EE1100
Basic Electrical Engineering
Tutorial 1

February 2024

Problem 1

In the circuit shown below, Find the value of R_L so that power transferred to R_L is maximum.

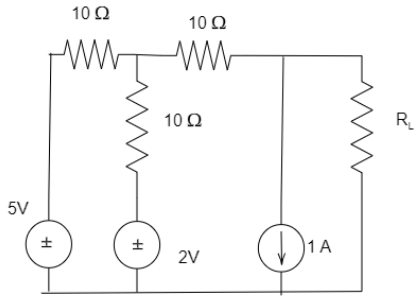

Figure 1: Circuit 1

Problem 2

In the given circuit, as shown in Fig 2. Find the current through the 1Ω resistance. *Hint:* Try to solve it using source transformation.

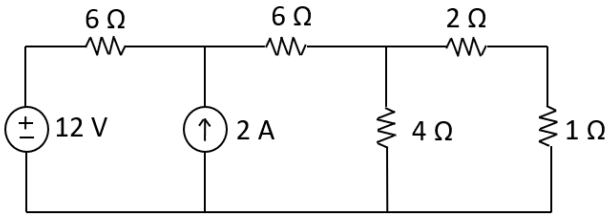

Figure 2: Circuit 2

Problem 3

Find the current through the 10 Ω resistance in the given circuit Fig 3. Solve it using Norton's law.

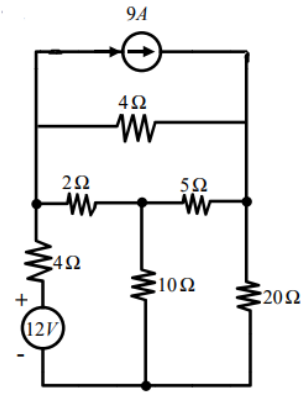

Figure 3: Circuit 3

Problem 4

Using Mesh analysis, find the voltage Vx and the currents Ix and Iy in the given electric circuit 4.

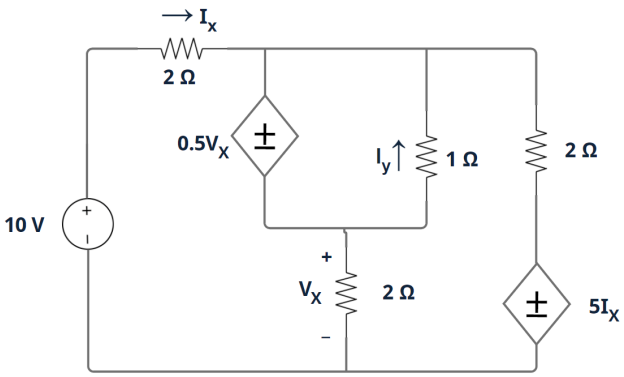

Figure 4: Circuit 4

Problem 5

Find the current i, using Thevenin theorem

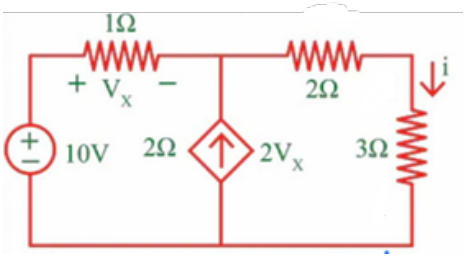

Figure 5: Circuit 5

Problem 6

Find the current through the load resistor (1K means 1KΩ = 1000Ω)

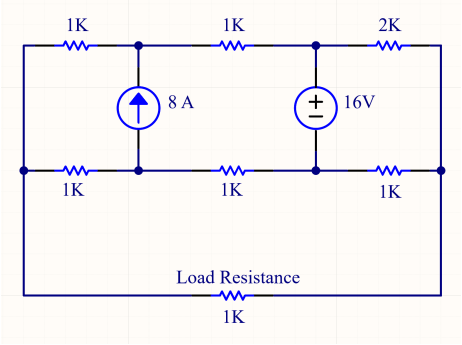

Figure 6: Circuit 6