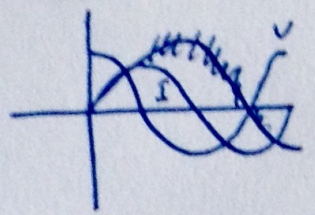
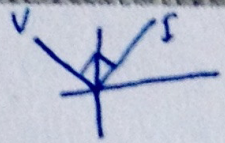


$X_L = \omega L$



$V_{max} = I_{max} X_L$

$V_i \cos$
 $I_i \sin$
out of phase

Preview from Notesale.co.uk
Page 1 of 1

V leads I

Alternating Current

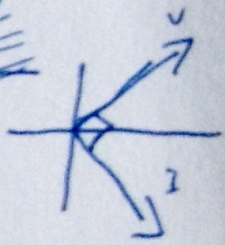
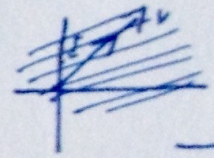
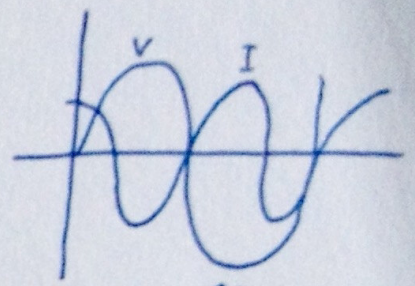
with capacitor

no in phase
volt = sin graph
 $I = \cos$ graph
I leads V

$V = IR$
 $V_{max} = I_{max} X_C$

$X_C = \frac{1}{\omega C}$

X_C = Resistance in capacitor.



with Resistor

I in phase
 $V \sim I$

RC in AC

Power

average

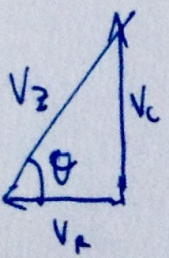
$P_{avg} = I_{rms} V_{rms} \cos \theta$

Pythagoras to solve impedance (Z)

$\cos \theta = \frac{V_R}{V_Z}$

$\cos \theta = \frac{R}{Z}$

total resistance



$V_Z^2 = V_C^2 + V_R^2$

$Z = \sqrt{X_C^2 + R^2}$

