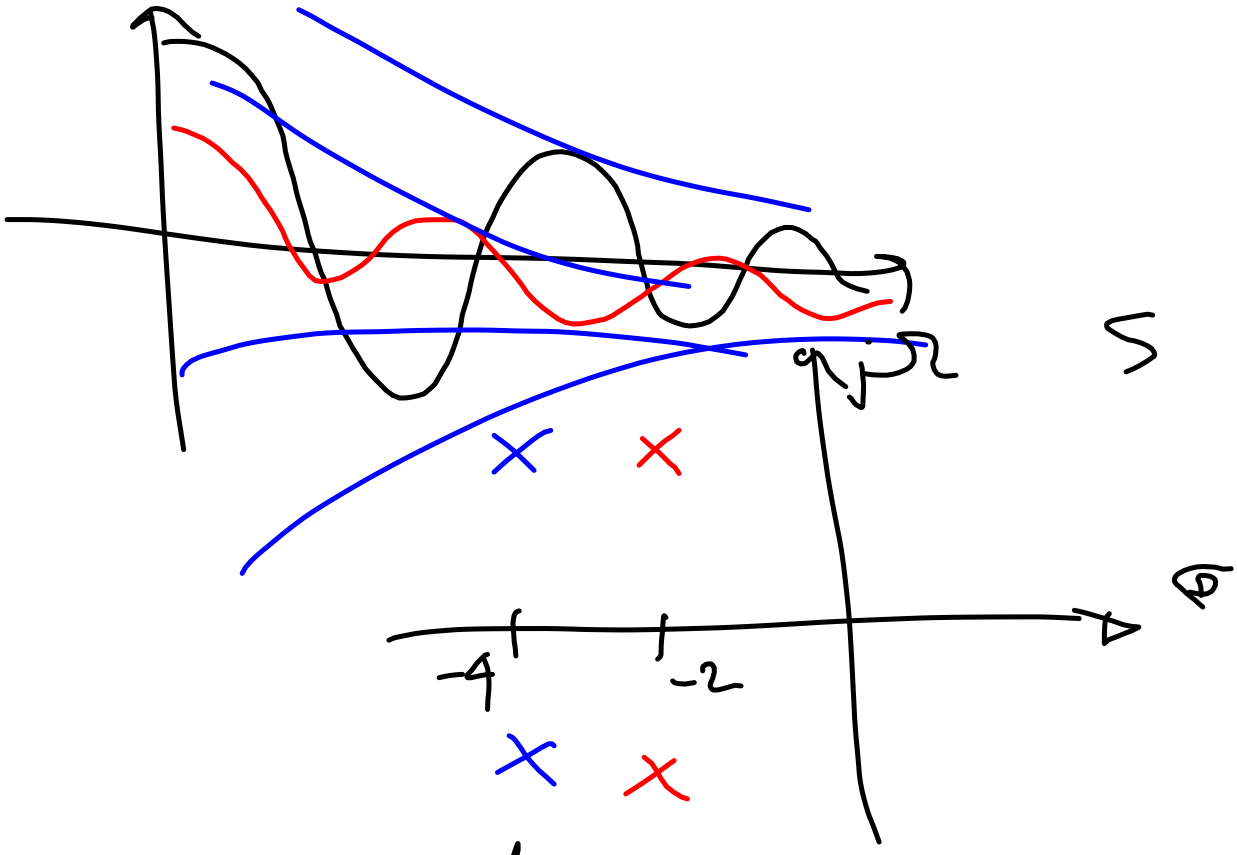
CPE 381 #14



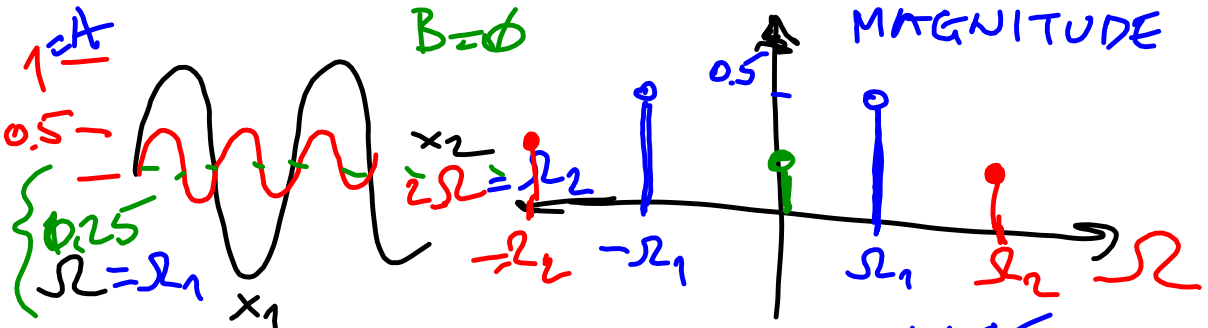
b) a)

$s = \sigma + j\Omega$

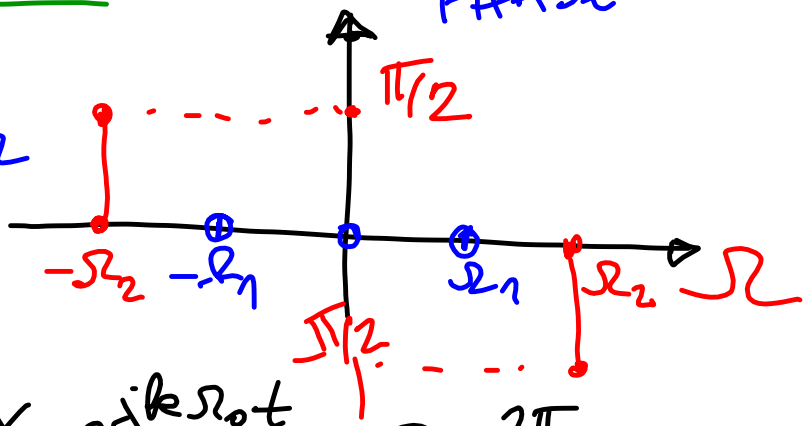
$e^{st} = e^{(\sigma + j\Omega)t} = e^{\sigma t} \cdot e^{j\Omega t}$

e^{-2t}

e^{-4t}



$$X = X_1 + X_2$$



$$x(t) = \sum_{k=-\infty}^{\infty} X_k e^{jk\Omega_0 t} \qquad \Omega_0 = \frac{2\pi}{T}$$

$$x = B + A\cos(\Omega_0 t)$$

$$= B + \frac{A}{2} e^{j\Omega_0 t} + \frac{A}{2} e^{-j\Omega_0 t}$$

$k=0$ $k=1$ $k=-1$

$e^{jk\Omega_0 t} \Rightarrow e^{j\Omega t}$