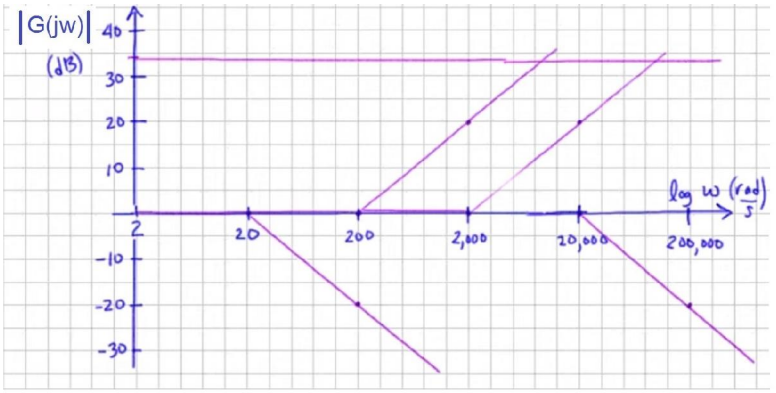
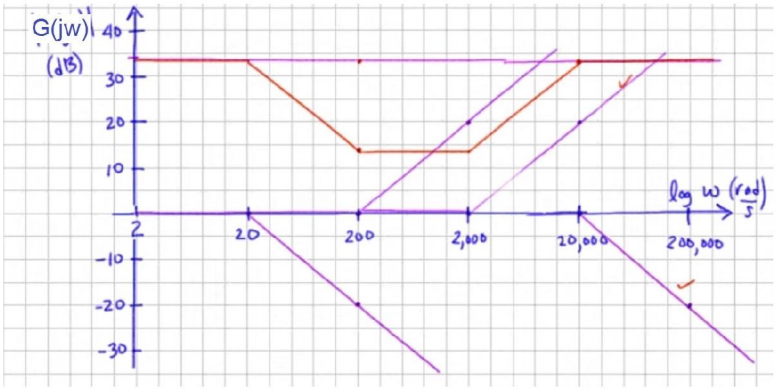


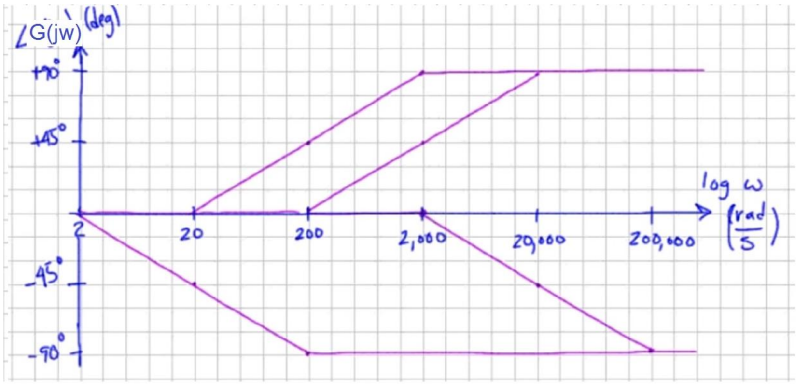


$$G(s) = \frac{50s^2 + 110E3s + 20E6}{s^2 + 20{,}020s + 400E3}$$

$$= \frac{50(s+200)(s+2000)}{(s+20)(s+20{,}000)}$$

$$= \frac{50 \cdot \cancel{200}\left(1+\frac{s}{200}\right)\cdot \cancel{2000}\left(1+\frac{s}{2000}\right)}{\cancel{20}\left(1+\frac{s}{20}\right)\cdot \cancel{20{,}000}\left(1+\frac{s}{20{,}000}\right)}$$

$$20\log_{10}(50) = +34\ dB$$



$$G(s) = \frac{50s^2 + 110E3s + 20E6}{s^2 + 20{,}020s + 400E3}$$

$$= \frac{50(s+200)(s+2000)}{(s+20)(s+20000)}$$