Leonardo Rodrigues Marques, 178610.

①
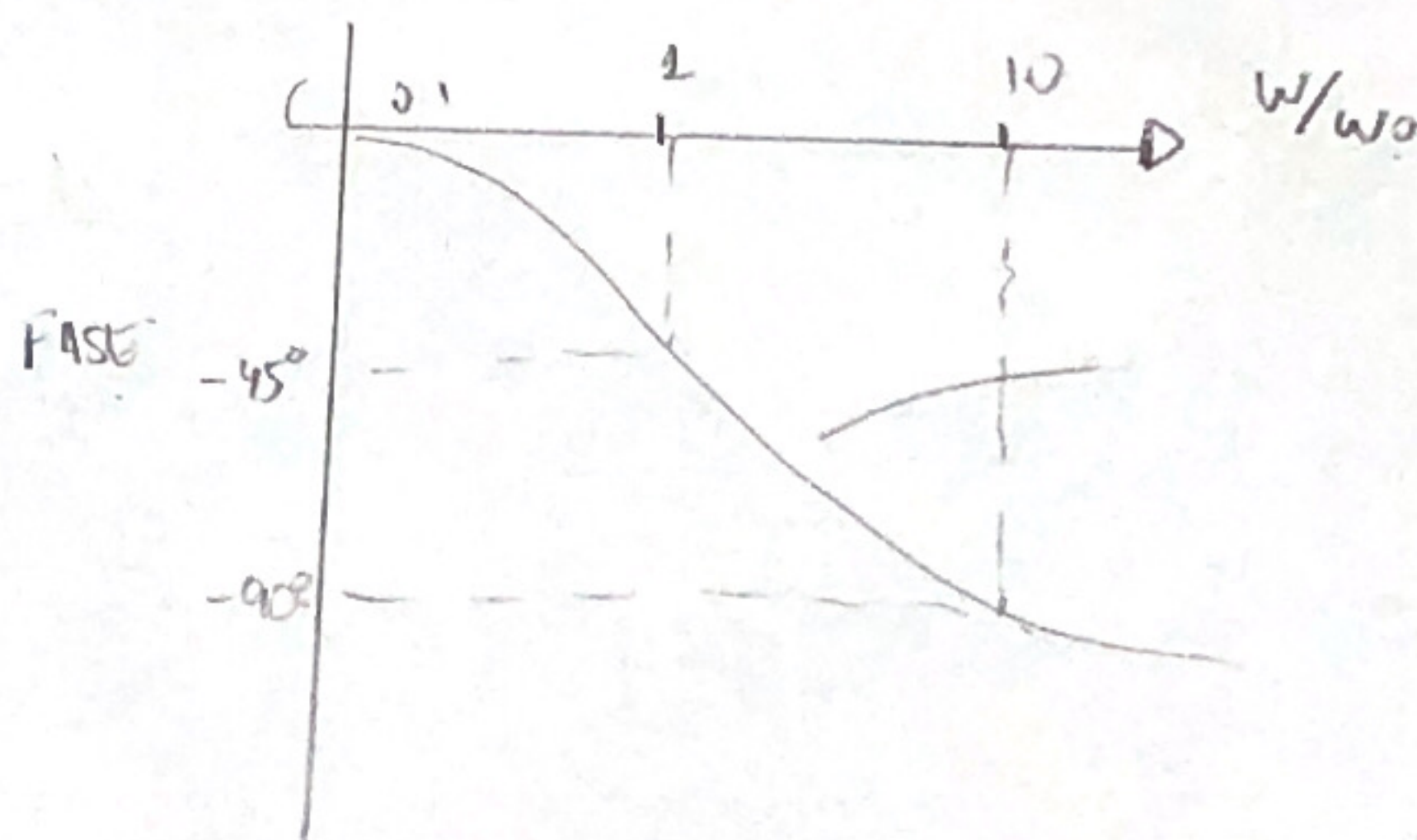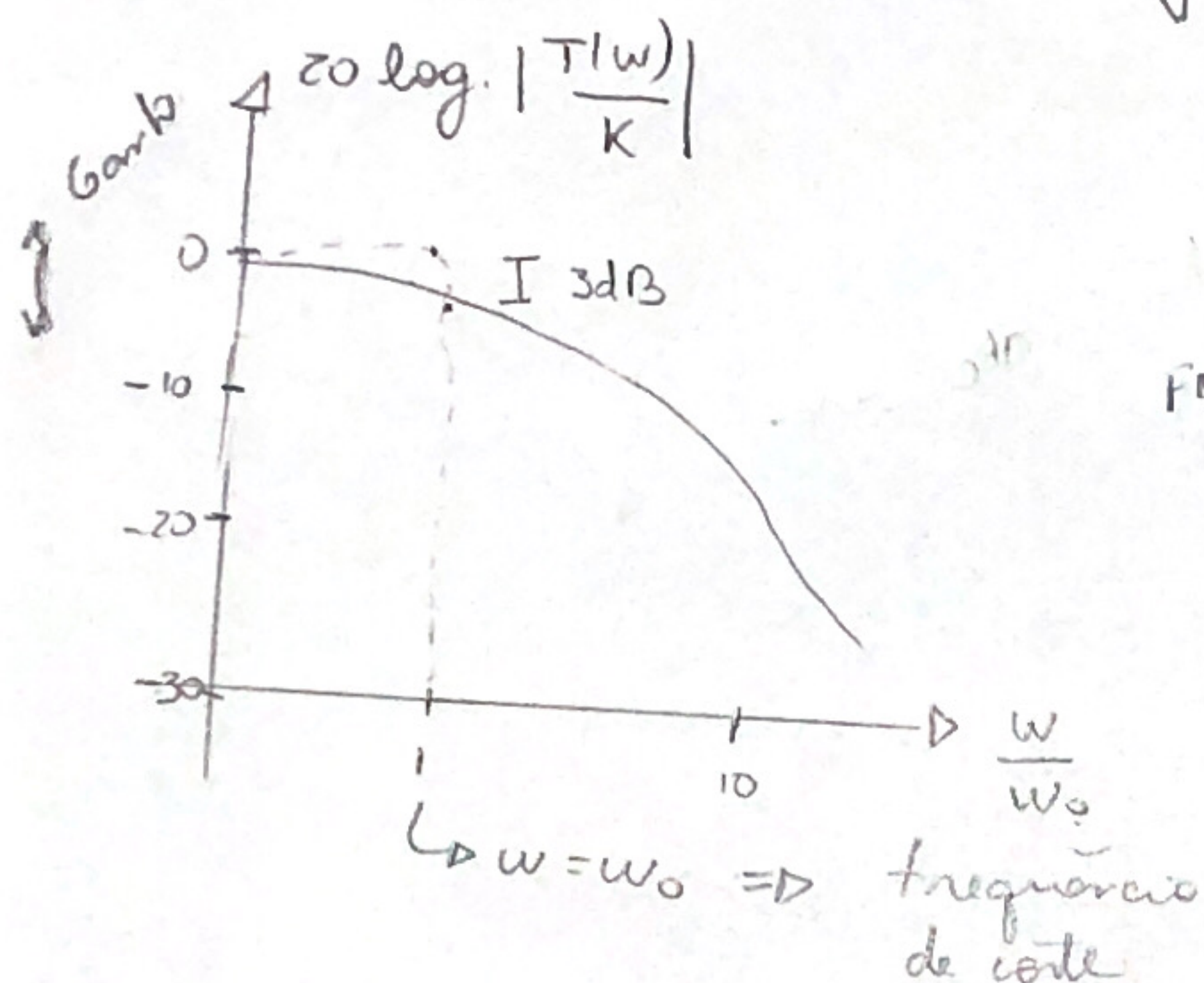
Passa-baixa:

$$T(s) = \dfrac{K}{1 + \left(\dfrac{s}{w_o}\right)} = \dfrac{K}{1 + sRC} \Rightarrow s = wj \qquad |T(jw)| = \dfrac{1}{\sqrt{1 + (wRC)^2}}$$

Ganho $\qquad G_{PB} = |T(jw)| = \dfrac{1}{\sqrt{1 + (wRC)^2}}$

frequência de corte:
$$w_c = 1/RC.$$

$\qquad \hookrightarrow w = w_o \Rightarrow$ frequência de corte

Passa-alta:

$$T(s) = \dfrac{K_s}{s + w_o} = \dfrac{K_s}{s + RC} \Rightarrow s = wj \qquad |T(jw)| = \dfrac{wRC}{\sqrt{1 + (wRC)^2}}$$

Ganho $\qquad G_{PA} = |T(jw)| = \dfrac{wRC}{\sqrt{1 + (wRC)^2}}$

frequência de corte
$$w_c = 1/RC.$$