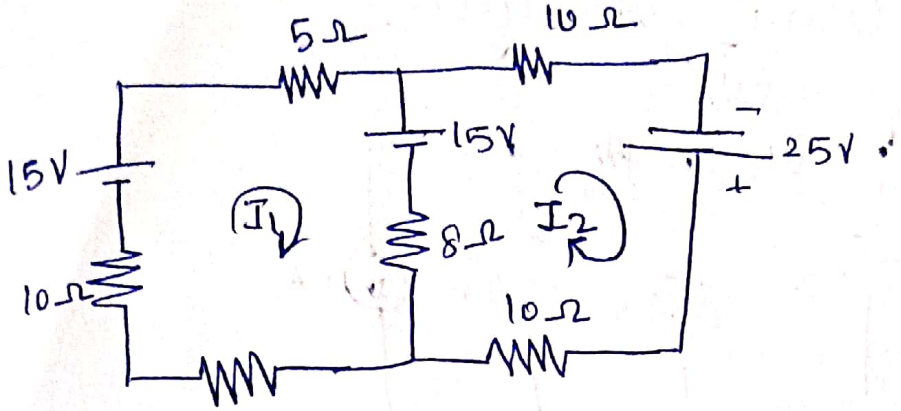
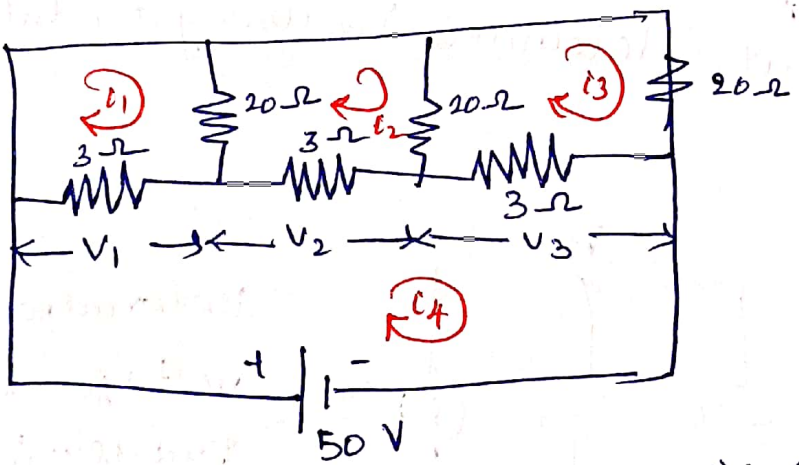
Mesh Analysis

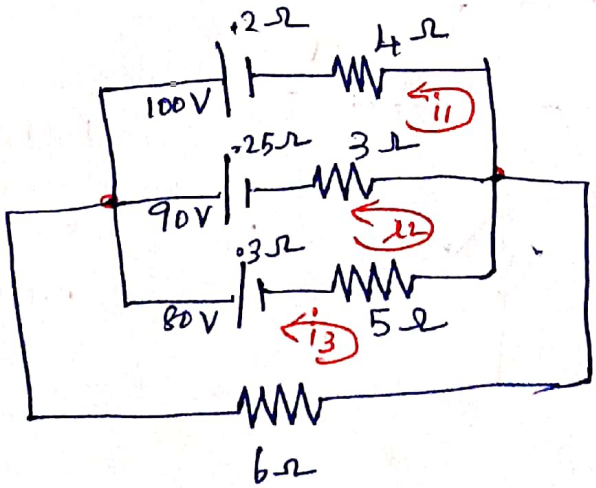
1) Find the Current in 8Ω resistor in the circuit shown



2) Determine the voltage across 3Ω resistor in the network.

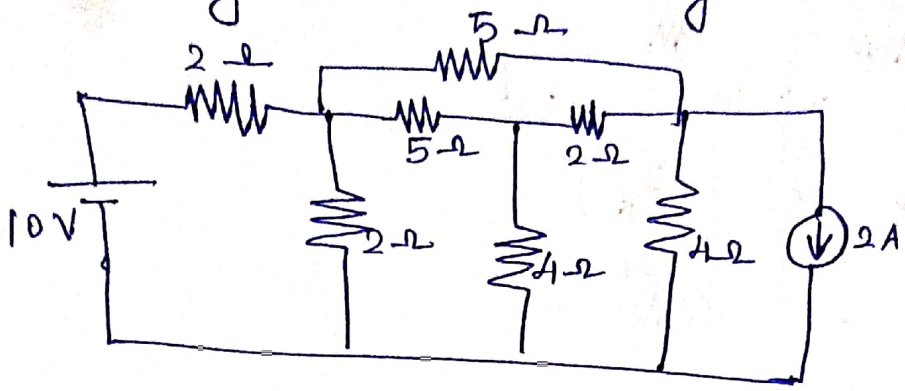


3) Find the Current through (i) 6Ω Resistance (ii) 3Ω Resis

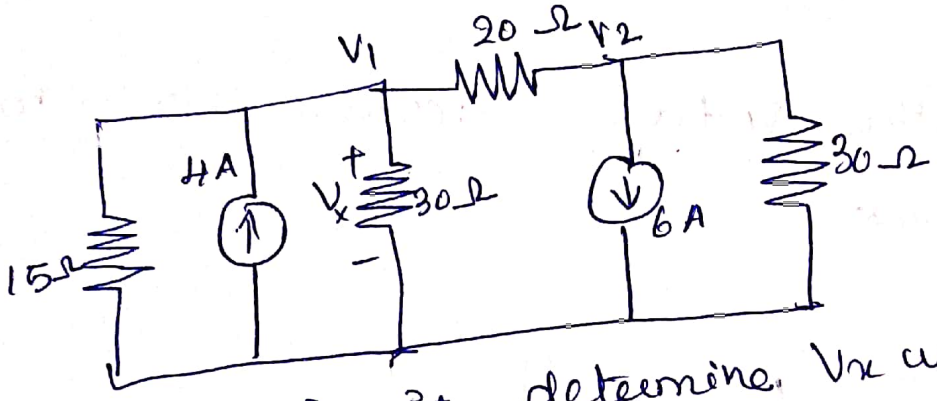


Nodal Analysis

4) Calculate the Current flowing in 5Ω branch using Nodal Analysis.

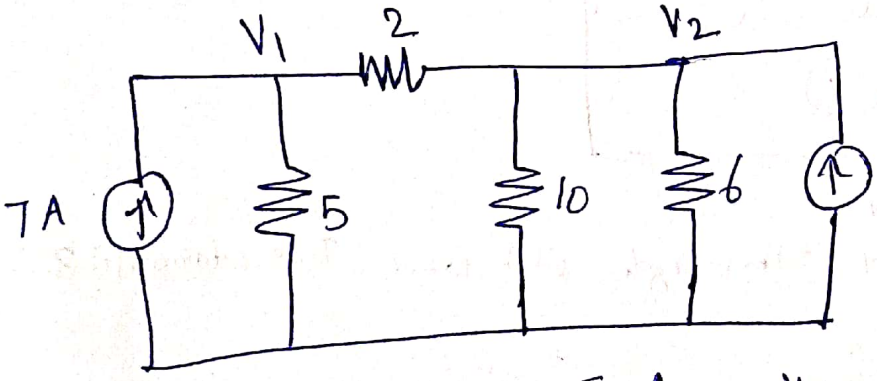


5)



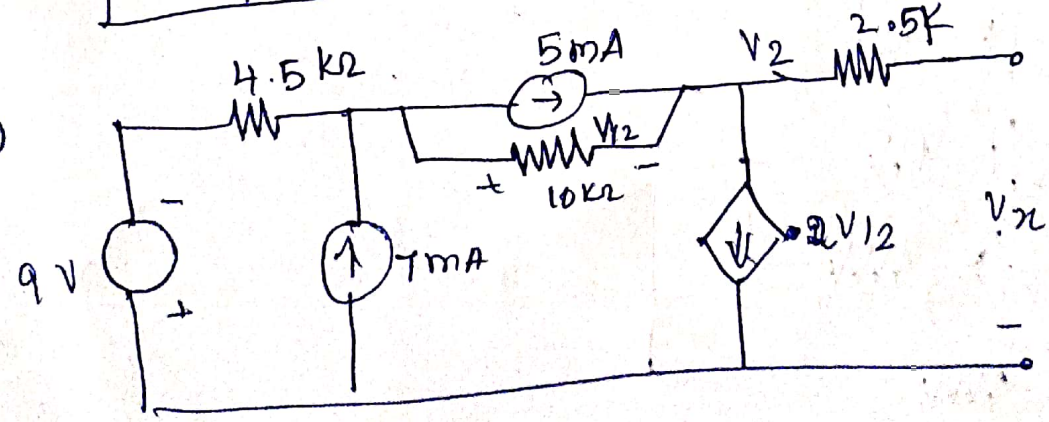
For the circuit, determine Vx using Nodal Analysis

6)



Determine nodal voltage and current through 2Ω resistance.

7)



Determine Vx using Nodal Analysis.

Source transformation.

1. Convert the given 1) Current source into a voltage source Fig(a) 2) Voltage into Current source Fig b

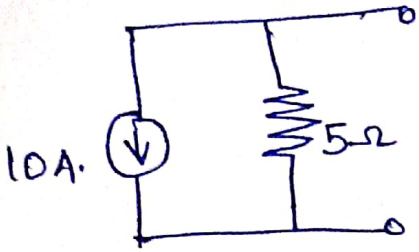


Fig (a)

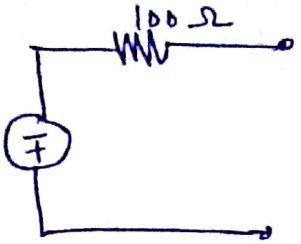
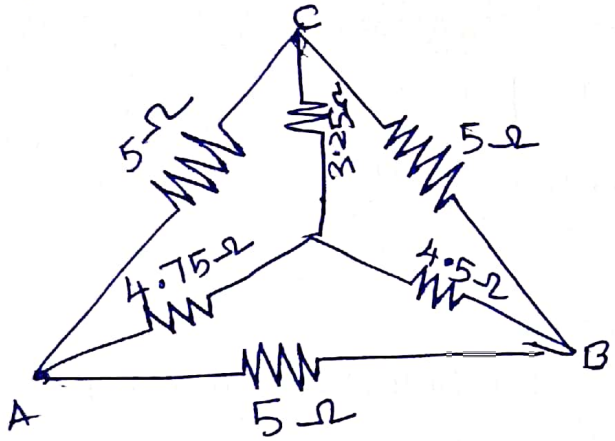


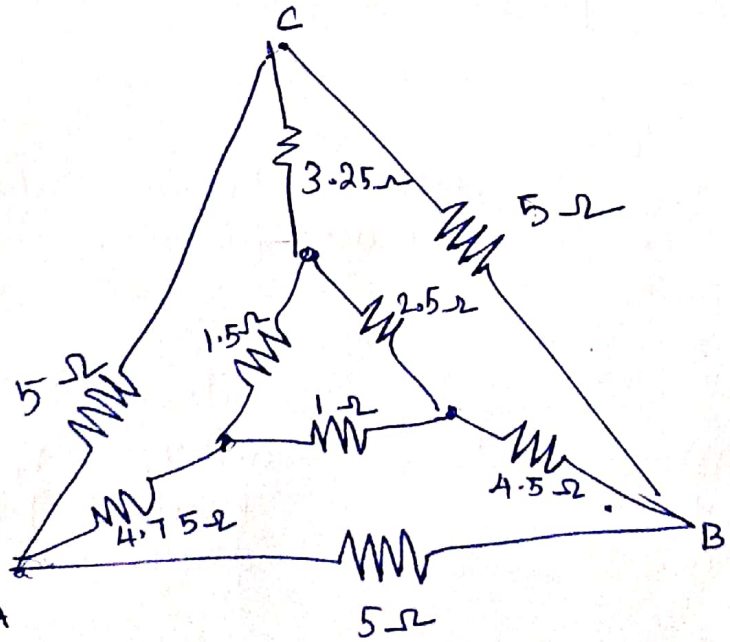
Fig b.

star delta

2) In the network shown, find the resistance between the points A and B.



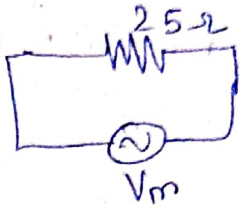
3)



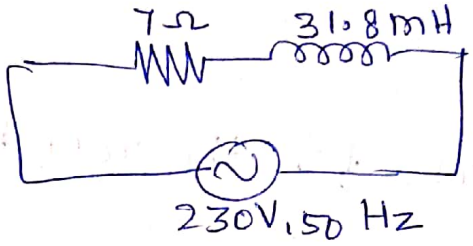
R,L,C circuits

1) A 25Ω resistance has a voltage $V = 150\sin 377t$ volts. Find corresponding current & power.

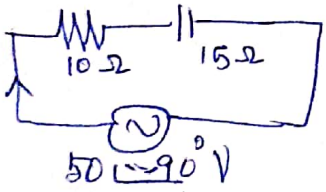
$V_m = 150 \sin 377t$



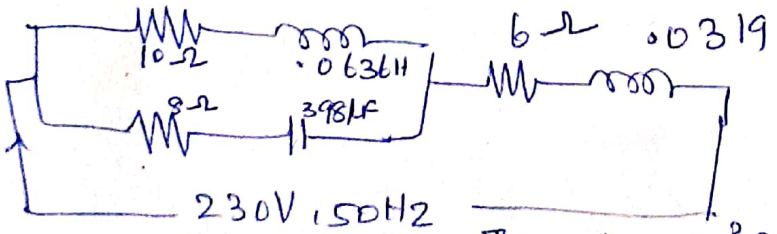
2) Calculate the circuit current, phase angle, Power factor and power consumed.



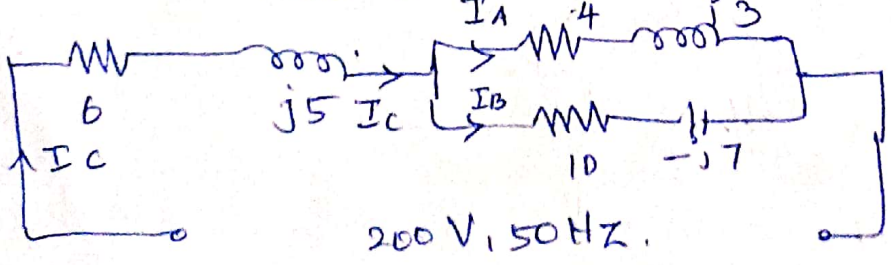
3) A series RL circuit has R=20Ω, L=0.05H and it is connected to 250V, 50 cycle source. Calculate the Impedance, Current & power factor. Draw phasor diagram.

4) 

Calculate realpower, reatice power, Complex power & power factor.

5) 

Find Total current & power factor

6) 

Calculate I_A, I_B and I_C, Power factor & phasor diagram