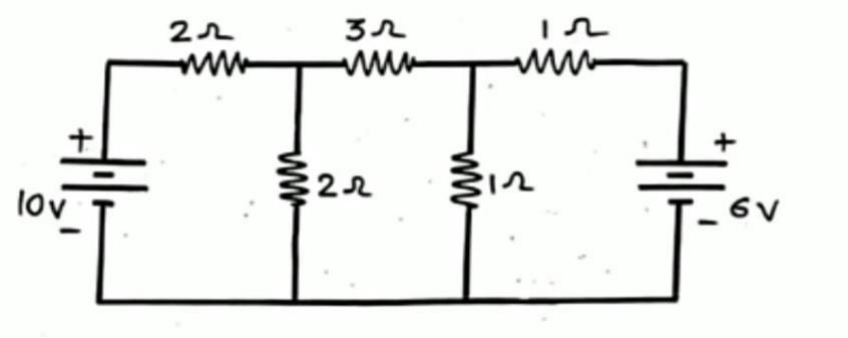
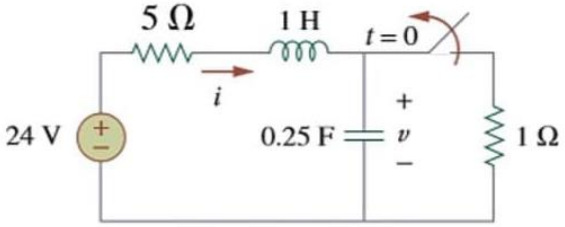
SECTION C

CIRCUITS FOR BEE

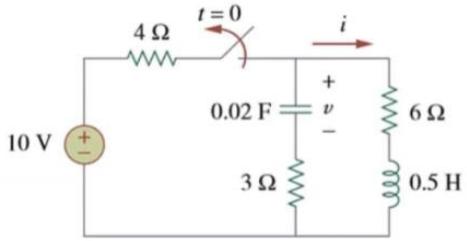
Find the current and power consumed by 3 ohm resistor for the circuit given below:



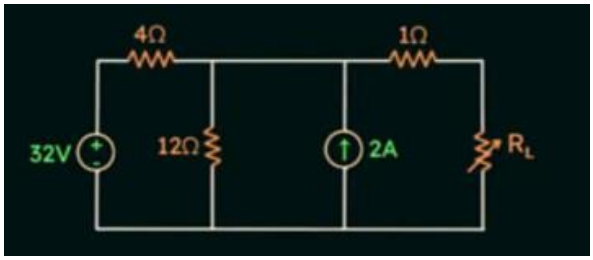
For the circuit given below find v(t) and i(t) for t>0:



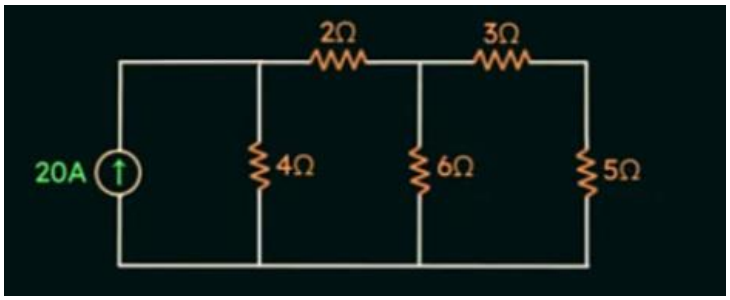
Find i(t) in the circuit assuming that the circuit has reached a steady state at t=0-



Find the current flowing through the load resistance when it is equal to 16 ohm using Thevenin Theorem:



Find the current flowing through 5 ohm resistor using Norton Theorem:



The circuit contains a switch that can be used to connect and disconnect a battery. The switch has been open for a very long time. At t=0 the switch closes, and then at t=50ms it opens again. Determine capacitor voltage as a function of time.

R1=R2=1000 ohm

R3=500 ohm

C= 25 microfarad