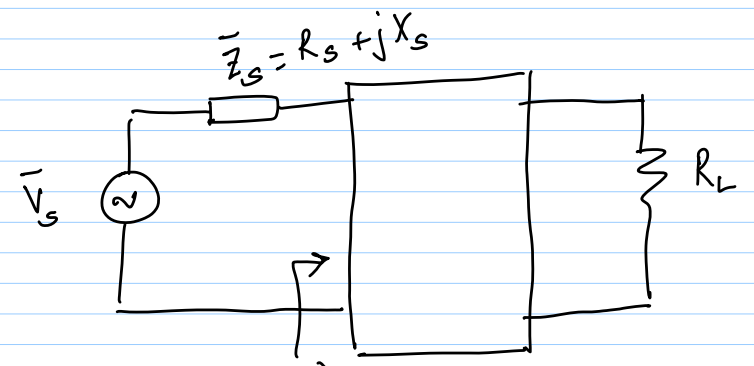


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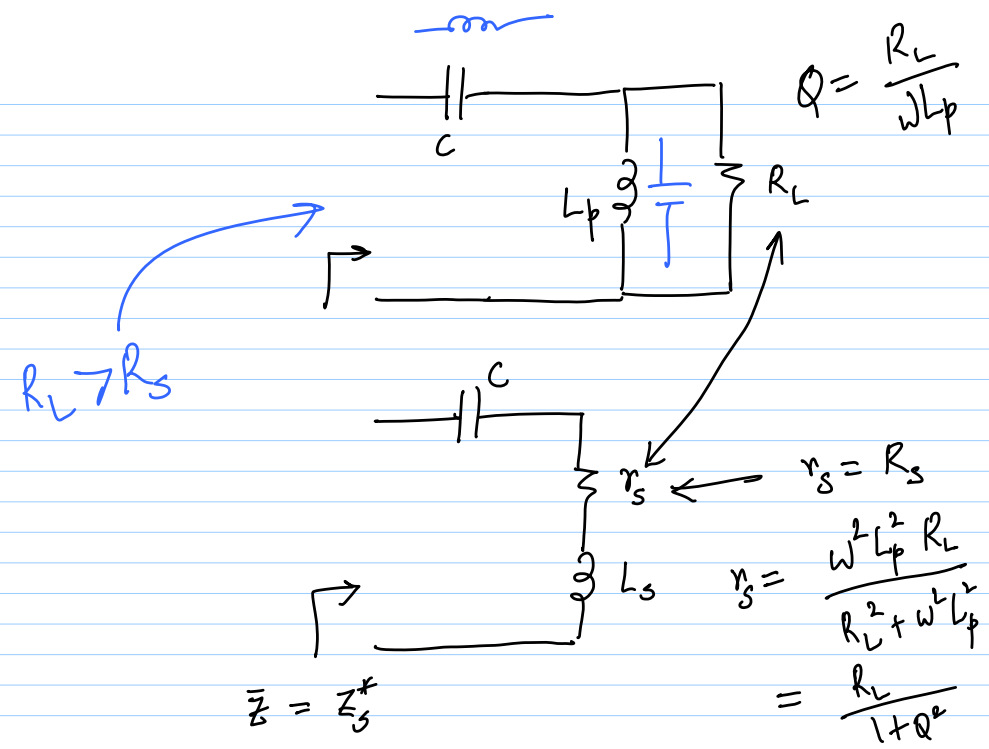
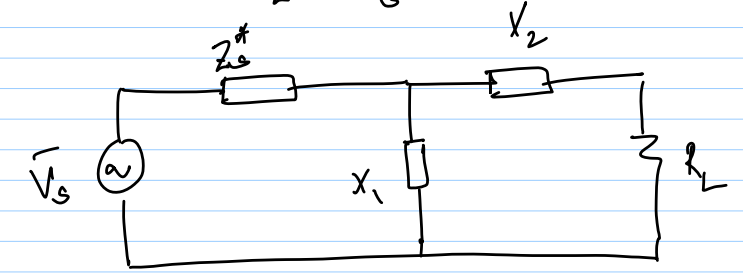
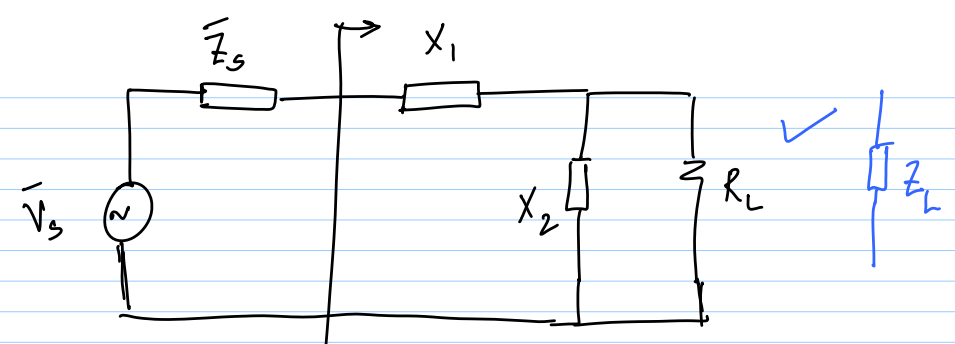
Lec 39



$\bar{Z} = Z(j\omega)$ M.N.

Conjugate Matching $\bar{Z} = Z_s^*$ ← 2 constraints

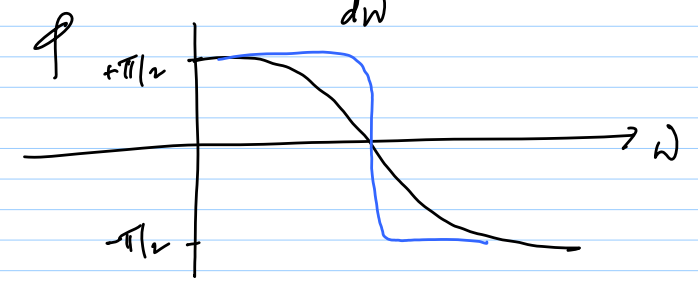
→ need min. 2 components

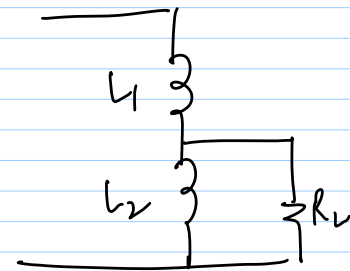
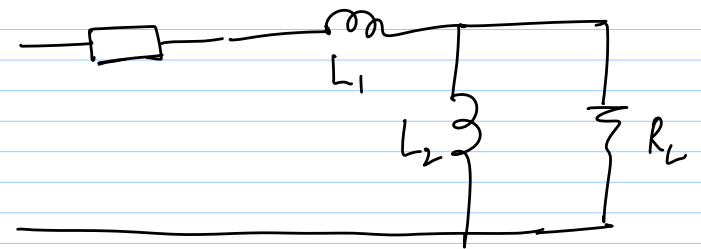
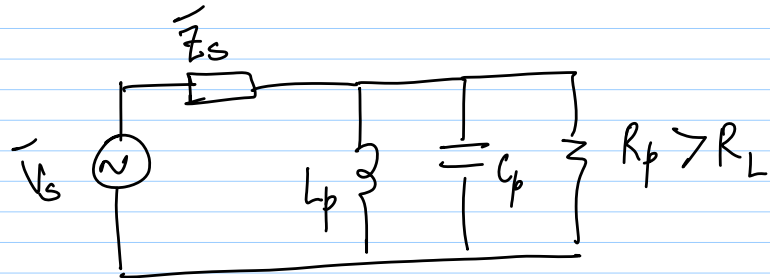
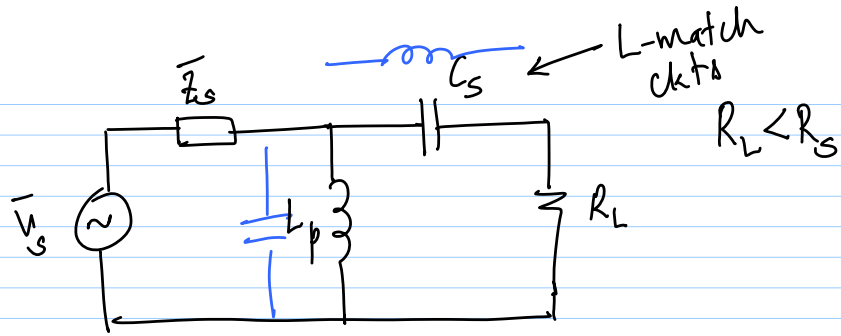
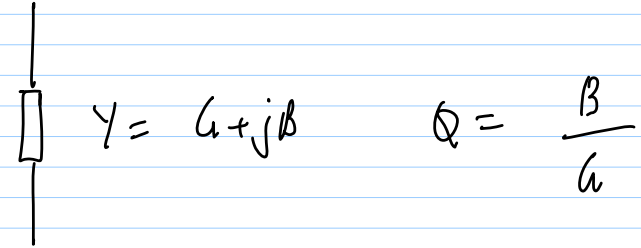
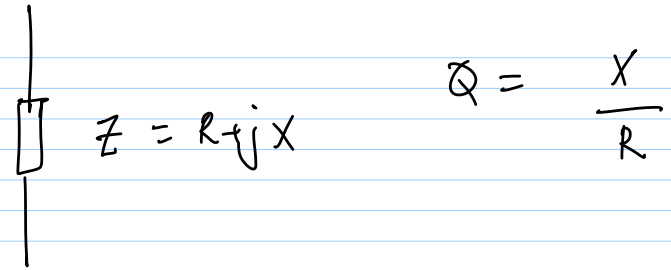
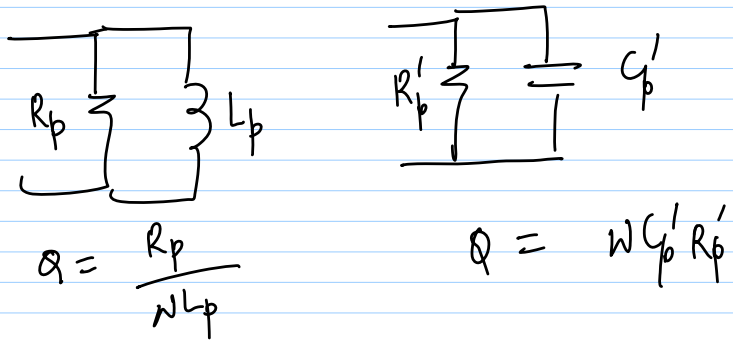
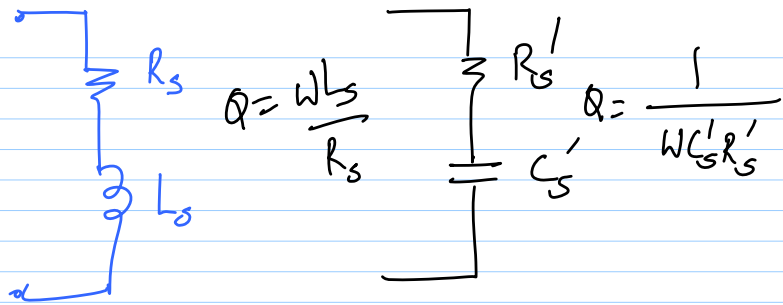


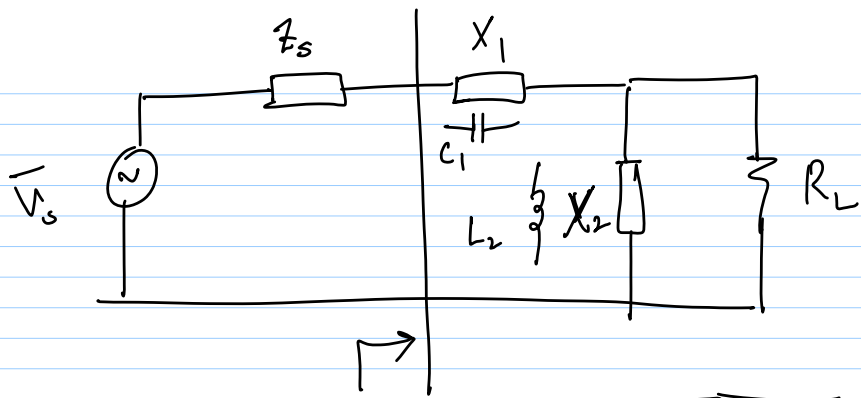
quality factor $Q = \frac{\omega_0}{BW}$ bandwidth

$= \frac{2\pi V \cdot \text{peak Energy stored}}{\text{Energy dissipated/cycle}}$

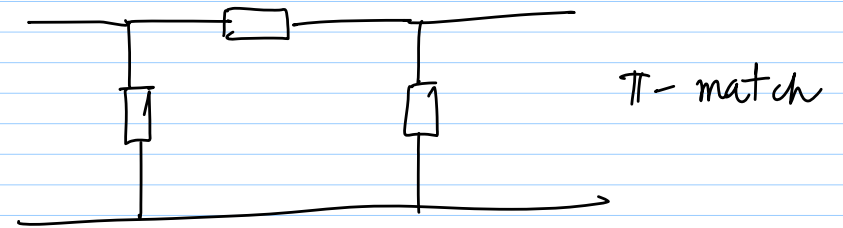
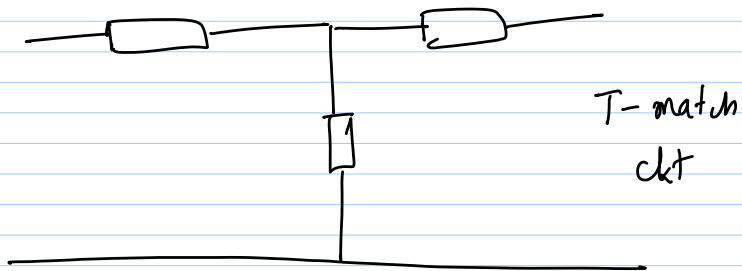
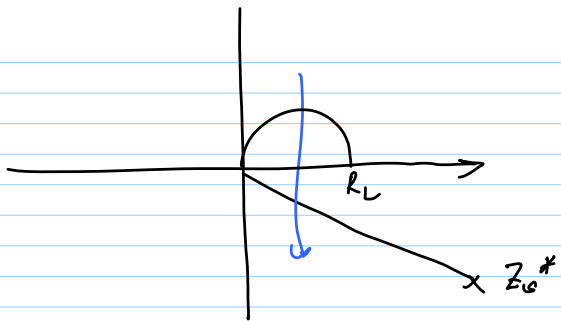
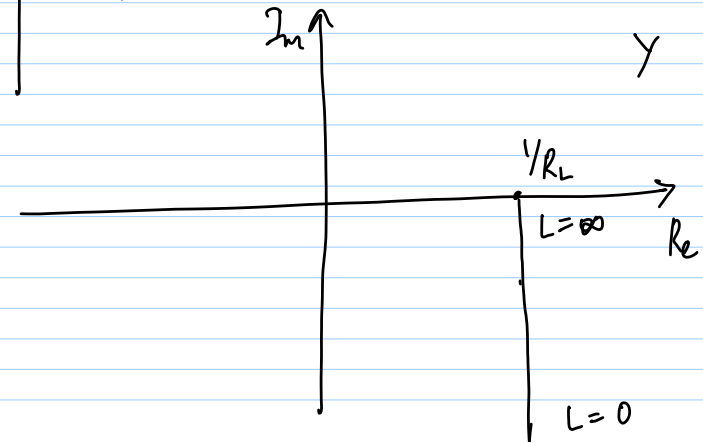
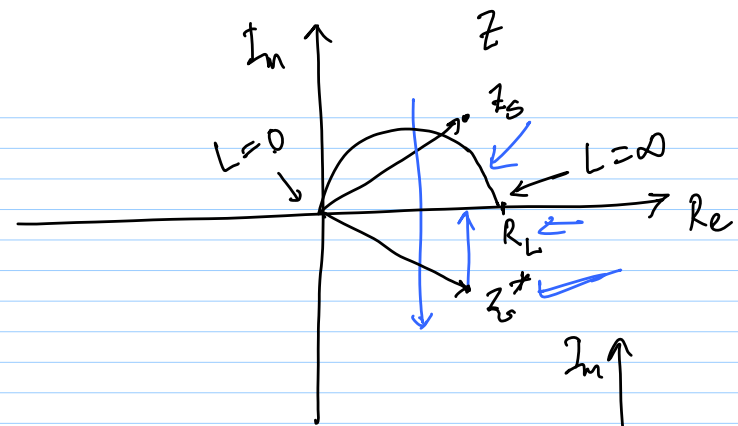
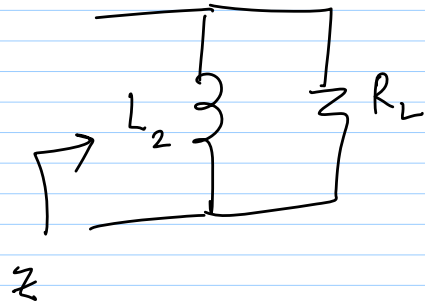
$= \frac{d\phi}{d\omega}$







$$Z_{in}(j\omega) = Z_s^*$$



3rd constraint : BW of matching
or
Quality factor

