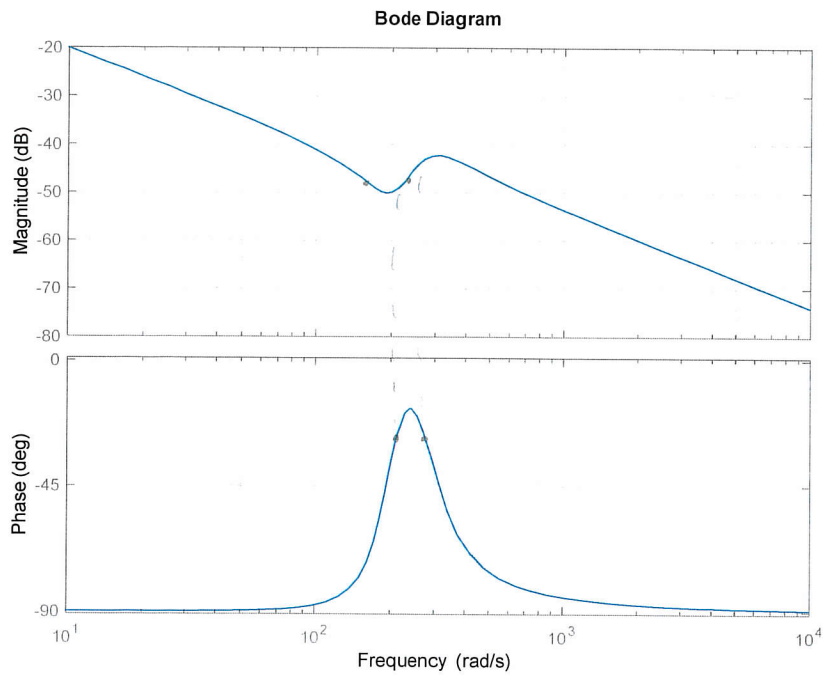
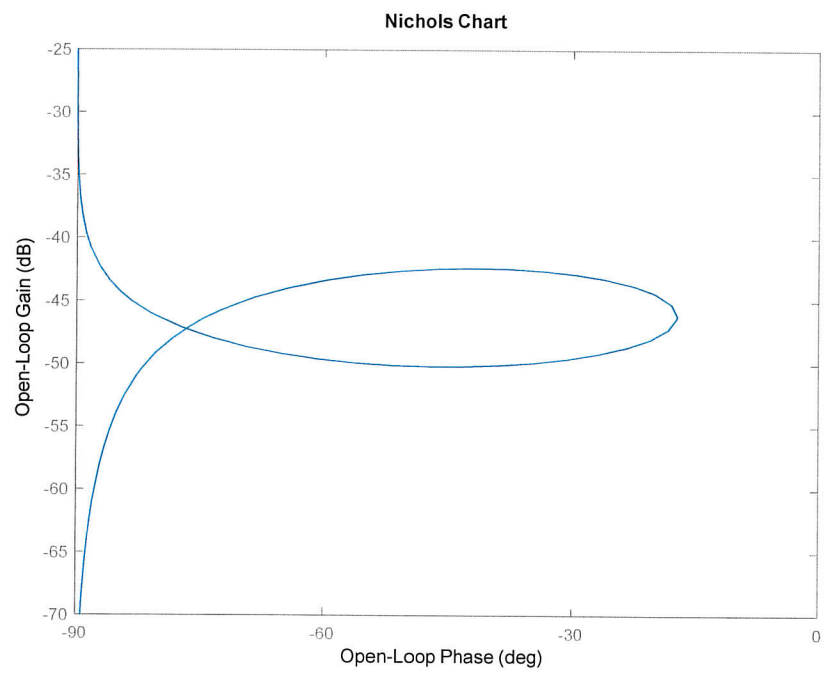
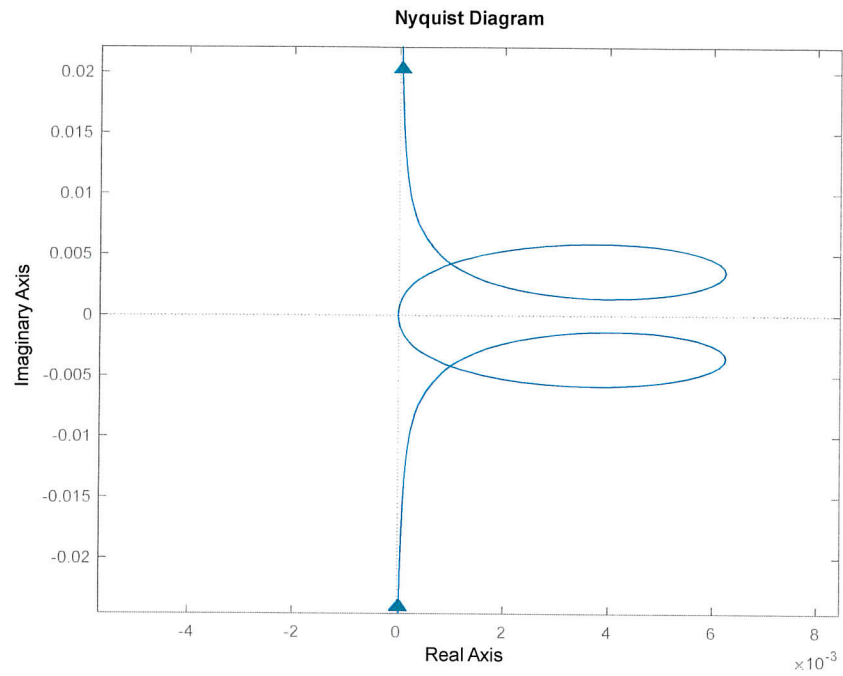


Examples - AC-LOG

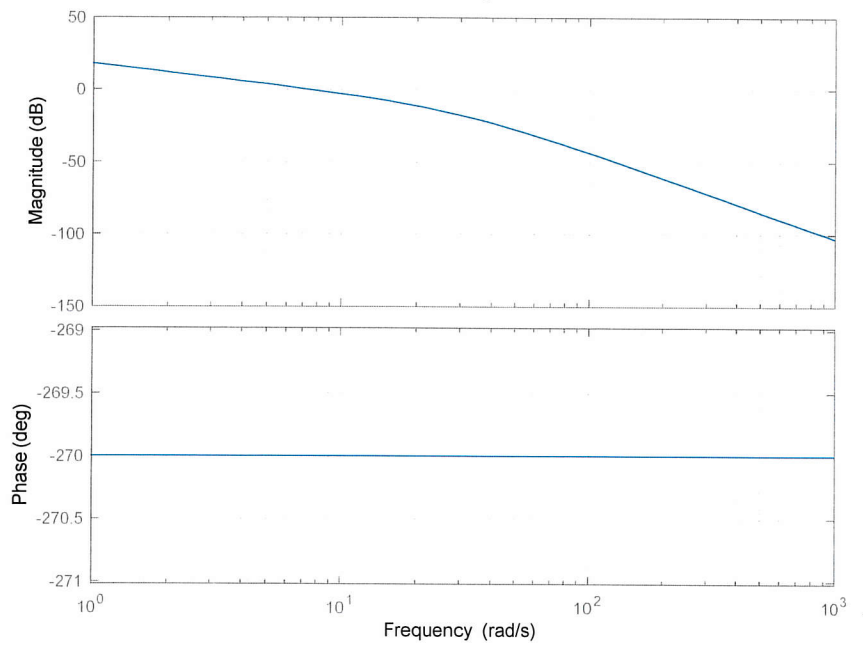
$$H(s) = \frac{2(s^2 + 80s + 40000)}{s(s^2 + 160s + 80000)}$$

$\omega_n \approx 200$
 $\omega_n \approx 280$



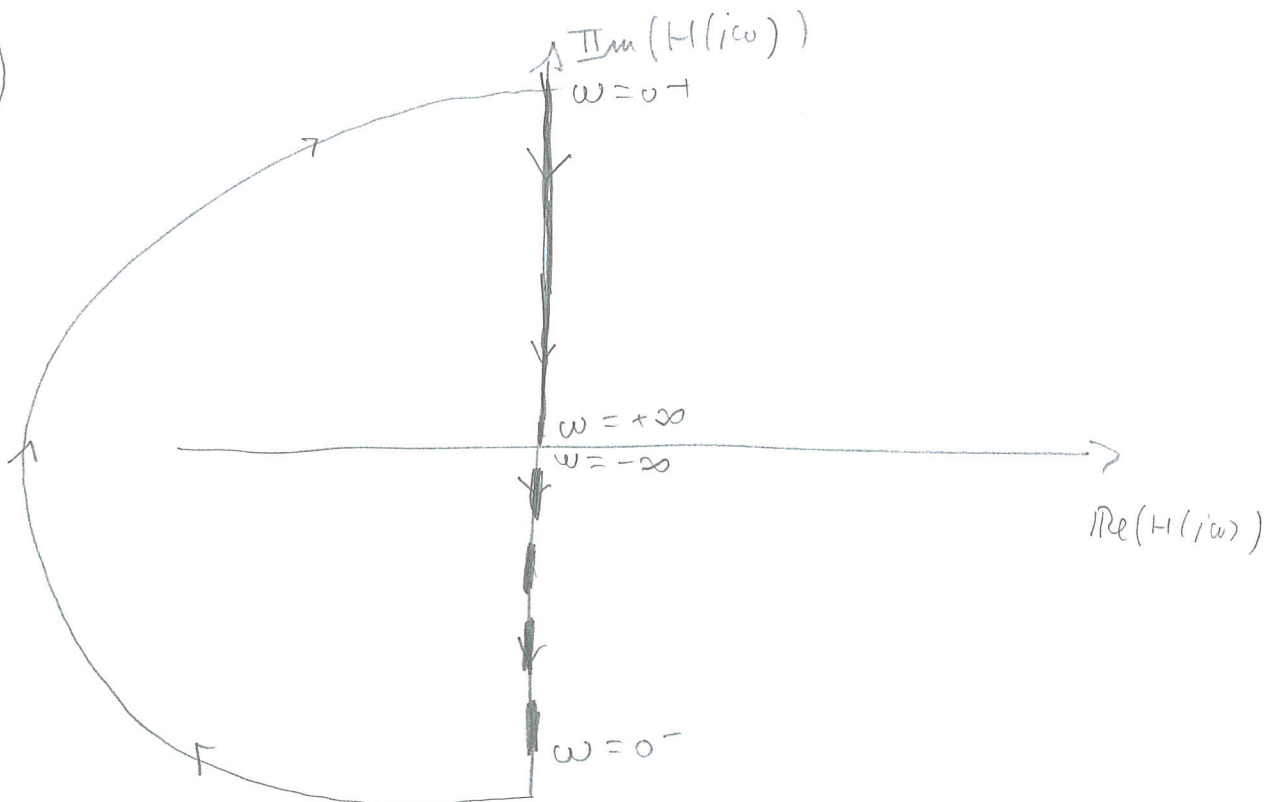
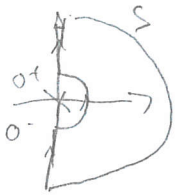


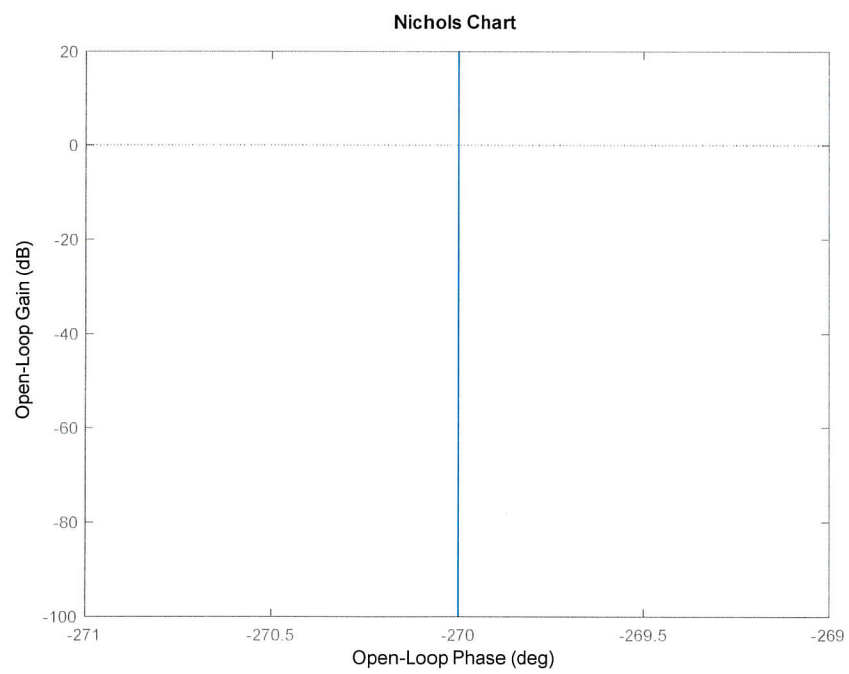
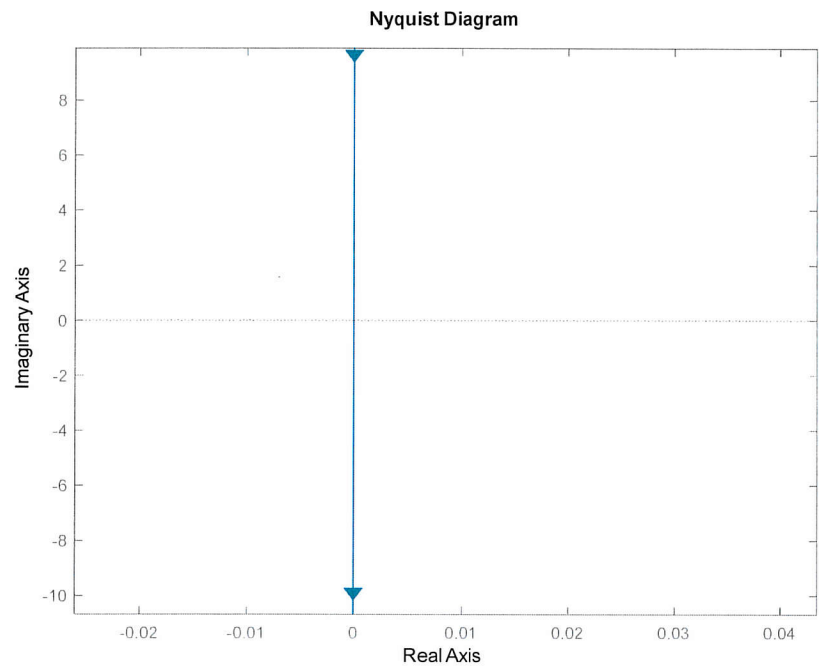
$$H(s) = \frac{7000}{s(s^2 - 900)} = \frac{7000}{s(s+30)(s-30)} = \frac{7000}{s} \cdot \frac{1}{30(1+\frac{s}{30}) \cdot (-30)(1-\frac{s}{30})}$$



$$= \frac{7000 \cdot 1}{s(-900)}$$

$$(1+\frac{s}{30})(1-\frac{s}{30})$$
 generalized
DC-gain
is negative!





$$H(s) = \frac{10(s+25)}{s(s^2+25)} = \frac{10(s+25)}{s(s+5j)(s-5j)}$$

Bode Diagram

