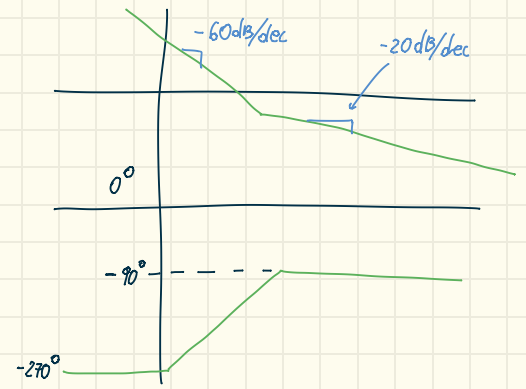
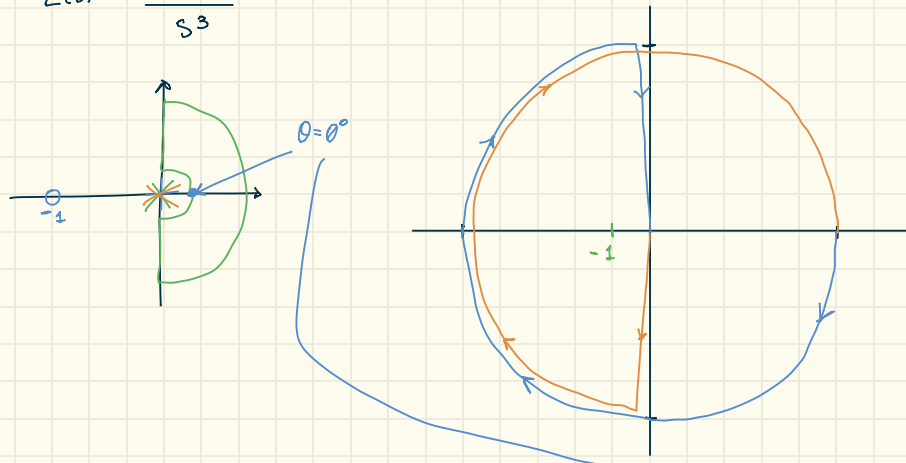


Esome 12/01/21

$$L(s) = \frac{(s+1)^2}{s^3}$$



- -1 Non viene toccato \Rightarrow Diagramma ben Definito
- -1 Viene circondato 2 volte, quanti poli a $\text{Re } p > 0$ ha $L(s)$? \rightarrow Zero
 $\Rightarrow N \neq P \Rightarrow$ Non A.S.

$$s' = \varepsilon e^{j\theta} \text{ con } \theta \in [0, \frac{\pi}{2}]$$

Siccome $\varepsilon \ll 1$
 $\varepsilon e^{j\theta} + 1 \approx 1$

$$\rightarrow L(s') = \frac{(\varepsilon e^{j\theta} + 1)^2}{\varepsilon^3 e^{j3\theta}} = \frac{1}{\varepsilon^3} e^{-j\varphi} \text{ con } \varphi \in [0, \frac{3}{2}\pi] \quad \rightarrow \text{Per } \theta=0 \quad L(s') = \frac{(1+1)^2}{\varepsilon^3} = \frac{4}{\varepsilon^3} \approx \frac{1}{\varepsilon^3}$$

Immagine del cammino di Nyq. quando $\theta=0$
 se $\varepsilon \ll 1$

* Ci fermiamo ad una fase di -270° spiegh a 14:50