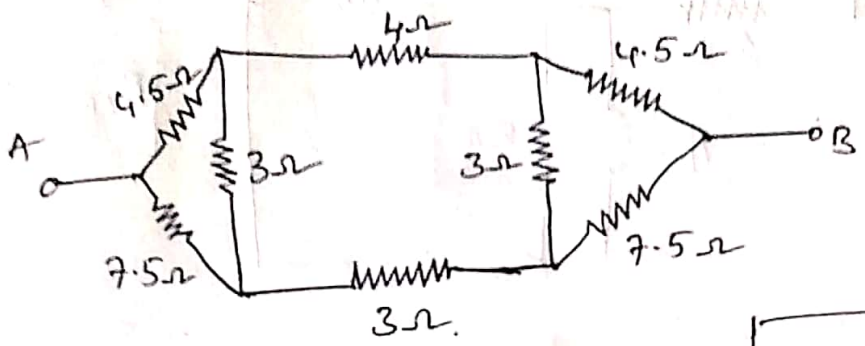
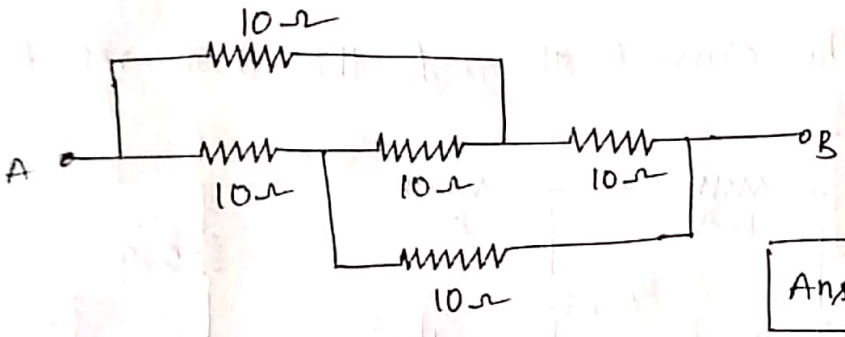
Assignment – 1

1. Find an equivalent resistance between A and B



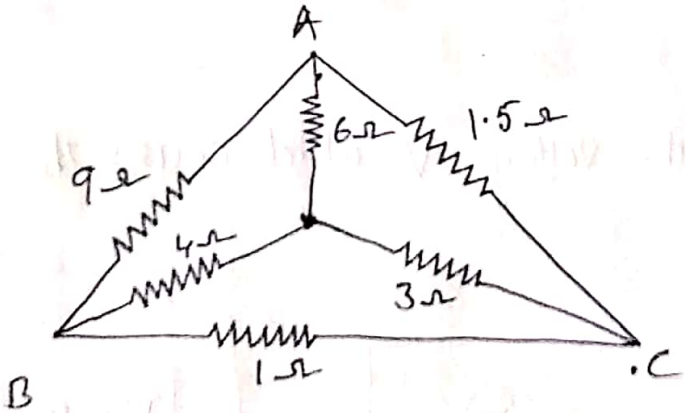
Ans: $R_{AB} = 7.45\Omega$

2.



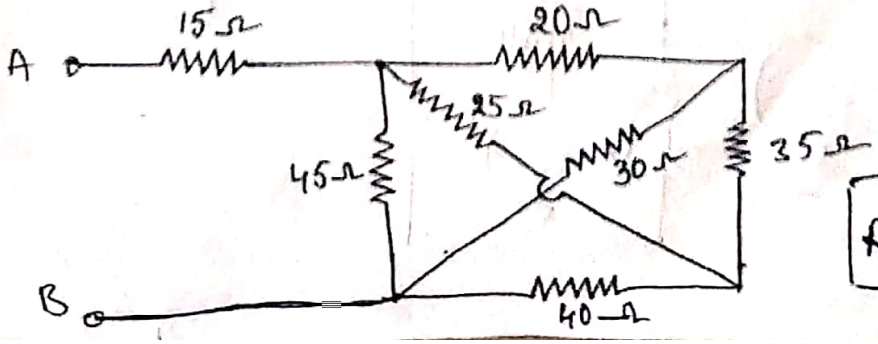
Ans: 10Ω

3. Find an equivalent resistance b/w A and B



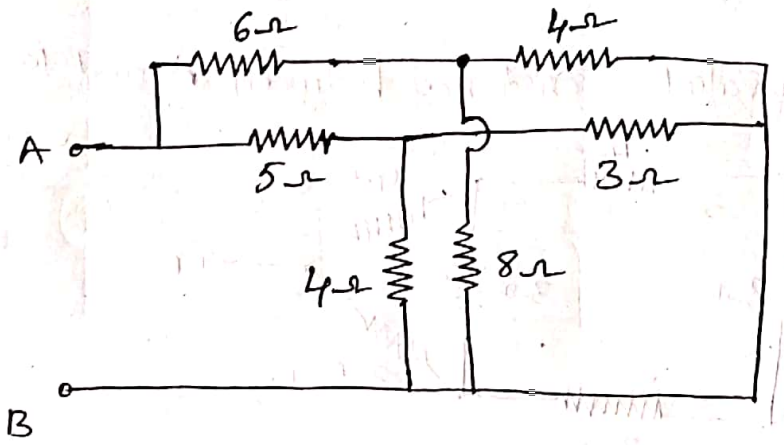
$R_{AB} = 1.64\Omega$

4.



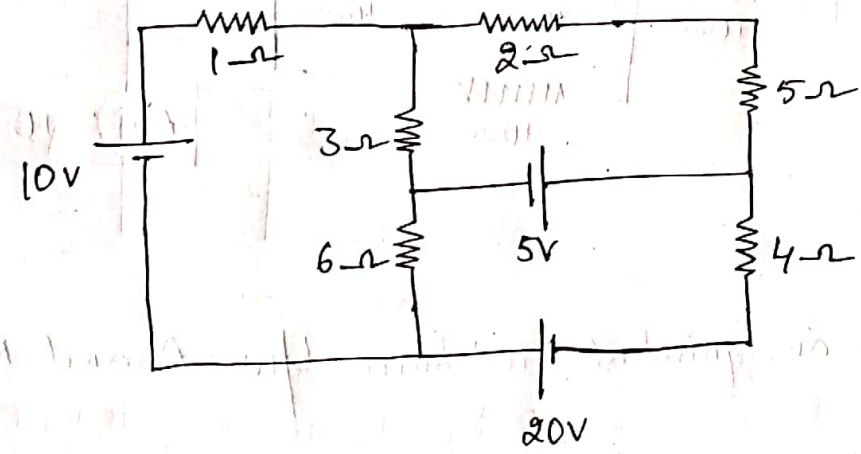
$R_{AB} = 32.36\Omega$

⑤. Find an equivalent resistance b/w A and B



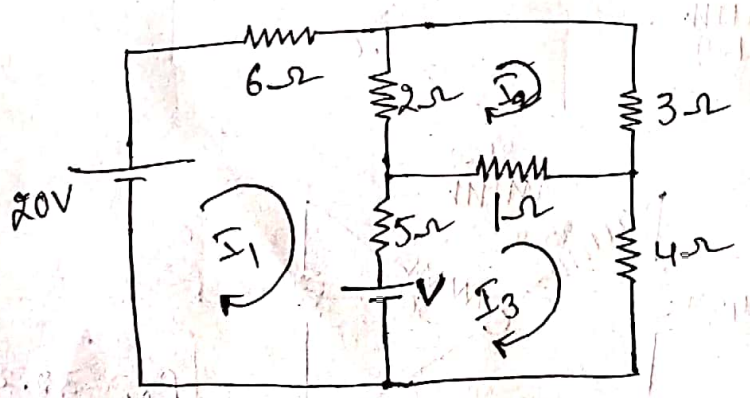
$R_{AB} = 3.78\,\Omega$

⑥. Find the current through the 5Ω resistor.



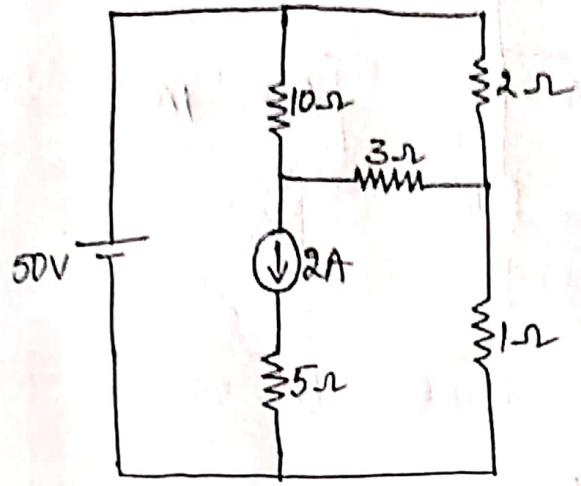
$I_{5\Omega} = 0.78A$

⑦. Determine the voltage 'V' which causes the current 'I' to be zero.



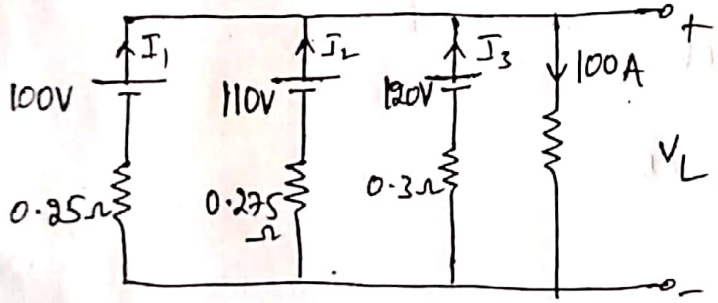
$V = 43.7V$

(8). Find the current in the 5Ω resistor.



Ans:- 4.67 A

(9). Find the current supplied by each battery and Load voltage



Ans:-

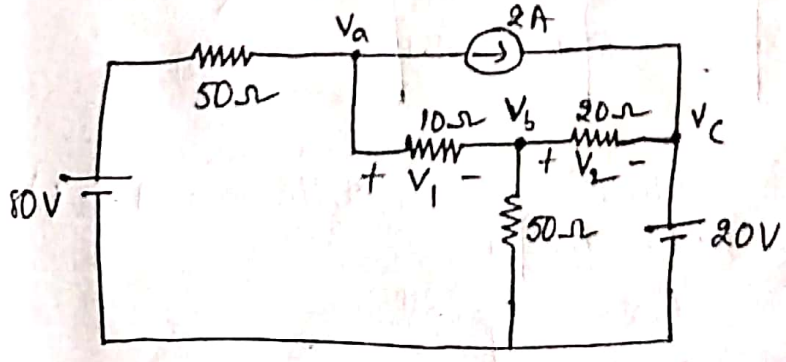
$I_1 = 1.08A$

$I_2 = -35.38A$

$I_3 = -65.77A$

$V_L = 100.27V$

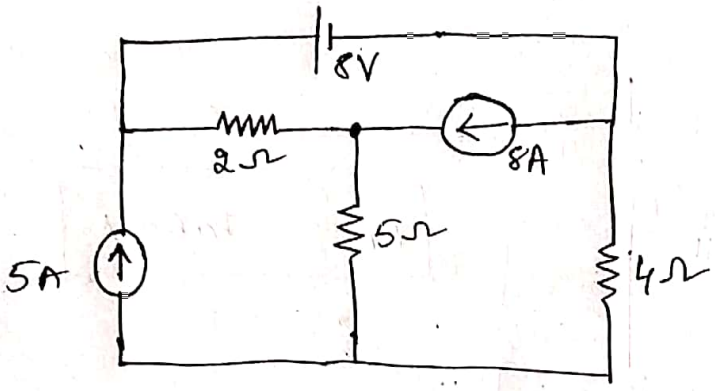
(10). Find V_1 and V_2



$V_1 = -4.61V$

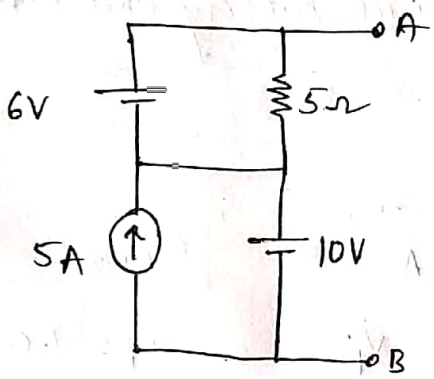
$V_2 = -12.31V$

(11). find the current through the 4Ω resistor



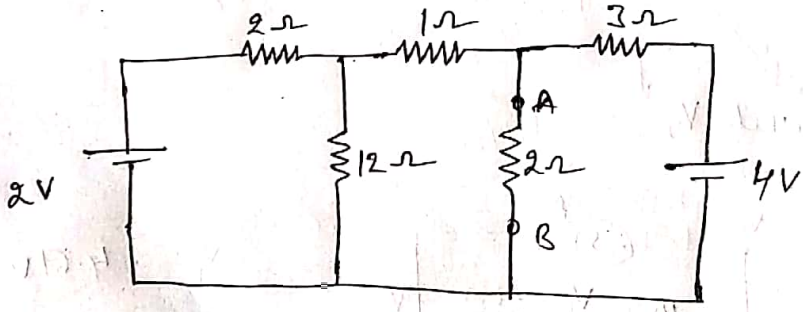
Ans: 1A

(12). Find the voltage V_{AB}



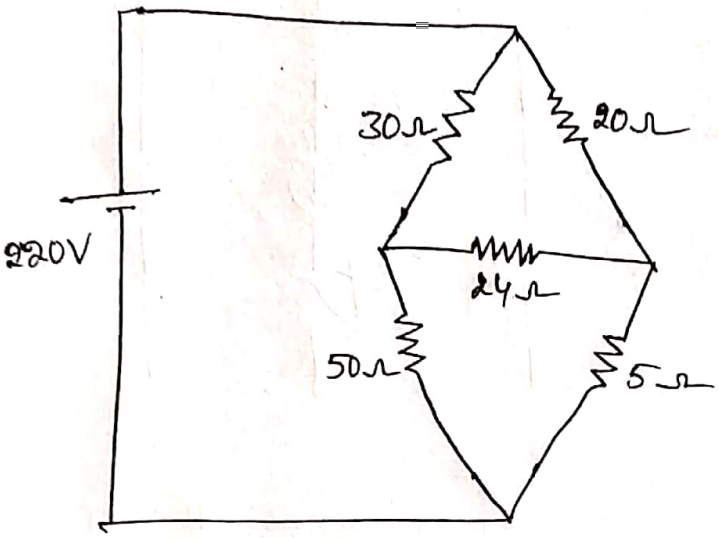
$V_{AB} = 16V$

(13). Find the current through the 2Ω resistor by using Thevenin's Theorem.



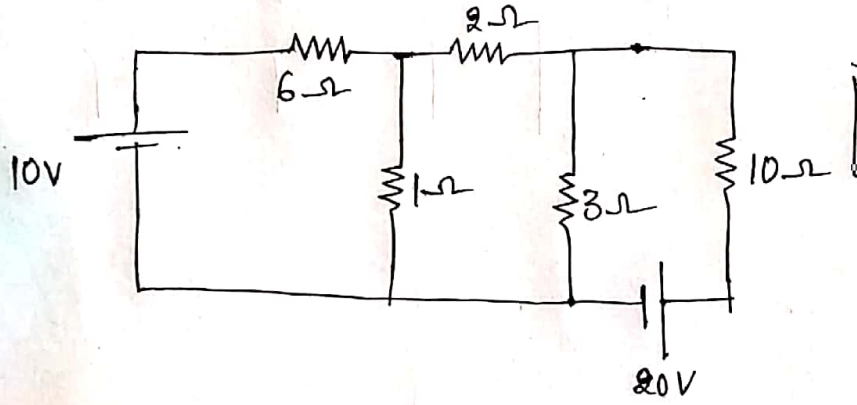
Ans:- 0.82 A

(14). By Applying Thevenin's theorem, determine the Current through the 24Ω resistor.



Ans:- 2A

(15). Apply Norton's theorem to find the current through the 10Ω resistor.



Ans: 1.68A