

$$L1=1\text{mH} (10^{-3})$$

$$L2=1\text{mH} (10^{-3})$$

$$R3=2\text{k} (2*10^3)$$

$$\omega(s) = \frac{1 + s * \frac{L2}{R3}}{1 + s * \frac{L1 + L2}{R3}}$$

$$\omega(s) = \frac{1 + s * \frac{L2}{R3}}{1 + s * \frac{L1 + L2}{R3}}$$

$$Y(w * j) = \frac{1+j*10^2*5*10^{-7}}{1+j*10^2*10^{-6}} = \text{????}$$

$$Y(w * j) = \frac{1+j*10^2*5*10^{-7}}{1+j*10^2*10^{-6}} = \text{????}$$

$$\omega(s) = \frac{1 + s * \frac{L2}{R3}}{1 + s * \frac{L1 + L2}{R3}}$$

$$\tau = \frac{L2}{R3} = \frac{10^{-3}}{2*10^3} = 5 * 10^{-7}$$

$$T = \frac{L1+L2}{R3} = \frac{10^{-3}+10^{-3}}{2*10^3} = 10^{-6}$$