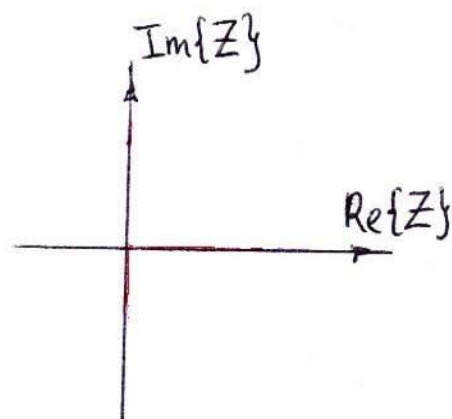
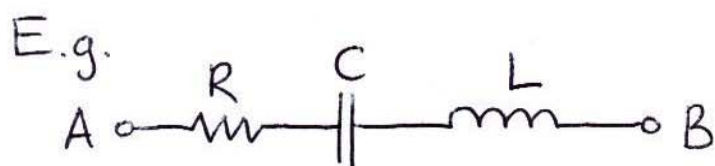
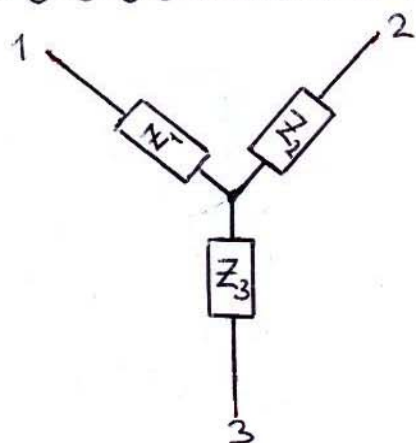


Lecture 8Combining R, L, C

series:

parallel:

Y- Δ transformation

same as before, but now complex

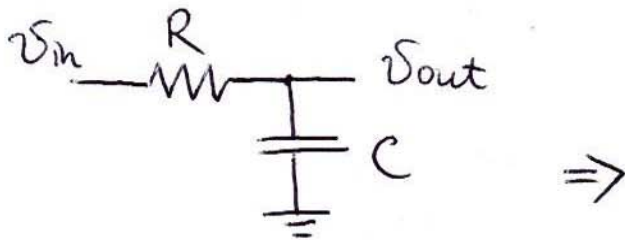
 $\Delta \rightarrow Y$: $Y \rightarrow \Delta$:

AC circuit analysis

②

- * superposition
- * Thevenin & Norton
- * KCL & KVL

Lo-pass filter



Transfer fcn (a.k.a. complex gain)

$$G(\omega) \equiv$$

$$\text{L.P. : } G(\omega) =$$

magn. $|G(\omega)| =$

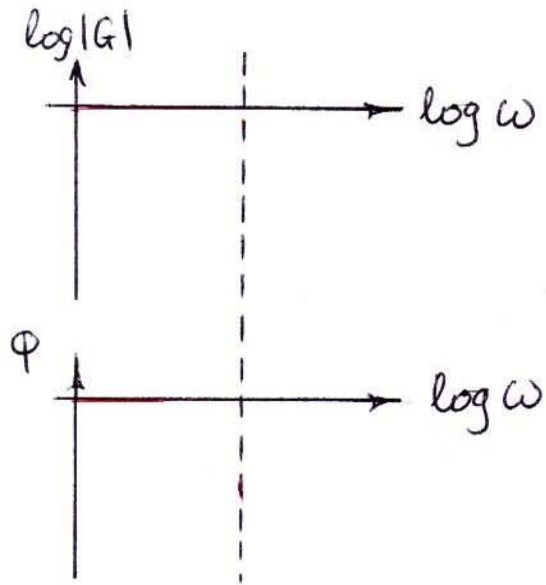
phase $\Phi[G] =$

Bode plots

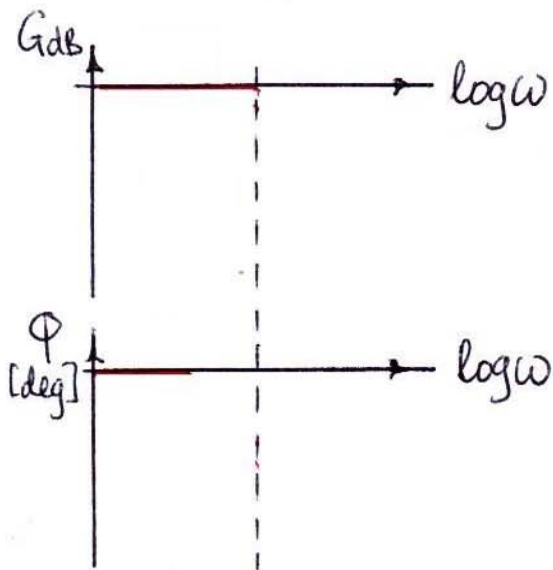
③

$$G(\omega) = |G(\omega)| e^{j\phi[G(\omega)]}$$

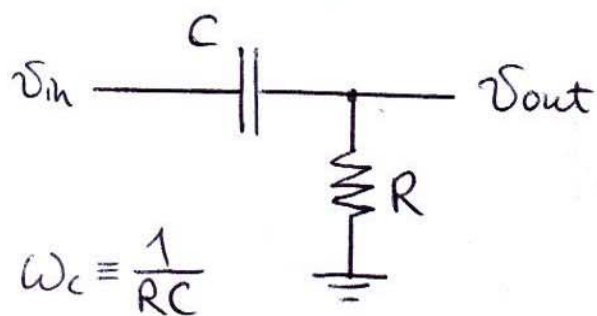
Bode plots =



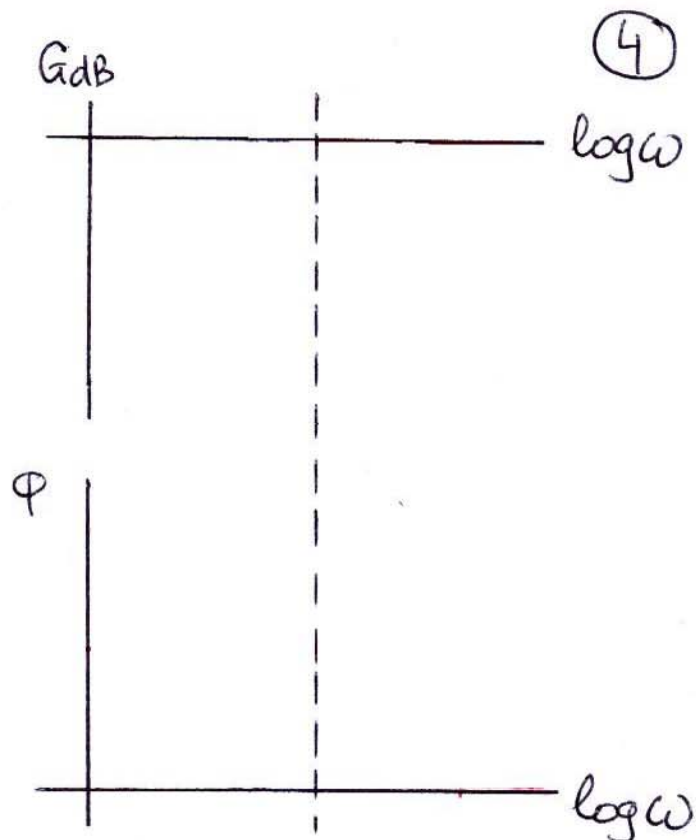
Usually draw uncorrected Bode plots.



Hi-pass filter



$$G(\omega) =$$



Note: Bode plots $\Rightarrow$ always two
 $G(\omega) = |G(\omega)| e^{j\phi[G(\omega)]}$

- magnitude & phase _____
- e.g. change in magn. _____

Standard (zero-pole) form of G

$$G(\omega) =$$