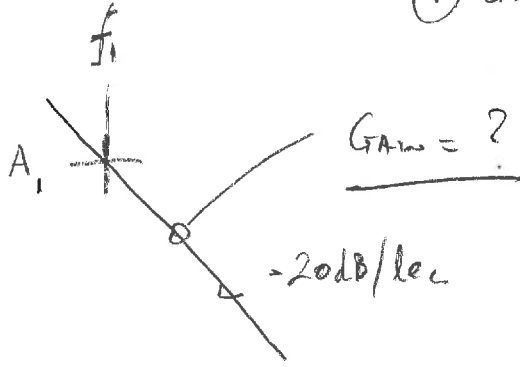


PROBLEMS - ASYMPTOTIC PLOTS

1)

$$|G_1(j\omega)|$$

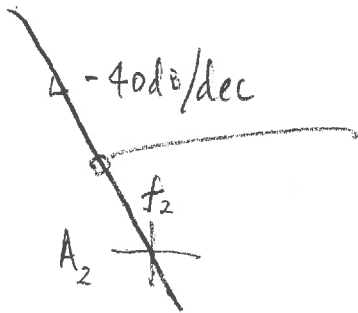


① GIVEN A_1, f_1 FIND THE EXPRESSION FOR THE GAIN ALONG THE LINE.

N.B. $A_1 = |G_1(j2\pi f_1)|$

2)

$$|G_2(j\omega)|$$

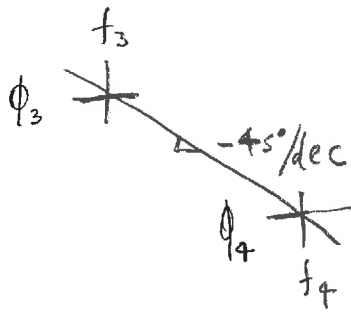


② GIVEN A_2, f_2 FIND THE EXPRESSION FOR THE GAIN ALONG THE LINE.

N.B. $A_2 = |G_2(j2\pi f_2)|$

3)

$$\angle G_3(j\omega)$$



③ GIVEN ϕ_3, f_3 AND f_4 FIND ϕ_4

WHERE $\phi_3 = \angle G(j2\pi f_3)$

AND $\phi_4 = \angle G(j2\pi f_4)$

$\phi_4 = ?$

SOLUTIONS - ASYMPTOTIC PLOTS

$$1) \text{ GAIN} = A_1 \left(\frac{f_1}{f} \right)$$

$$2) \text{ GAIN} = A_2 \left(\frac{f_2}{f} \right)^2$$

$$3) \phi_4 = \phi_3 - 45 \log_{10} \left(\frac{f_4}{f_3} \right)$$