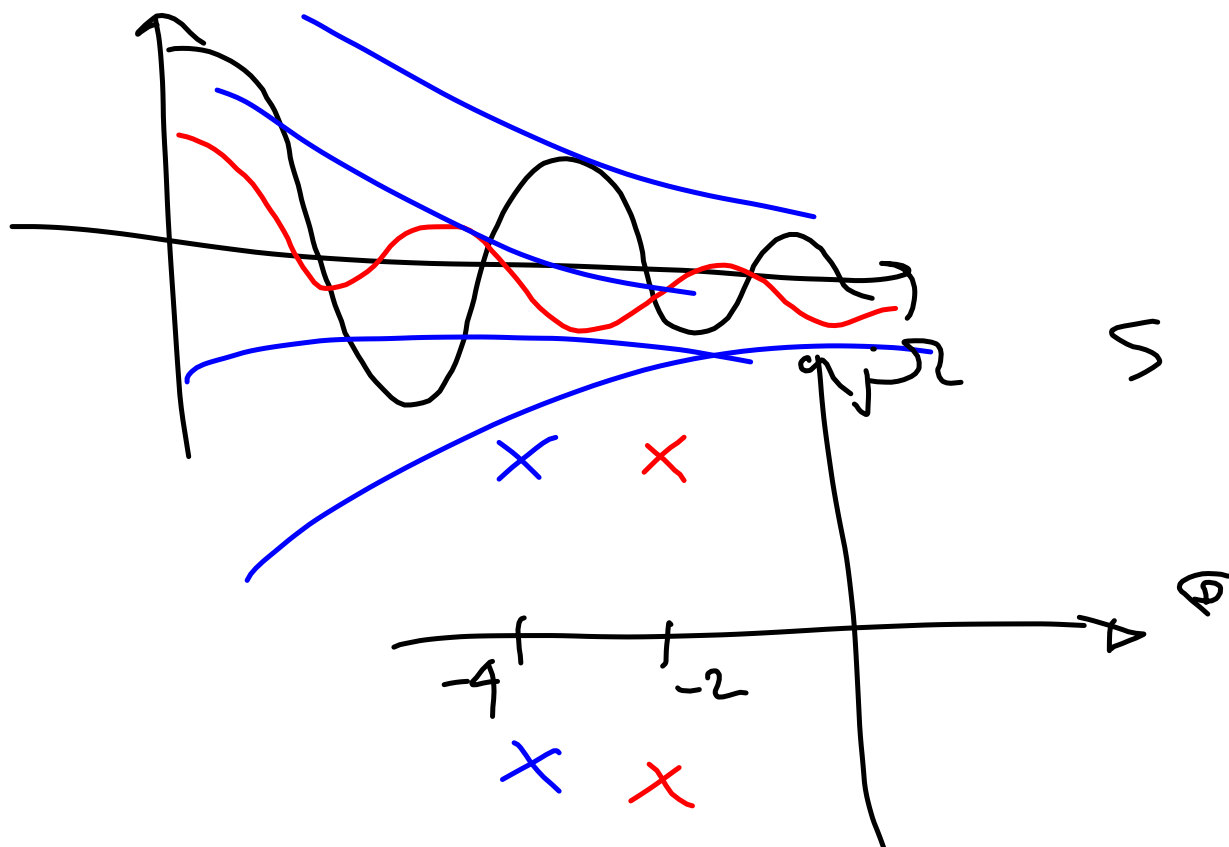


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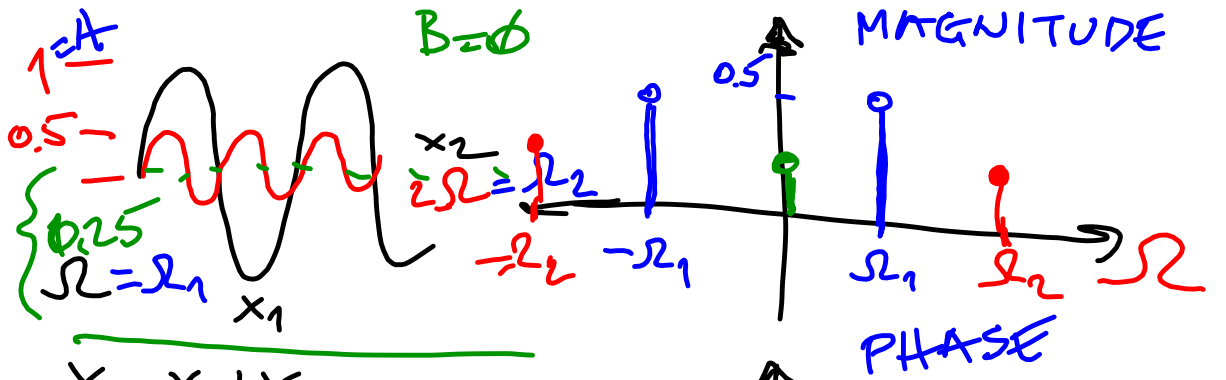


b) a)

$$s = \sigma + j\omega$$

$$e^{st} = e^{(\sigma + j\omega)t} = \underbrace{e^{\sigma t}}_{\text{red wavy}} \cdot \underbrace{e^{j\omega t}}_{\text{red wavy}}$$

$\left. \begin{matrix} e^{-2t} \\ e^{-4t} \end{matrix} \right\}$



$$X = X_1 + X_2$$

$$\omega_1 \quad \omega_2$$

$$x(t) = \sum_{k=-\infty}^{\infty} X_k e^{jk\omega_0 t}$$

$$\omega_0 = \frac{2\pi}{T}$$

$$x = B + A \cos(\omega_0 t)$$

$$= B + \left(\frac{A}{2}\right) e^{j\omega_0 t} + \left(\frac{A}{2}\right) e^{-j\omega_0 t}$$

$$k=0$$

$$k=1$$

$$k=-1$$

$$e^{jk\omega_0 t} \Rightarrow e^{j\omega_0 t}$$