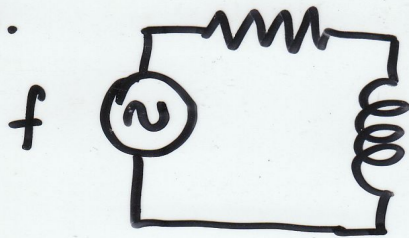


1) EJ.

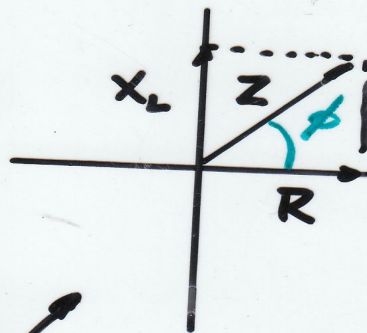
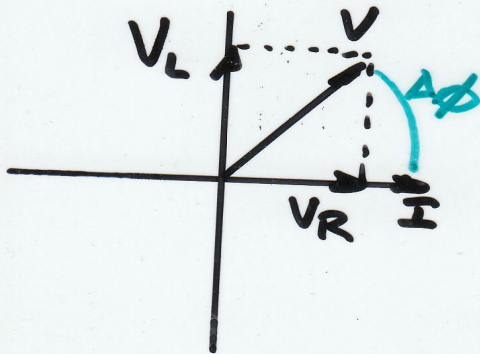


$$V = V_R + jV_L$$

$$Z = R + jX_L \quad X_L = \omega L$$

$$V = I \cdot Z = IR + jIX_L$$

$$V_R = IR \quad V_L = IX_L$$



¡OJO!: ES UN CIRCUITO SERIE

$\Delta\phi$: CALCULARLO DEL GRAFICO! NO MEDIRLO (POR RAZONES DE t)

$$\Delta\phi = \frac{X_L}{R}$$

$$|Z| = \sqrt{R^2 + X_L^2}$$

$$|V| = \sqrt{V_R^2 + V_L^2}$$

$$|V| = \sqrt{(IR)^2 + (IX_L)^2} = |I| \sqrt{R^2 + X_L^2} = |I| |Z|$$

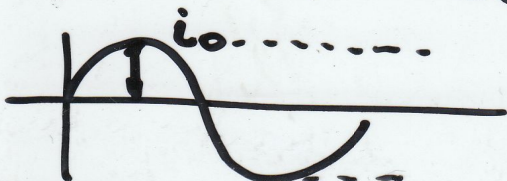
OJO: LOS INSTRUMENTOS MIDEN VALORES EFICACES.

$$dW = i^2 R dt$$



$$W = R \int_0^T i^2 dt = \underbrace{i^2 R T}_{\text{PARA CC}} \Rightarrow i_{ef} = \sqrt{\frac{1}{T} \int_0^T i^2 dt}$$

PARA CA: si $i(t) = i_0 \sin(\omega t)$: $i_{ef} = \frac{i_0}{\sqrt{2}}$



$$\therefore |U_{pp} = 2V_{max} = 2\sqrt{2} V_{ef}|$$