

Tutorial-2

Winter 2024

Basic Electronics (ECE113)

Q1: Find the value of current " I_x " in the given following circuit (Figure-1) by using nodal analysis.

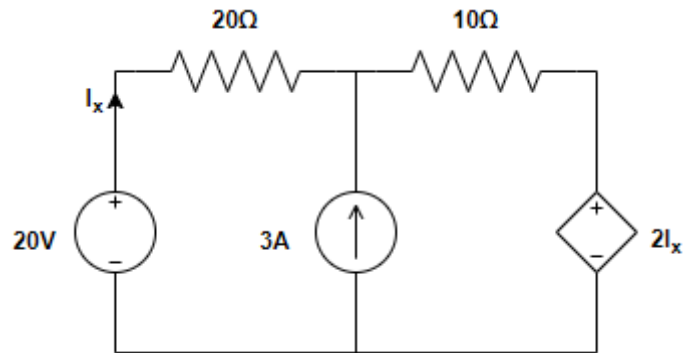


Figure 1

Q2: Find equivalent resistance (R_{AB}) between node A & B (Figure-2).

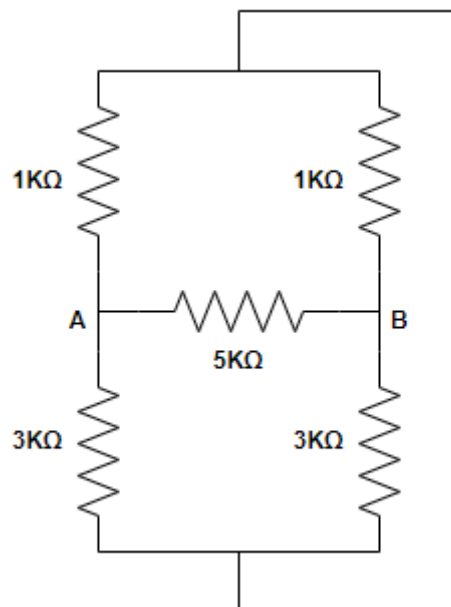


Figure 2

Q3: Find the value of voltage across node "P" & "Q" (V_{PQ}) in the following circuit (Figure-3).

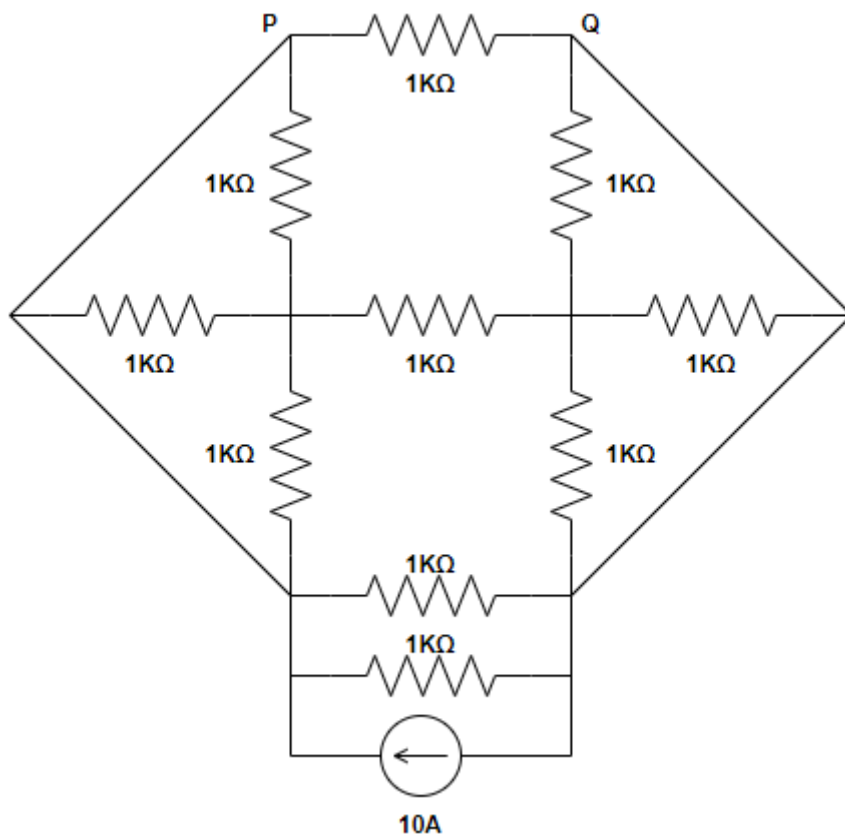


Figure 3

Q4: Calculate the value of power dissipation in each resistance (Figure-4).

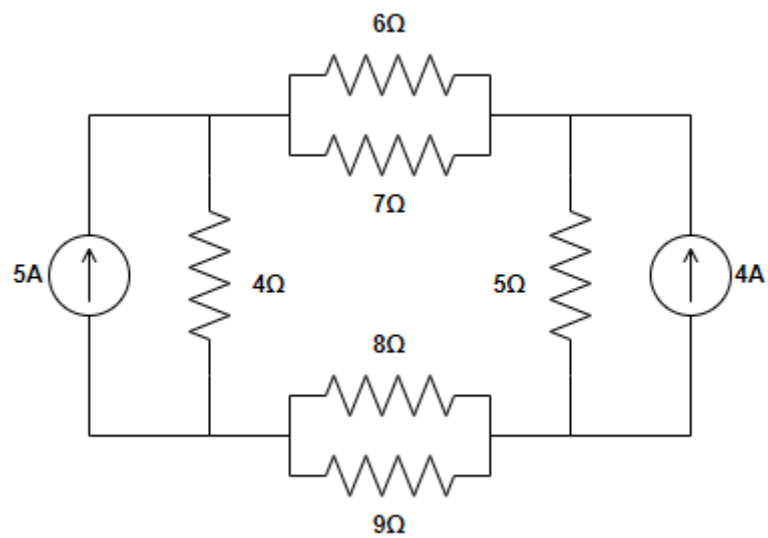


Figure 4

Q5: In the given following circuit (Figure-5), if $V_x=3V$ and 18V ideal voltage source deliver a current of 8A, then find the value of unknown resistance (R).

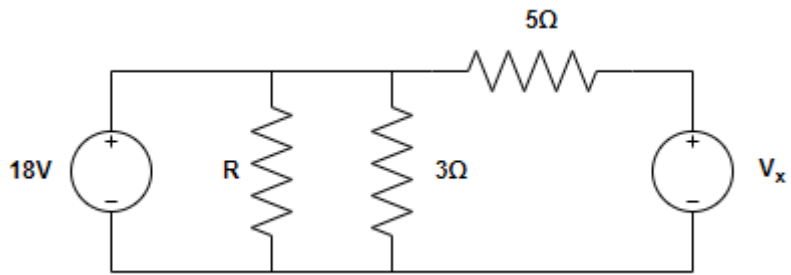


Figure 5

Q6: Find the value of node voltages V_1 and V_2 (Figure-6).

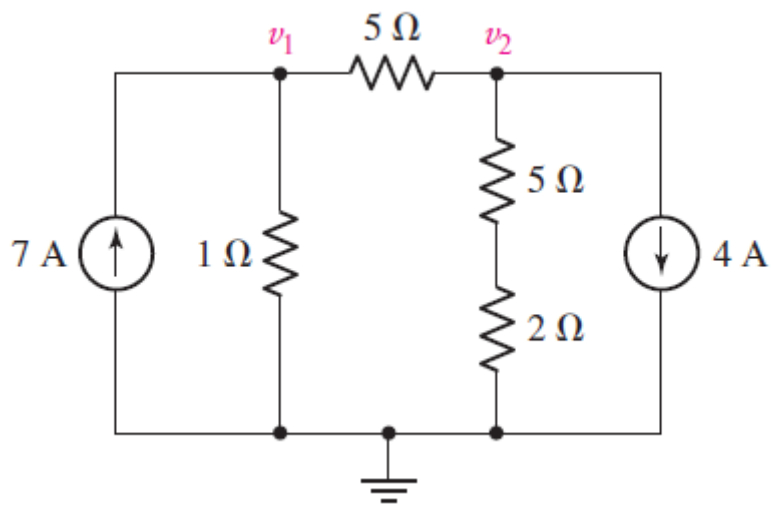


Figure 6

Q7: In the given following circuit (Figure-7), find the value of current ' i_x '.

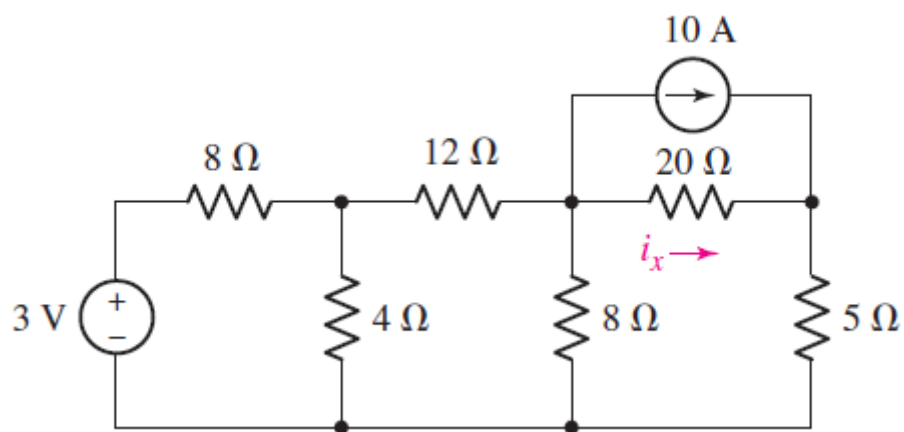


Figure 7