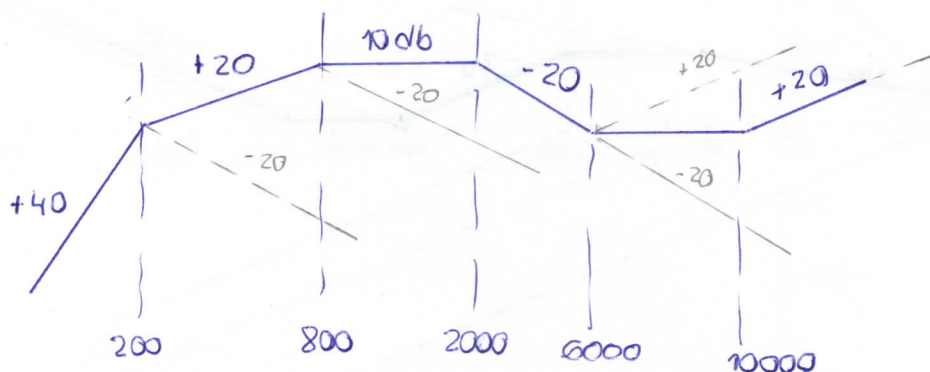


Dado el diagrama asintótico de Bode en Módulo, determinar la F.de T. correspondiente y trazar el diagrama de fase.



$$F(s) = \frac{k s^2 \left(\frac{s}{6000} + 1\right) \left(\frac{s}{10000} + 1\right)}{\left(\frac{s}{200} + 1\right) \left(\frac{s}{800} + 1\right) \left(\frac{s}{2000} + 1\right)}$$

Calculo de k

$$800 < k < 2000 \Rightarrow F(s) = \frac{k s^2}{\frac{s}{200} \times \frac{s}{800}} = 160000 k$$

$$M = 20 \log_{10} |F(j\omega)| = 20 \log_{10} 160000 k = 10 \text{ db}$$

$$\log_{10} 160000 k = \frac{10}{20} = 0,5$$

$$160000 k = 10^{0,5} = 3,16$$

$$k = 2 \times 10^{-5}$$

$$F(s) = \frac{2 \times 10^{-5} s^2 \left(\frac{s}{6000} + 1\right) \left(\frac{s}{10000} + 1\right)}{\left(\frac{s}{200} + 1\right) \left(\frac{s}{800} + 1\right) \left(\frac{s}{2000} + 1\right)}$$

Diagramas

